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A naturalistic enquiry into the  
day-to-day lives of obese children

Lauren M. Puglisi  
University of Wollongong

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**A Naturalistic Inquiry into the Day-to-Day Lives of Obese Children**

A thesis submitted in fulfilment of the requirements for the award of the degree

Doctor of Philosophy

From

University of Wollongong

By Lauren M. Puglisi

B.Ed (Honours), University of Wollongong

The Faculty of Education

2009

## **CERTIFICATION**

I, Lauren Puglisi, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Faculty of Education, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualification at any other academic institution.

Signed

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Lauren Puglisi

Date

## **ABSTRACT**

Childhood obesity has reached epidemic levels in both developed and developing countries, posing one of the greatest challenges to paediatric health in the 21st century. To date, interventions to prevent and treat child obesity have had moderate success, with many researchers advocating the need for individual and community programs combined with a better understanding of the contextual factors affecting children, in particular social and environmental aspects. Little has been documented about the daily experiences of an obese child and the context of their weight-related behaviours. Because of the sensitive nature of child obesity, few studies have employed participant observation methods or naturalistic paradigms to gather contextual information around this prominent health issue.

The purpose of this current study was to explain the daily life of an obese child and then determine the context in which weight-related behaviours existed. This study was a naturalistic inquiry employing a multiple case-study design. It was conducted with six obese children and their families in their normal daily environments, including their home, school, and after-school and weekend settings. Participant observations took place from when the child woke in the morning until he/she went to bed at night. Field notes were taken, which were supplemented with digital recordings and casual conversations with key individuals.

A number of dietary, physical activity, sedentary and personal factors affecting the weight status of all six children were identified. A cross-case analysis found that there were a number that were common for most children. Common dietary factors included: the consumption of high-sugar or energy-dense snacks; portion sizes; providing food choices; parental dietary patterns; eating in front of the television; and the options available at the school canteen. In relation to physical activity, frequent aspects were: perceived physical activity competence; physical difficulties; participation in a small amount of physical activity after school and on weekends: having people to play with; existence of sibling or parental role models; backyard size; school sport activities; and time available for unstructured physical activity in schools. There were also a number of common factors related to sedentary behaviours, including: enjoyment of these activities; time spent in small screen recreation; regularly reading books; availability of electronic media; friends' interests in small screen recreation; existence of rules; parental sedentary behaviour patterns; and parental use of small screen recreation as a babysitter. Personal characteristics affecting the weight status of most of the children in the study included: physical

appearance self-concept; behavioural self-concept; and peer acceptance self-concept. These factors exerted their influence in a number of the normal day-to-day behaviour settings of these six children.

These findings were compared retrospectively with the study's theoretical framework, Davison and Birch's Ecological Systems Model (Davison & Birch, 2001), which explores factors affecting a child's weight status within three broad categories: child characteristics and child risk factors; parenting styles and family characteristics; and community, demographic and societal characteristics. A number of similarities and differences were found between my study's findings and those presented in Davison and Birch's model. New risk factors, which were evident in this current study included: personal characteristics which suggested low levels of self-awareness in the social context; sedentary factors such as the enjoyment of the activity and the social inclusion it provided rather than the social exclusion and physical discomfort experienced through physical activity. Both Davison and Birch's model and this study recognise that the aetiology of child obesity involves complex interactions between individuals and environments.

In light of these findings, the development of childhood obesity involves a complex set of factors from a range of contexts that interact to place a child at risk of developing weight problems. It is not simply an imbalance in energy intake and energy expenditure. It is crucial that future interventions cater for risk factors at all three levels, including child, family and the community. Collecting both quantitative and qualitative data at both intra- and extra-individual levels may help to reduce some of the methodological limitations associated with child obesity interventions such as using a "one-size fits all" approach, delivering interventions in highly resourced settings and failing to include the entire family and add greater depth to our knowledge of the experiences and characteristics of the obese child.

## ACKNOWLEDGEMENTS

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I am eternally grateful to my mother, Sandra and father, Michael who have supported me and encouraged me throughout every day of my life and I cannot express my appreciation enough. Thank you for looking after me through my many years of University study.



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## **CHAPTER 1 – INTRODUCTION**

Childhood obesity has reached epidemic levels in both industrialised and developing countries (Booth, Dobbins, Okely, Denney-Wilson, & Hardy, 2007; Lobstein, Baur, & Uauy, 2004). It is one of the major global public health problems today due to its high prevalence and related health consequences. Approximately 10% of the world's school-age children are overweight, with a quarter of these obese (Lobstein et al., 2004). Reports have indicated that the prevalence of childhood overweight and obesity is high (Commonwealth Scientific Industrial Research Organisation, 2007) and increasing (Booth et al., 2006) in Australia. The NSW Schools Physical Activity and Nutrition Survey 2004 found that the prevalence of overweight and obesity combined among young people in New South Wales had increased from 20% in 1997 to 25% in 2004 (Booth et al., 2006), indicating that this health problem is becoming worse.

The health costs and consequences of child obesity have been well documented (Reilly et al., 2003). Although the impact of childhood obesity on health care systems in Australia is less well established, the cost of adolescent obesity appears substantial (Booth et al., 2009). Overweight and obesity in childhood have significant impacts on both physical and psychological health. They have been associated with a range of negative consequences including non-insulin dependent diabetes, hypertension and sleep apnoea (Dietz, 1998), and poor psychological outcomes such as depression (Wallace, Sheslow, & Hessink, 1993), insecure body image (Hill, Draper, & Stack, 1994) and low self-concept (Banis et al., 1988). It is the psychosocial impact of obesity, however, that may have the most immediate and impeding consequences for children (Dietz, 1998). Despite the increased prevalence and normalisation of the condition, ongoing bias and discrimination against obese children is still common (Latner & Stunkard, 2003; Puhl & Brownell, 2001). Because of the detrimental effects associated with childhood obesity, research assessing its risk factors is particularly important to steer the development of effective prevention and treatment programs.

Over the last decade an increased amount of funding has been directed to developing, implementing and evaluating programs to prevent and treat obesity (Dobbins & Deich, 2004; National Health and Medical Research Council, 2007). Evidence from systematic reviews, however, shows that treatment focusing on improving dietary patterns and behaviours, increasing physical activity, decreasing sedentary behaviours or a combination of these, have shown moderate success (Atlantis, Barnes, & Fiatarone Singh, 2006; Collins,

Warren, Neve, McCoy, & Stokes, 2007; Epstein, Myers, Raynor, & Saelens, 1998; Summerbell et al., 2003). There has been an increase in the number of intervention studies which have clearly shown that there are multiple factors that determine the level of success of interventions and it is a difficult task to make generalisable conclusions about what makes a program successful (Campbell, Waters, O'Meara, & Summerbell, 2001). Despite this research, the prevalence of childhood obesity continues to increase in Australia, which reflects the complex nature of the condition and its determinants (Davison & Birch, 2001).

Research focusing on behavioural links has assisted our understanding of the risk factors for childhood obesity. Further research is needed to move beyond these connections and create a clearer picture of the complexity of child obesity. Looking at the daily experiences of obese children would assist researchers in understanding the behaviours and the context in which these behaviours are shaped. This would assist in providing a broader understanding of the risk factors for becoming obese, which would more effectively inform interventions.

### **1.1 THE SIGNIFICANCE OF THE STUDY**

Given that current prevention and treatment options are having minimal effect on reducing the prevalence of child obesity, an examination of this issue through a different set of lenses may be required. This will help to better understand what patterns of social, cognitive, behavioural and ecological factors are experienced by obese children in the day-to-day ebb and flow of their lives. A naturalistic inquiry would aim to do this by providing an insight into the day-to-day experiences of obese children, focusing on their experiences and behaviours in their daily settings.

Naturalistic inquiries have been used in other research areas when quantitative methods have been unable to gain the depth of information needed or when these methods were inappropriate in answering the research question/s. By spending large amounts of time immersed in different behaviour settings, it is thought that a greater understanding of the complex causes of child obesity may emerge. The proposed study will set out to understand how complex phenomena in the area of child obesity operate, how these factors relate to each other and how these factors assist in sustaining and increasing child obesity-related behaviours.

Such a study is both timely and important. The field's emphasis on hypothesis testing research means that while a great deal is known about both the causes and potential cures of



childhood obesity, little is known about the context of childhood obesity in modern Australia. This may partly explain why the prevalence of childhood obesity seems to be increasing despite the plethora of knowledge that currently exists about dietary patterns, physical activity and sedentary behaviour. The significance of this inquiry is not examining one particular aspect of child obesity but adopting a holistic approach to investigating the nature and complexity of child obesity. The apparent lack of naturalistic-based research in looking at the day-to-day lives and behaviours of obese children makes this study both valuable and overdue.

## **1.2 RESEARCH QUESTIONS**

The purpose of this study was to map the day-to-day lives of obese children and the following research question guided the investigation:

1. What is day-to-day life like for an obese child?

In order to explore this primary research question in depth, the following sub-questions were also examined:

2. What weight-related behaviours are evident in their everyday lives?
3. What weight-related behaviours are common among obese children?

## **1.3 WRITING IN THE FIRST PERSON**

Glesne and Peshkin (1992) state that writing in the first person singular fits the nature of naturalistic inquiry. Clandinin and Connelly (2000) agree, arguing that a narrative inquiry text “is an ‘I’ document” (p.9) and that the ‘I’, “provides the biases, the perspectives and particular learning that the inquirer was able to engage in” (p.9) during the research journey. Therefore “I” in this research text reflects my presence in the research setting.

## **1.4 THEORETICAL FRAMEWORK**

A number of studies focusing on the behaviours of obese children have been carried out over recent years. Davison and Birch (2001) developed a contextual model to conceptualise these findings as well as welcoming findings from new research. Their multifaceted system, Ecological Systems Model, considers the context in which a person is located to gain a deeper understanding of their behaviours. Child characteristics place a child at risk of becoming overweight along with their immediate family background, which is located within a broader community and societal context. Because of the evolving nature of a

naturalistic inquiry and the notion that a researcher should be a “blank slate”, this theoretical perspective did not guide the entire study. Instead it was applied **after the data collection and analysis** phases in order to not bias the data. Because of the contextual nature of this framework, it greatly assisted in the explanation and discussion of the findings from this study. This theoretical framework is discussed in further detail in Chapters 2 and 5.

### **1.5 OVERVIEW OF THE STUDY’S METHODOLOGY**

The purpose of this study was to explore the daily experiences and behaviours of obese children. This, in turn, assisted in identifying risk factors to developing and maintaining weight problems in children. Utilising a qualitative approach, and more specifically a naturalistic inquiry framework, a multiple case study method was used in an attempt to provide rich descriptions of six children and their families’ day-to-day lives. In this investigation, the case study became the unit of analysis. Stake (1994) argued that the researcher may simultaneously investigate more than one case study, but that each case study is an intense inquiry into a single case.

Methods of data collection to provide rich descriptions of these six children and their families were participant observations, digital recordings, casual conversations and a reflective journal. I acted as a participant observer for six days with five families and five days with one family from when the child woke up in the morning until they went to bed at night. By spending long periods of time and establishing a relationship with each family I was able to gain detailed insights into their complex daily lives.

### **1.6 DEFINITIONS**

Throughout the reporting of this study, a number of terms will be used. Definitions of these terms are outlined in the following section.

#### *Behaviour:*

The way in which a person conducts him or herself. The actions or reactions of a person in response to external or internal stimuli (Answers Corporation, 2008).

*Body Mass Index (BMI):*

A measure of adiposity (body fatness) that is calculated using the formula weight in kilograms divided by height in metres squared (weight[kg]/height[m]<sup>2</sup>).

*Child:*

Young person between the ages of 7 and 12.

*Ecological Systems Theory:*

Is an approach to study human development that consists of the scientific study of the progressive, mutual accommodation, throughout the life course, between an active, growing human being, and the changing properties of the immediate settings in which the developing person lives, as this process is affected by the relations between these settings, and by the larger contexts in which the settings are embedded (Bronfenbrenner, 1989).

*Energy-dense:*

Foods or drinks that contain a high level of kilojoules per unit weight or volume. (Australian Government Department of Health and Ageing, 1998).

*Family:*

A group of two or more individuals who reside in the same household and/or who identify a common emotional bond, and who are interrelated by performing some social tasks in common, for example, socialisation of children or nourishment (Baranowski & Nader, 1985).

*Fundamental Movement Skills (FMS):*

The pre-requisites to, or foundation of, the specialised skills used in popular forms of adult physical activity (Gallahue & Ozmun, 2002, p.21).

*High-sugar:*

Foods or drinks that contain a high level of sugar per unit weight or volume  
Products with more than 15 grams of sugar per 100 grams can be defined as high  
(Australian Government Department of Health and Ageing, 1998).

### *Locomotor skills:*

Skills that require fluid co-ordinated movements of the body as the individual moves in one direction or another (e.g. running, sliding or hopping) (Ulrich, 2000, p.3).

### *Moderate-to-Vigorous Physical Activity (MVPA):*

Activity requiring approximately greater than three times as much energy as rest ( $\geq 3$  METS) (Trost, Pate, & Sallis, 2002).

### *Non-locomotor skills:*

Any movement that occurs in one location in space using the available space in any direction or movement organised around the axis of the body rather than designed for travel from one location to another (Ulrich, 2000).

### *Obese:*

An age- and sex-adjusted Body Mass Index (BMI) for children, that links to an internationally recognised cut-point greater than or equal to  $30 \text{ kg/m}^2$  at age 18 years (Cole, Bellizzi, Flegal, & Dietz, 2000).

### *Perceived competence:*

A self-evaluation of one's capabilities to perform in a specific domain or situation (Weiss & Ebbeck, 1996). In the context of this study, this relates to individuals' beliefs in their ability to physically perform a task or role.

### *Portion size:*

How much food you choose to eat at any one time (measured by weight or volume) (US Department of Health and Human Services, 2006) based on the serving sizes in the Australian Guide to Healthy Eating (Australian Government Department of Health and Ageing, 1998).

### *Risk factor:*

Something that increases a person's chances of developing a disease (MedicineNet, 1996-2008).

*Role model:*

Individuals are defined as good or poor role models based on whether they meet recommendations relating to health behaviours established by the Australian Government, Department of Health and Ageing. These specifically relate to dietary behaviours, physical activity and small screen recreation.

*Self-concept:*

An individual's sense of self, including assessment of one's own status with respect to a single trait or domain or to many dimensions, using societal or personal norms as criteria (Harre & Moghaddam, 2003).

*Self-esteem:*

A self-evaluation that is viewed as more of a global construct than self-concepts or perceptions which are domain-specific (Harter, 1993; Weiss & Ebbeck, 1996). Self-esteem is not simply a combination of domain-specific self-concepts or perceptions but an independent concept (Harter, 1993; Weiss & Ebbeck, 1996). In the context of this study, self-esteem relates to feelings about oneself.

## **1.7 DELIMITATIONS**

This study aimed to investigate the culture of obesity among children. This study was delimited in the following manner:

1. Due to the vast amount of time spent with each family the study was limited to six families from the Illawarra region of New South Wales, Australia. In addition, the children needed to be obese according to international BMI cut-points.
2. These families had previously contacted the Child Obesity Research Centre in New South Wales to be involved in the obesity treatment program, however, they were deemed ineligible to participate. This meant that the family wanted to do something about their child's weight and therefore may have already modified some of their behaviours to try to reduce their risk factors.

## **1.8 ETHICAL CONSIDERATIONS**

Authorisation to conduct this study was sought from the University of Wollongong Human Research Ethics Committee, the New South Wales Department of Education and Training, the Catholic Education Office and the participating parents and children. Parents were

contacted via telephone to determine whether they would be interested in participating. Information sheets and consent forms were distributed to interested participants and these forms were returned before the study began.

Participants were informed that the results of the study would remain confidential and that their withdrawal from the study at any stage would not jeopardise their current or future relationship with the University of Wollongong. Participants were told to express any concerns they had regarding the research process to the University of Wollongong Human Research Ethics Committee.

Observations were carried out in participants' homes and other day-to-day behaviour settings. It was important to enter the field in the least intrusive manner possible and establish good relations with the participants.

## **1.9 OVERVIEW OF THE CHAPTERS**

This chapter outlined the background to the research and described the purpose of the study. It provided a brief overview of the theoretical framework, methods employed and the significance of the study, as well as the limitations of the research. Finally, specific terms used in this thesis were defined. Chapter 2 will present a review of research related to paediatric obesity and the behaviours associated with child obesity. It will provide a detailed review of the research and a rationale for the current study. In Chapter 3, the methodology for the study is given which provides the framework for this naturalistic study. Details of the data collection and analysis procedures, descriptions of participants, as well as the theoretical perspective are provided. Chapter 4 describes the stories of each of the six children as well as providing an analysis of the weight-related behaviours specific to each child and their family. Chapter 5 discusses and explains these findings across the six children and provides recommendations for future research and practice.

## **1.10 CHAPTER SUMMARY**

This chapter described the background to this study and the purpose of this research inquiry. An overview of the theoretical framework as well as the study methodology was described. Specific terms used throughout this thesis were defined. The delimitations of the research and ethical considerations were also explained. This study aims to explore an obese child's day-to-day experiences in order to gain an insight into his/her daily

experiences providing assistance to our understanding of the factors associated with child obesity and the context in which they occur. The development of child obesity incorporates a multifaceted set of factors from different contexts, which interrelate to place a child at risk of becoming obese.

## **CHAPTER 2 – REVIEW OF LITERATURE**

This literature review discusses the patterns and prevalence of childhood overweight and obesity in Australia, along with the health consequences associated with these conditions. Ecological Systems Model is then outlined, as one theoretical framework that attempts to explain the factors influencing the weight status of children. This framework was applied **after** data collection and analysis were complete due to the evolving nature of a naturalistic inquiry and the view that a researcher should be a “blank slate” (Glaser & Strauss, 1979). It is important to note, however, that while the literature review was written after data collection and analysis had taken place, I had read widely before this point. Child, family, and community characteristics, as proposed in the Ecological Systems Model, are then reviewed. Following this, behaviours outlined in this framework, viz, dietary behaviours, physical activity and sedentary behaviours are explored, with a focus on their relationship to weight status and on their correlates. Based on the preceding evidence, the review concludes with a synthesis of the gaps in current child obesity research to provide a more cogent rationale for the proposed study.

### **2.1 PATTERNS AND PREVALENCE OF CHILDHOOD OVERWEIGHT AND OBESITY IN AUSTRALIA**

The prevalence of child overweight and obesity is high and has increased throughout most of the developed world in the past 20 years. In Australia, several studies have been conducted to provide a greater understanding of the prevalence and patterns of distribution of overweight and obesity in Australian children and how they have changed over time. These include: Australian Health and Fitness Survey 1985 (ACHPER, 1987); National Nutrition Survey 1995 (Magarey, Daniels, & Boulton, 2001); Health of Young Victorians Survey 1997; NSW Schools Fitness and Physical Activity Survey 1997 (Booth et al., 1997); Children’s Leisure Activities Study Survey 2001 (Salmon, Telford, & Crawford, 2004); Child and Adolescent Physical Activity and Nutrition Survey 2003 (Hands, Parker, Glasson, Brinkman, & Read, 2004); NSW Schools Physical Activity and Nutrition Survey 2004 (Booth et al., 2007); Healthy Kids Queensland Survey 2006 (Abbott et al., 2007); and the Australian National Children’s Nutrition and Physical Activity Survey 2007 (Commonwealth Scientific Industrial Research Organisation, 2007).

Even though overweight and obesity rates vary slightly in each of the studies, all show that over the last two decades the prevalence of both overweight and obesity has increased. Collectively, approximately 20% to 25% of Australian children and adolescents are either



overweight or obese (Commonwealth Scientific Industrial Research Organisation, 2007), with the prevalence of overweight doubling and the prevalence of obesity tripling from 1985 to 2004 (Booth et al., 2007).

In Australia, all demographic groups appear to be affected by overweight or obesity, even though studies show a slight difference with respect to age (Abbott et al., 2007; Booth et al., 2006; Booth et al., 2001; Commonwealth Scientific Industrial Research Organisation, 2007), sex (Abbott et al., 2007; Booth et al., 2001; Hands et al., 2004; Magarey et al., 2001), geographic location (Booth, Macaskill, Lazarus, & Baur, 1999; Booth et al., 2007; Booth et al., 2001), socio-economic status and cultural background (Booth et al., 2006; Booth et al., 2001). Among boys, the prevalence of both overweight and obesity increased from the 4- to 8-year-old age group to the 9- to 13-year-old age group before stabilising in the 14- to 16-year-olds (Commonwealth Scientific Industrial Research Organisation, 2007). A similar pattern was evident among girls with the peak reached in the 9- to 13-year-olds before declining slightly in the older age group (Commonwealth Scientific Industrial Research Organisation, 2007). Overall, the prevalence of overweight and obesity combined was two percentage points higher in girls compared with boys (Commonwealth Scientific Industrial Research Organisation, 2007). While the National survey shows differences in genders and ages, no other demographic comparisons were reported. In contrast, the prevalence of overweight and obesity appeared to increase with declining socio-economic status (Booth et al., 2006). The strength of the association between socio-economic status and overweight became stronger with age (Booth et al., 2006). Finally, children from European and Middle-Eastern cultural backgrounds had a higher prevalence of overweight or obesity than those from English and Asian-speaking backgrounds (Booth et al., 2006; Booth et al., 2001).

Over the past two decades, a number of studies have provided a clearer picture of the epidemiology of childhood obesity in Australia. The combined results of these studies indicate that the prevalence of both overweight and obesity is high and increasing among Australian children and adolescents, with prevalence rates higher among those of a low socio-economic status and European and Middle-Eastern backgrounds, making it a major public health concern.

## **2.2 HEALTH CONSEQUENCES OF CHILDHOOD OVERWEIGHT AND OBESITY**

Childhood obesity is associated with a number of physical, psychological, social and economic consequences (Dietz, 1998; Lobstein et al., 2004), which are both short- and long-term in nature (Lobstein et al., 2004). The economic costs are alarming, with Australian overweight and obese adolescents costing Medicare [an Australian health care system] a total of \$164.8 million per annum (Booth et al., 2009). These figures affect all Australians, however, on an individual level it can be argued that the physical and psychological health consequences to the child are the most concerning.

### **2.2.1 Physical Health Consequences of Overweight and Obesity in Children**

#### **2.2.1.1 Cardiovascular Disease Risk Factors**

Evidence supports the association of childhood obesity with cardiovascular risk factors in childhood (Goran, Ball, & Cruz, 2003; Reilly et al., 2003; Weiss et al., 2004). Literature suggests that the prevalence of cardiovascular risk factors is more common in obese children than their non-obese counterparts. Weiss and colleagues (2004), in their cross-sectional investigation of 439 obese, 31 overweight and 20 non-overweight children and adolescents aged 4 to 20, found that BMI had a strong relationship with cardiovascular risk factors such as systolic blood pressure and total to high-density lipoprotein cholesterol ratio. The Bogalusa Heart Study in Louisiana, USA, examined the presence of cardiovascular risk factors in obese children and their continuation into adulthood (Bao, Srinivasan, Wattigney, & Berenson, 1994; Berenson, 2002). It involved seven examinations of 9,167 5- to 17-year-old schoolchildren in Bogalusa, conducted between 1973 and 1994, and found substantial increases in cardiovascular risk factors in obese children and adolescents (BMI  $\geq$  95<sup>th</sup> percentile) (Freedman, Dietz, Srinivasan, & Berenson, 1999). Specifically, compared with their non-obese counterparts, obese children and adolescents had an increased odds ratio of 2.4 (95% Confidence Interval (CI) = 2.0 to 3.0) for elevated levels of total cholesterol, 3.0 (95% CI = 2.4 to 3.6) for high levels of low-density lipoproteins and 3.4 (95% CI = 2.8 to 4.2) for low levels of high-density lipoproteins. Further, obese children and adolescents were found to be 4.5 times more likely to have elevated systolic blood pressure (95% CI = 3.6 to 5.8) and 2.4 times more likely to have elevated diastolic blood pressure (95% CI = 1.8 to 3.0). Odds ratios for triglycerides 7.1 (95% CI = 5.8 to 8.6) and fasting insulin levels 12.6 (95% CI = 10 to 16) were also significantly higher in obese children and adolescents compared with their leaner peers (Freedman et al., 1999). Moreover, childhood BMI and

insulin predicted the presence of the metabolic syndrome in adulthood, with BMI being the most dominant predictor (Srinivasan, Bao, Wattigney, & Berenson, 1996).

The metabolic syndrome refers to the clustering of cardiovascular disease risk factors such as hypertension, hypertriglyceridaemia, dyslipidaemia and hyperinsulinaemia or insulin resistance (Lobstein et al., 2004). The prevalence of metabolic syndrome was investigated in a cross-sectional study of 2430 12- to 19-year-old children and adolescents from the National Health and Nutrition Survey in the U.S. (NHANES III) (Cook, Weitzman, Auinger, Nguyen, & Dietz, 2003). Around 6% of males and 2% of females exhibited cardiovascular disease profiles consistent with the metabolic syndrome. The prevalence of the syndrome was found to significantly relate to weight status as it was present in less than 0.1% of adolescents with a BMI below the 85<sup>th</sup> percentile (clinically used as the cut-off for overweight), rising to 6.8% among overweight adolescents (BMI 85<sup>th</sup> – 95<sup>th</sup> percentiles) and 28.7% among obese adolescents (BMI  $\geq$  95<sup>th</sup> percentile). Research suggests that the proportion of participants who developed **clustered** cardiovascular risk factors (BMI, hyperinsulinaemia, hypertension **and** dyslipidaemia) as adults, were greater with increasing childhood BMI (Srinivasan et al., 1996). Vanhala and colleagues (1999) found that the metabolic syndrome was particularly evident in obese adults who were also obese as children (Vanhala et al., 1999).

Prospective studies have shown that serum lipid and lipoprotein levels track from childhood into young adulthood and are predictive of adult lipid levels (Lobstein et al., 2004). Results from the Bogalusa Heart Study suggest that increased levels of low-density lipoprotein (LDL) cholesterol, decreased levels of high-density lipoprotein (HDL) cholesterol and raised serum triglyceride levels were strongly associated with an increase in adiposity (triceps skinfold thickness and BMI) among adolescents aged 13 to 17 years. Further there was a strong connection between weight gain and lipid and lipoprotein levels. Bao and colleagues (1996) indicate that weight gain was second only to initial levels of lipid and lipoprotein in predicting adult levels. Srinivasan et al. (1996) also support this finding in their study of 783 adolescents aged 13 to 17 years who were followed up at ages 27 to 31 years of age. The study cohort was categorised as overweight or lean during adolescence. Compared with their lean counterparts, those who were overweight had significantly increased systolic and diastolic blood pressure and total cholesterol, triglycerides, very low-density lipoprotein (VLDL) cholesterol, LDL cholesterol, insulin, and glucose levels and decreased HDL cholesterol levels in adulthood. Both adolescent overweight and weight

gain from adolescence to adulthood had independent adverse effects on adult risk factor variables.

#### **2.2.1.2 Endocrine**

A number of studies describe the positive link between obesity and Type II diabetes in children. The early onset of Type II diabetes has been found to increase the risk of complications of the condition in early adulthood including cardiovascular disease, kidney failure, visual impairment and limb amputations (Lobstein et al., 2004). Type II diabetes is associated with factors such as family history and ethnicity, however, the most influential risk factor is obesity (Lobstein et al., 2004). Goran and colleagues (2003) support this statement, suggesting that overweight children and adolescents are now being diagnosed with impaired glucose tolerance and Type II diabetes, and they show early signs of the insulin resistance syndrome and cardiovascular risk. Several clinical observations suggest a large increase in the incidence of Type II diabetes in children and adolescents (American Diabetes Association, 2000), with one study reporting a 10-fold increase between 1982 and 1994 (Pinhas-Hamiel et al., 1996). Sinha and colleagues (2002) found that impaired glucose tolerance was a major concern in overweight/obese children and adolescents. In their multi-ethnic clinic-based study, 25% of 55 obese children and 21% of 112 obese adolescents had impaired glucose tolerance. Four percent of the sample also had undiagnosed Type II diabetes. It seems inevitable that as the prevalence of child obesity continues to rise, so too will Type II diabetes (Sinha et al., 2002). In an Australian study of 496 adolescents in Year 10, a significant positive association was found between insulin resistance and weight status in both boys and girls (Denney-Wilson, Hardy, Dobbins, Okely, & Baur, 2008). Based on BMI, obese boys were 24 times more likely to have higher levels of insulin (95 % CI = 8.2 to 72.1) and obese girls were 7 times more likely to have abnormal values of insulin (95% CI = 1.5 to 29.4).

#### **2.2.1.3 Pulmonary**

A pulmonary consequence of childhood obesity is sleep-associated breathing disorder, which involves an increase in resistance to airflow, heavy snoring, hypopnoea and apnoea (Lobstein et al., 2004). Through a number of studies, Riley, Santiago and Edelman (1976) found another condition linked to obesity is hypoventilation syndrome, also known as Pickwickian Syndrome. This condition is extremely serious as it is linked to pulmonary embolism and sudden death in children (Riley et al., 1976). Additionally, Rhodes et al.

(1995) demonstrated that obstructive sleep apnoea can have disturbing effects for children with extreme obesity, particularly in relation to learning and memory function (Rhodes et al., 1995). Redline and colleagues (1999) examined risk factors for sleep disordered breathing in children aged 2-18 years and found that for every increase in BMI by  $1\text{kg/m}^2$  beyond the average BMI for age and gender, the risk of obstructive sleep apnoea increased by 12%. Obese children were four to five times more likely to have sleep disordered breathing than non-obese children (Redline et al., 1999).

A number of studies have suggested a strong link between obesity and asthma. The Third National Health and Nutrition Examination Survey focused on children from the United States aged from 2 months to 18 years. This representative survey found that BMI above the 85<sup>th</sup> centile was associated with an increase in asthma prevalence, regardless of age, sex and ethnicity (Lobstein et al., 2004).

#### **2.2.1.4 Hepatic**

Another major health condition prevalent in obese children is non-alcoholic fatty liver disease (NAFLD). Research conducted by Neuschwander-Tetri and Caldwell (2003) indicated that NAFLD has the potential to progress to fibrosis, cirrhosis and end-stage liver disease (Neuschwander-Tetri & Caldwell, 2003). This study found that NAFLD affected approximately 3% of all children and between 23% and 53% of children who were obese, indicating that this form of liver disease is more common in children carrying excess weight (Neuschwander-Tetri & Caldwell, 2003).

#### **2.2.1.5 Musculoskeletal**

Styne's (2001) review reported that Blount disease was linked with obesity. Blount disease affects the bone development of toddlers and older children and usually begins as bow-leggedness. Several studies have shown that the prevalence of obesity is between 50% and 80% among children with Blount disease (Styne, 2001). Obese children are also more likely to have slipped capital femoral epiphysis, which can be defined as an unusual disorder of the hip in which the ball of the upper end of the femur slips off in a backward direction. Studies show that between 50% to 70% of affected children are obese (Styne, 2001). This review also illustrated that there is a significant tendency toward flat feet in obese children. This is an important area to explore as it is suggested that foot discomfort and associated

structural changes and increased forefoot plantar pressures in the foot of an obese child may hinder their participation in physical activity (Dowling, Steele, & Baur, 2001).

#### **2.2.1.6 Reproductive**

Lobstein et al. (2004) indicate that excess body weight in girls leads to abnormalities in menstruation and early menarche. Several studies have outlined a relationship between obesity and lowered fertility. The prevalence of Polycystic Ovary Syndrome in youth is unknown, however, it has been argued that hormonal patterns typical of Polycystic Ovary Syndrome are increasingly evident in obese children (Lazar et al., 1995). Much research asserts that the weight of an individual affects menarchal timing (Lobstein et al., 2004). Those individuals with a higher weight are thought to have earlier menarche and, therefore, the increase in the prevalence of childhood obesity has led to a decrease in the average age of menarche. Early menarche may lead to a number of detrimental health consequences. For example, early menarche is a risk factor for breast cancer and has been associated with a number of other cancers of the female reproductive system (Lobstein et al., 2004). Furthermore, it has been suggested that early menarche can be linked to psychiatric problems experienced by adolescent girls, including depression, eating disorders and substance abuse (Lobstein et al., 2004).

Not only does obesity lead to a number of reproductive consequences for girls but literature suggests that overweight boys may also experience adverse outcomes. In contrast to girls, however, boys carrying excess weight tend to mature later than their leaner counterparts (Lobstein et al., 2004).

### **2.2.2 Psychological and Social Consequences of Overweight and Obesity in Children**

Not only are the physical health consequences detrimental to the quality of life of obese children but so are those causing social and psychological harm (Dietz, 1998). The bias and discrimination experienced by obese individuals have been well researched and shown to occur across multiple social settings (Puhl & Brownell, 2001). Self-esteem and self-perceptions in obese children are lower than those of their non-overweight peers, illustrating that the psychological effects of obesity begin early in life (Franklin, Denyer, Steinbeck, Caterson, & Hill, 2006). In addition, the health-related quality of life of the obese child has received attention from researchers, with findings showing that physical and

social functioning is poorer in obese young people (Williams, Wake, Hesketh, Maher, & Waters, 2005).

#### **2.2.2.1 Bias, Discrimination and Social Marginalisation**

Studies documenting stigmatisation of obese children date back more than 40 years. Staffieri and colleagues (1967) studied the personality traits that children used to describe obese people. The sample consisted of 90 6- to 10-year-old boys, who were asked to allocate adjectives of various personality traits to images, which represented extreme endomorph, mesomorph and ectomorph body types. Findings revealed that the boys associated obese body types with a number of negative personality features, including cheating, lazy, sloppy, lying, naughty, mean, ugly, dirty or stupid (Staffieri, 1967). When a similar study was conducted more recently in an Australian context, 8- to 10-year-old children associated similar negative descriptions with obesity (Tiggemann & Anesbury, 2000). In this study, 96 boys and girls from Years 4 to 6 completed questionnaires evaluating negative stereotyping and their beliefs about weight. Findings illustrated that consistent negative stereotyping was associated with obesity even after controlling for the child's gender, age and weight.

Richardson et al. (1961), in another well-cited study from the 1960s, explored bias against obese children in 10- to 11-year-old boys and girls. Participants were asked to rank drawings according to the child they "liked the best". Drawings were of children with different disabilities (crutches, wheelchair, missing a hand, facial disfigurement and obesity), and it was found that the obese child was ranked the lowest. This finding was independent of the ranking child's sex, cultural background, socio-economic status, living environment or own disability, showing the social bias and rejection faced by obese children. To determine whether this was still the case 40 years later, Latner and Stunkard (2003) repeated Richardson et al.'s (1961) study using the same drawings. The sample size was larger, with 458 participants from Years 5 and 6. The obese child was again ranked as the least preferred by children, demonstrating that social marginalisation was still evident and that increasing prevalence rates resulting in perhaps greater 'normalisation' have had little impact on the social rejection of obese children.

In a large nationally representative United States sample of 17,557, Strauss and Pollock (2003) explored adolescent social connections by examining friendship nominations of students within individual high schools. The authors studied multiple indicators of

connectedness for each child, including their number of friendship nominations, their number of nominations as a best friend, the reciprocity of best friend nominations, and their popularity within their friendship networks (centrality). The authors found that obese adolescents received fewer friendship nominations and were more likely to receive no nominations from their leaner peers. Obese adolescents were also less central to their social networks and had fewer friendship ties than their non-obese peers.

Discrimination, bias and social marginalisation are not only apparent in early life but also in adolescence and adulthood. The sources of bias have been well documented and occur in many settings from high school and tertiary education, to health, and medical care, and also in employment opportunities and income earned (O'Brien, Hunter, & Banks, 2007; Puhl & Brownell, 2001).

#### **2.2.2.2 Self-Esteem and Perceived Competence**

The level of bias and discrimination described above may impact on a child's self-esteem and self-perceptions. Self-esteem can be measured holistically, consisting of the child's broad evaluation of themselves, and in specific domains such as scholastic, social and physical (Weiss & Ebbeck, 1996). Using the domain-specific approach, self-perceptions such as body-esteem have been shown to be significantly lower in young obese girls compared with their non-overweight peers (Davison & Birch, 2001).

Studies in older children also show lower self-esteem among the obese compared with their leaner peers. Sung et al. (2005) compared the self-perceptions of 172 8- to 12-year-old overweight or obese Chinese children with 462 of their non-overweight peers. Perceived competence was assessed using a questionnaire that captured several components of children's self-perceptions in the physical domain. Findings indicated that overweight and obese children reported lower self-perceptions in all domains except their general level of physical activity (Sung et al., 2005).

In a representative sample of New South Wales primary school children in Australia, Franklin and colleagues (2006) also studied differences in self-perceptions between non-overweight and obese children. The sample included 2,749 children, aged 9 to 14 years, randomly selected from 55 schools. Self-esteem and perceived competence were evaluated more broadly using the Self-Perception Profile for Children (Harter, 1985). The following domains of self-perceptions were evaluated: scholastic competence, social acceptance,



athletic competence, physical appearance and behavioural conduct. Global self-worth/self-esteem was also assessed. Obese children were found to have significantly lower perceived athletic competence, physical appearance and global self-worth than their lean peers (Franklin et al., 2006). Obese girls also reported significantly lower perceived social acceptance than non-overweight girls.

Strauss' (2000) longitudinal analysis of change in self-esteem between childhood and adolescence further demonstrated the effects of obesity on psychosocial health of young people. One thousand, five hundred and twenty children aged 9 to 10 years were followed for four years, with global self-esteem assessed in the first and fourth years. No differences were found between obese and non-obese children in childhood, however, by early adolescence self-esteem was significantly lower amongst obese boys and girls. This study showed that low self-esteem in obese children was linked with increased rates of sadness, loneliness and nervousness at follow-up, and those obese children whose self-esteem declined were more likely to smoke and drink alcohol compared with their non-obese peers.

Hesketh, Wake and Waters (2004) conducted another longitudinal study, which suggested that overweight or obesity causes lower self-esteem levels rather than low self-esteem causing overweight or obesity. Child self-esteem was measured by a validated self-report questionnaire of child health, covering factors such as child's satisfaction with their scholastic ability, athletic ability, peer and family relationships, physical appearance and their global self-esteem. These data were collected as part of the Health of Young Victorians Study, which included a representative sample of 24 randomly selected schools from Victoria, Australia. Hesketh et al.'s (2004) study included 1,157 children aged 5 to 11 years, whose self-esteem was investigated at baseline and three years later. A low baseline self-esteem score did not predict gains in BMI z-score at follow-up, however, a higher baseline BMI z-score did predict a lower follow-up self-esteem score. In those children classified as overweight or obese, there was a significant decline between the two assessment points.

### **2.2.2.3 Health-Related Quality of Life**

Health-related quality of life is another area in which children with weight problems experience detrimental outcomes. Quality of life refers to an individual's ability to enjoy normal life activities (MedicineNet, 1996-2009). Schwimmer, Burwinkle and Varni (2003) studied the health-related quality of life of 106 obese children and adolescents aged 5 to 18

years. Obese children, who were recruited through referral to a children's hospital, were compared with published data for healthy children and adolescents, as well as with children and adolescents diagnosed with cancer. Findings indicated that obese children, when compared with non-obese children, reported significantly lower health-related quality of life in all domains: physical functioning, emotional functioning, social functioning and school functioning. In addition, their health-related quality of life was reported to be similar to that of children and adolescents with cancer (Schwimmer et al., 2003).

Williams and colleagues (2005) reported the health-related quality of life of a large representative, community sample of Australian children, overcoming some of the sampling limitations of Schwimmer's study (2003), which only used a clinical sample. Data were collected from 1,569 children aged 9 to 12 years, from 24 randomly selected schools, as part of the Health of Young Victorians Study. The findings showed that children's reported health-related quality of life decreased with increasing weight status. In addition, obese children reported poorer physical and social functioning than their non-overweight peers, however, emotional and school functioning scores did not differ between the groups. Evidently, data from Williams et al. (2005) showed that obese children may experience substantially poorer health-related quality of life than their non-overweight counterparts, although it is suggested that the difference was less extreme than reported by Schwimmer et al. (2003) in their clinical sample of obese children.

### **2.2.3 Summary**

The health of obese children is clearly poorer compared with their non-obese counterparts. Being obese has adverse consequences on all aspects of a child's day-to-day life, including physical, emotional, social, and educational. These are consequences that not only exert their influence during childhood but continue into adulthood. In order to improve the health of these children it is imperative to have a better understanding of the risk factors for unhealthy weight-related behaviours in the daily lives of obese children.

## **2.3 ECOLOGICAL SYSTEMS MODEL**

Over the past two decades much research has examined the risk factors that influence childhood overweight and obesity. Various models have been proposed to better understand its complex aetiology and to identify not only the biological and behavioural influences but also the environmental risk factors for obesity (Egger & Swinburn, 1997; Egger, Swinburn,

& Rossner, 2003; Swinburn & Egger, 2002; Swinburn, Egger, & Raza, 1999), with a popular model in relation to child obesity being Ecological Systems Model (Davison & Birch, 2001).

Ecological Systems Model (Davison & Birch, 2001) is a well-recognised framework, which relates specifically to the risk factors associated with childhood obesity. Urie Bronfenbrenner first developed Ecological Systems Theory in 1979 to describe the influences of an individual's context on behaviour. His theory specified four types of environmental systems, with bi-directional influences within and between the systems. The four systems included:

1. **Microsystem:** This is the layer closest to the child and contains the structures with which the child has direct contact. The microsystem encompasses the relationships and interactions a child has with his or her immediate surrounds (Berk, 2000). Structures in the microsystem included family, school, neighbourhood, and a range of other child environments. At this level, relationships have impact in two directions – both away from the child and toward the child. For example, parents may affect a child's beliefs and behaviour, however, the child also affects the behaviour and beliefs of the parent. The bi-directional influences are strongest at this layer and have the greatest impact on the child.
2. **Mesosystem:** A system comprised of connections between immediate environments. This could include the connection between the child's teacher and parents.
3. **Exosystem:** Social settings not containing the individual (such as parent's workplace schedule). The child may not be directly involved at this level, but they do feel the positive or negative force involved with the interaction.
4. **Macrosystem:** This layer may be considered as the outermost layer in the child's environment. This layer is comprised of cultural values, customs and laws.

(Bronfenbrenner, 1979)

Later a fifth system was added:

5. **Chronosystem:** The patterning of environmental events and transitions over the course of life. Elements within this system can be either external, such as the timing of a parent's death, or internal, such as the psychological changes that occur with the ageing of a child (Bronfenbrenner, 1979).

Each system contains roles, norms and rules that can powerfully shape development and Bronfenbrenner advocated that development must therefore be studied within social contexts (Bronfenbrenner, 1979).

Davison and Birch used Bronfenbrenner's Ecological Systems Theory to develop their own model and apply it specifically to the behaviours affecting a child's weight status. They contextualised the model by using concentric circles to depict the relationship between a child's behaviours and the different contexts in which he or she was situated. The individual's ecological niche (e.g. home or family) does not exist in isolation and is situated within a broader context, such as the neighbourhood and wider society. Davison and Birch (2001) advocated that it is the interactions between these contexts or layers that affect a child's weight-related behaviour. This model is based on the findings of research assessing predictors of childhood overweight in combination with Ecological Systems Model. This model is shown in Figure 2.1.

Please see print copy for image

(Davison & Birch, 2001, p.161)

**Figure 2.1:** Ecological model of predictors of childhood overweight

Child obesity has long been known to be influenced by a range of behaviours and factors and therefore it is imperative to study this within the range of social contexts applicable to children. Davison and Birch stated that behaviours affecting a child's weight status fell into a number of larger categories, including: child characteristics and child risk factors; parenting styles and family characteristics; and community, demographic and societal characteristics. Davison and Birch believed that the factors within each of these contexts interacted across contexts and affected a child's weight status (Davison & Birch, 2001). It focuses on child characteristics that place a child at risk of the development of overweight (including dietary intake, physical activity and sedentary behaviour) while accounting for the family context, the school environment, and the community and larger social environments (Davison & Birch, 2001). According to this model, child behaviours such as dietary intake, physical activity, and sedentary behaviour can place a child at risk of overweight. The influence of these child risk factors on the development of overweight is determined by child characteristics including age, gender, and familial susceptibility to weight gain. The development of child risk factors is shaped by parenting styles and family characteristics such as parents' dietary intake and activity patterns, nutritional knowledge, child feeding practices, and peer and sibling interactions. On the outer layer, characteristics of the school environment, such as structured periods of activity and the dietary quality of school lunches, and community, demographic, and larger environmental factors, such as parent work-related demands, ethnic background and the availability and accessibility of recreational facilities, influence a child's weight status.

The Ecological Systems Model has shown that there are a number of factors which influence a child's weight status. The aetiology of obesity involves complex interactions between these factors. It is an evolving model, whereby new findings can be added to the risk factors outlined by Davison and Birch (2001). According to this model, child behaviours such as diet, physical activity and sedentariness can place a child at risk of becoming overweight. The following section reviews research focusing on the relationship between these behaviours and a child's weight status as well as risk factors associated with each behaviour.

#### **2.4 RELATIONSHIP BETWEEN WEIGHT STATUS AND BEHAVIOURS**

According to the Ecological Systems Model, the three key child risk factors influencing a child's weight status are dietary behaviours, physical activity and sedentary behaviours. These are the three behaviours recommended to be targeted in child obesity treatment trials

(National Health and Medical Research Council, 2003). The first step in reviewing the evidence for this model is to examine the relationship between each of these behaviours and a child's weight status. This will be presented based on the strength of evidence firstly from experimental and then from observational (longitudinal then cross-sectional) studies.

#### **2.4.1 Dietary Behaviours**

A number of experimental studies have focused on the impact of improving dietary behaviours in children on the prevention or treatment of obesity. Collins and colleagues (2007) conducted a review assessing interventions with a dietary component for treating overweight and obese children and adolescents. The review covered the years 1975 to 2003 and included 88 studies. Thirty-seven were randomised controlled trials (RCT) and 67 were non-randomised studies. Meta-analyses were performed on eight studies that included both a dietary intervention component and an adequate control group and on four studies that had follow-up data. They found that interventions that included a dietary component were effective in achieving relative weight loss in overweight or obese children. The greatest standardised effects were in the studies by Rocchini et al. (1987) and Becque et al. (1988). In their study of 50 obese adolescents, Rocchini et al. (1987) reported significant post-intervention reductions in percentage body fat (3-6%) after a 20-week program while Becque et al. (1988) reported that 20 weeks of dietary behaviour change treatment, with or without exercise, achieved a reduction of almost 3% body fat. Those studies with follow-up data showed a diminishing intervention effect over time. This provides evidence that interventions including modifying dietary behaviours generally result in significant weight loss, at least in the short term.

In an Australian multi-site RCT focusing on dietary behaviours, Golley and colleagues (2007) examined the effectiveness of parenting-skills training, with or without intensive lifestyle education, as part of a parent-led, family-focused weight management program. Parents and overweight children six to nine years of age, were randomised to three groups: a parenting skills training plus intensive lifestyle education; parenting skills training alone; or wait-list control. Parents in the parenting skills training plus intensive lifestyle education group completed a parenting program as well as intensive lifestyle support sessions, with a focus on dietary behaviours. These sessions included: family-focused healthy eating with specific core food serve recommendations, monitoring, label reading, snacks, modifying recipes, roles and responsibilities around eating, managing appetite, ways to be active, self-esteem and teasing. The Healthy Eating and Lifestyle through Positive Parenting (HELPP)

study resulted in all three groups having a significant reduction in BMI z-score over 12 months (approximately 10% with parenting skills training plus intensive lifestyle education versus approximately 5% with parenting-skills training alone or wait-list control). There were no statistically significant differences between the three groups. Waist circumference z-score fell significantly over 12 months in both intervention groups but not in the control group.

Longitudinally, higher energy intake has been associated with greater increases in children's skinfold thickness across a period of one year (Robertson et al., 1999) and greater increases in caloric intake have been associated with greater increases in children's body mass index over a period of one (Berkey, Rockett, & Field, 2000) and three (Klesges, Klesges, Eck, & Shelton, 1995) years. In one of the few longitudinal studies of childhood obesity that included measures of physical activity, dietary intake and familial predisposition for obesity in children, Klesges and colleagues (1995) found that high levels of dietary fat were associated with greater adiposity and greater adiposity gain over a three-year period.

Positive relationships have been reported cross-sectionally between total daily energy intake and child weight-for-length (Stunkard, Berkowitz, Stallings, & Schoeller, 1999), skinfold thickness (Zive et al., 1998) and weight status (Waxman & Stunkard, 1980). Similarly, higher intakes among overweight children have been observed in cross-sectional studies (Gillis, Kennedy, Gillis, & Bar-Or, 2002; Tucker, Seljaas, & Hager, 1997), although the relationship was only significant among boys in one study (Azizi, Allahverdian, Mirmiran, Rahmani, & Mohammadi, 2001). Similarly, Gazzaniga and Burns (1993) examined the relationship between diet composition and body fatness in 48 boys and girls aged 9 to 11 years. They found that obese children had significantly greater daily energy intakes than non-obese children. Other studies have found no association between total energy intake and BMI (Atkin & Davies, 2000; Bellisle, Rolland-Cachera, Deheeger, & Guillaud-Bataille, 1988; Davies, 1997; Guillaume, Lapidus, & Lambert, 1998; Maffeis, Talamini, & Tat, 1998; Manios et al., 2004; McGloin et al., 2002; Rolland-Cachera, Deheeger, Akrouit, & Bellisle, 1995; Story, Tompkins, Bass, & Wakefield, 1986). Three cross-sectional studies observed lower energy intakes among overweight children compared with normal weight children (Gazzaniga & Burns, 1993; Johnson-Down, O'Loughlin, Koski, & Gray-Donald, 1997; Stefanik & Heald, 1959) and energy intake was also significantly lower among obese children compared with non-obese children in two cross-sectional studies (Bandini,

Schoeller, Cyr, & Dietz, 1990; Maffeis, Pinelli, & Schutz, 1996). Maffeis and colleagues (1996) studied 91 children, 35 obese and 56 non-obese, between the ages of 7.5 to 11.5 years. When energy intake was adjusted for resting metabolic rate, energy intake was significantly lower in obese than in non-obese children. Bandini and colleagues (1990) also found that among their 33 obese and 28 non-obese boys and girls aged 12 to 18 years, daily energy intake was significantly lower in the obese than the non-obese group. Both of these studies used self-report diet records, which may present problems as often portion sizes are underestimated and both obese and non-obese adolescents have been found to underreport habitual energy intake with these errors greater in obese individuals (Bandini et al., 1990).

Evidence of an association between total dietary intake and obesity among children is reasonably consistent, with findings from more robust experimental and longitudinal studies unequivocal and cross-sectional studies less consistent. This may be due to inadequate control of potential confounders such as parental overweight, lack of consideration for the role of underreporting, differences in the measurement of weight status and/or dietary intake, and differences in the extent to which the energy needs of children, such as age, gender and activity level, were taken into consideration (Birch & Fisher, 1998; Newby, 2007). Also cross-sectional studies report the dietary behaviours of children at one point in time and are unable to disentangle whether dietary intake or weight may be increasing or decreasing at that point of measurement.

#### **2.4.2 Physical Activity**

A number of reviews focusing on interventions targeting physical activity to prevent (Reilly & McDowell, 2003; Summerbell et al., 2003) and treat (Atlantis et al., 2006) childhood obesity have been conducted. In a review looking at physical activity interventions to prevent childhood obesity, Reilly and McDowell (2003) focused on RCTs published between June 2000 and May 2002 that targeted activity or inactivity, which followed children or adolescents for at least a year. This builds on a review completed by Reilly and colleagues, which reviewed literature up until May 2000 (Reilly, Wilson, Summerbell, & Wilson, 2002). A total of four new RCTs, two new systematic reviews and one meta-analysis were identified.

Reilly and McDowell (2003) discussed in detail two “high-quality” RCTs: the Child and Adolescent Trial for Cardiovascular Health (CATCH) (Luepker et al., 1996) and Planet Health (Gortmaker et al., 1999). CATCH was a three-year intervention involving a total of



96 schools (over 6,000 students) who were randomised to two treatment conditions: intervention and control. Planet Health involved six high schools with 129 classroom teachers trained in implementing the program, focusing on increasing physical activity, decreasing television viewing, improving diet and moderating fat intake. Change in obesity prevalence (measured by BMI and triceps skinfold) was the primary outcome in the study by Gortmaker et al. (1999). Luepker et al. (1996) used change in serum cholesterol as the primary outcome with change in BMI as a secondary outcome. CATCH reported no marked change in BMI at follow-up (Luepker et al., 1996). The Planet Health Study reported significant declines in obesity prevalence in girls in the intervention groups and significantly greater remission of pre-existing obesity in girls (Gortmaker et al., 1999).

Summerbell and colleagues (2003) assessed the effectiveness of interventions designed to prevent obesity in childhood through diet, physical activity and/or lifestyle and social support. They included 22 studies from 1990 to February 2005 in their review. A number of short- (Flores, 1995; Neumark-Sztainer, Story, Hannan, & Rex, 2003; Pangrazi, Beighle, Vehige, & Vack, 2003) and long-term (Mo-Suwan, Pongprapai, Junjana, & Peutpaiboon, 1998; Sallis et al., 1993) studies focusing solely on physical activity were reviewed. Of the short-term (under 12 months follow-up) studies, one reported significant reductions in BMI between intervention and control girls (Flores, 1995), while the other two did not find BMI to be significantly different between intervention and control groups (Neumark-Sztainer et al., 2003; Pangrazi et al., 2003). Two of the ten long-term (at least 12 months follow-up) focused on physical activity alone (Mo-Suwan et al., 1998). Mo-Suwan and colleagues (1998) conducted a study among 292 Thai kindergarten children (mean age 4.5 years) who were randomised by class into the exercise group or control. Small and clinically non-significant decreases in the overall prevalence of obesity (measured by triceps-skinfold thickness) were found in both the intervention and control groups. Another RCT reported in this review was conducted by Sallis and colleagues (1993) among 549 boys and girls (mean age 9.25 years). Three schools were randomised to the intervention and three to the control condition. The Sports, Play and Active Recreation for Kids (SPARK) intervention was a physical education program with a self-management component. The usual school physical education curriculum was evaluated as a control. Results for boys showed that the control group had significantly lower BMIs at 6 and 12 months but not at 18 months. The skinfold results for boys, however, showed that boys in the specialist led group had thinner skinfolds at 6 and 12 months but not at 18 months. Girls' results showed the control group to have lower BMIs at each time point and this

reached statistical significance at 18 months. The teacher led group showed the thinnest skinfolds at each time point but these were not significantly different to the control group.

Atlantis and colleagues (2006) included 14 studies up until 2004 in their review of physical activity interventions designed to treat child obesity. Two studies compared the effects of physical activity with an untreated control group (Ferguson et al., 1999; Gutin, Owens, Slavens, Riggs, & Treiber, 1997), one study compared the effect of a device which permitted television viewing contingent to exercise with that of a control group which received a similar device but different in that television viewing was not contingent to exercise (Faith et al., 2001), one examined the effects of extra gymnastics classes to untreated control (Blomquist, Borjeson, Larsson, Persson, & Sterky, 1965) and the remaining nine studies investigated the influence of a variety of dietary/behavioural treatments with or without physical activity (Becque et al., 1988; Epstein, Wing, Penner, & Kress, 1985; Gutin et al., 2002; Hills & Parker, 1988; Katch, Becque, Marks, Moorehead, & Rocchini, 1988; Rocchini et al., 1988) or combined aerobic and weight-training exercise (Emes, Velde, Moreau, Mordoch, & Trussell, 1990; Schwingshandl, Eibl, Wallner, & Borkenstein, 1999; Woo et al., 2004). Overall they found that physical activity significantly reduced adiposity in obese circumpubertal boys and girls. Much of the evidence stemmed from studies of moderate-to-high intensity aerobic exercise plus behavioural interventions for dietary restriction making it difficult to disentangle the independent effect of physical activity.

A number of longitudinal studies have assessed physical activity in childhood and analysed its influence on subsequent changes in adiposity (Jago, Baranowski, Baranowski, Thompson, & Greaves, 2005; Johnson et al., 2000; Klesges et al., 1995; Moore, Nguyen, Rothman, Cupples, & Ellison, 1995; Moore et al., 2003; O'Loughlin, Gray-Donald, Paradis, & Meshefedjian, 2000; Stevens et al., 2004) and skin folds (Moore et al., 1995; Stevens et al., 2004). These studies consistently show that children with the lowest physical activity levels at baseline have greatest increases in adiposity over time. Conversely those with the highest physical activity levels at baseline have the smallest increases in adiposity. Of the aforementioned research investigating physical activity and associated changes in adiposity in children, the findings from 103 children aged 4 to 11 years from the Framingham Children's Study may be the most informative as it employed repeated measures of objectively-assessed physical activity and multiple measures of adiposity over the period from infancy to late childhood (Moore et al., 2003; Moore et al., 1995). These findings

suggest that those children in the highest tertile of physical activity at baseline had a significantly smaller increase in BMI and percentage body fat at eight years follow-up (Moore et al., 2003).

Cross-sectional studies examining associations between objectively measured physical activity and weight status suggest that low levels of physical activity are associated with greater body fat or BMI in children. A number of large-scale population studies have examined this relationship. Janz and colleagues (2002) used accelerometers and DEXA assessments of body fat and found that minutes spent in vigorous physical activity were strongly associated with adiposity. Similarly, Trost and colleagues (2003), using accelerometry, found that obese children participated in less physical activity compared with their non-overweight peers. Two reports from the European Youth Heart Study also show inverse relationships between physical activity and adiposity. Both Ruiz and colleagues (2006) and Ekelund and colleagues (2004) examined relationships between accelerometer-measured physical activity and body fat assessed by the sum of five skin folds. They found that physical activity was inversely related to adiposity. Using DEXA and accelerometers, Dencker and colleagues (2006) investigated the relationship between physical activity and body fat. They found a negative relationship between body fat and minutes spent participating in vigorous physical activity and that children in the highest quintile of body fat engaged in 12 minutes less vigorous activity per day than their peers in the lowest quintile. The strongest cross-sectional evidence investigating associations between physical activity and body fat in children was reported in the findings of the Avon Longitudinal Study of Parents and Children (ALSPAC). Ness and colleagues (2007) studied associations between DEXA-measured body fat and accelerometer-assessed physical activity among 5,500 12-year-old children. Results showed a strong inverse relationship between percentage body fat and minutes per day in moderate-to-vigorous physical activity.

The positive association between physical activity and decreased body weight in children is mostly consistent across experimental, longitudinal and cross-sectional studies. Many of these studies also focused solely on the effect of physical activity on a child's weight and did not include other factors such as diet or level of inactivity, which may have confounded the outcome of these studies. Most of the experimental studies resulted in reductions in BMI in the intervention group. Some of these reductions were shown to be statistically significant, however, the long-term outcomes varied. The consistency in results may be because most of these studies used objective measures such as accelerometers, which

reduces the subjectivity inherent in survey methods. It can be argued that these types of measures are an objective tool for the assessment of physical activity in large populations over a period long enough to be representative for normal daily life.

### **2.4.3 Sedentary Behaviour**

Dietz (1996) stated over 10 years ago that although the adverse effects of sedentary behaviour might be as important as the effects of physical activity, sedentary behaviour had received far less attention. The role of sedentary behaviours in the development of obesity is less understood in comparison with physical activity. Sedentary behaviour refers to activities such as sleeping, lying down, cultural activities such as drawing and playing an instrument, watching television, videos and DVD and playing the computer and other electronic games. While there are a variety of sedentary activities, most of the research around sedentary behaviours has focused on television viewing. Recently, Rey-Lopez and colleagues (2008) conducted a review of 71 published studies between 1990 and 2007. They looked at the relationship between sedentary lifestyle patterns and obesity in children and adolescents between the ages of 2 and 18 years in intervention, longitudinal and cross-sectional studies. Of the intervention studies, four focused on normal and overweight children.

In Robinson's (1999) RCT, he examined the effects of reducing television, videotape, and video game use on changes in adiposity, physical activity, and dietary intake. One hundred and ninety two students in Years 2 and 3 from two sociodemographically and scholastically matched schools participated in the study. Children in one elementary school received an 18-lesson, 6-month classroom curriculum to reduce television, videotape, and video game use. Compared with their controls, children in the intervention group had significantly greater decreases in body mass index, triceps skinfold thickness, waist circumference and waist-to-hip ratio. Gortmaker and colleagues (1999) randomised 1295 ethnically diverse Year 6 and 7 students from 10 public schools. Five schools received the intervention over two years, which involved the inclusion of Planet Health sessions in the existing curricula using classroom teachers in four major subjects and physical education. Sessions focused on decreasing television viewing, decreasing the consumption of high-fat foods, increasing fruit and vegetable intake, and increasing moderate to vigorous physical activity. The researchers found that the prevalence of obesity among girls in intervention schools was reduced compared with their controls, with no differences found among boys.

In an Australian study, Salmon and colleagues (2008) randomised 311 10-year old children to one of four conditions: a behavioural modification (BM) group, a fundamental movement skills (FMS) group, a combined BM/FMS group and a control group. After adjusting for food intake and physical activity, a significant intervention effect between baseline and post intervention on children's BMI was found among those in the combined BM/FMS group compared with the control group, which was maintained at 6- and 12-month follow-up. Children in the BM/FMS group were less likely than their controls to be overweight or obese at post intervention and this was also maintained at 12-month follow-up.

A number of longitudinal studies focusing on the relationship between sedentary behaviour and adiposity among children and adolescents have been conducted. Most reported positive associations between television viewing and adiposity (Burke et al., 2005; Francis, Lee, & Birch, 2003; Gordon-Larsen, Adair, & Popkin, 2002; Gortmaker et al., 1996; Horn, Paradis, Potvin, Macaulay, & Desrosiers, 2001; Jago et al., 2005; Proctor et al., 2003). Among Australian children, each additional hour of television watched was associated with a 40% increased risk of overweight or obesity two years later (Burke et al., 2005). Similarly, Hancox and colleagues (2004) found that among 5- to 15-year-old children, average weeknight viewing was associated with a higher BMI in adulthood. In the Framingham Children's Study, those who watched the most television and videos had the largest increases in skinfolds (Proctor et al., 2003). Two studies showed relationships between television and adiposity in girls but not boys (Horn et al., 2001; O'Loughlin et al., 2000). In 1994 and in 1996, Horn and colleagues (2001) studied 103 girls and 95 boys (mean age 7.5 years), attending two Mohawk communities. Television viewing was found to be the only consistent determinant of adiposity in girls over a two-year period. On the other hand, in their cohort study of 9149 girls and 4620 boys aged 9 to 14 years old, Berkey and colleagues (2000) found a significant relationship among boys but not girls after a year. One longitudinal study showed that those children who watched more television had a higher BMI after four years but only if they were from families with no overweight parents (Francis et al., 2003). Some longitudinal studies among young (Bogaert, Steinbeck, Baur, Brock, & Bermingham, 2003; Salbe et al., 2002) and old (Elgar, Roberts, Moore, & Tudor-Smith, 2005; Kettaneh et al., 2005; Maffei et al., 1998; Robinson et al., 1993) children found no association between time spent in sedentary behaviours and subsequent changes in adiposity. In their recent review, Rey-Lopez and colleagues (2008) reported that of the 28 longitudinal studies examining the role of sedentary behaviour in the development of

overweight/obesity, most showed a positive association between time spent watching television and adiposity.

A number of cross-sectional studies have found significant relationships between sedentary behaviours (usually television) and an increase in adiposity. In their review Rey-Lopez and colleagues (2008) reported a significant positive association between television viewing and the risk of overweight/obesity in children under age 10 (Dennison, Erb, & Jenkins, 2002; Ekelund et al., 2006; Grund, Krause, Siewers, Rieckert, & Muller, 2001; Hanley et al., 2000; Janz et al., 2002; Jiang et al., 2006; Moreas, Seltran Rosas, Mondini, & Freitas, 2006; Salmon, Campbell, & Crawford, 2006; Serra-Majen, Aranceta, Perez-Rodrigo, Ribas-Barba, & Delgado-Rubio, 2006; Stettler, Signer, & Suter, 2004; Tremblay & Willms, 2003; Von Kries, Toschke, Koletzko, & Slikker, 2002; Wardle, Guthrie, Sanderson, Birch, & Plomin, 2001) and children over 10 (Adachi-Mejia et al., 2007; Andersen, Crespo, Bartlett, Cheskin, & Pratt, 1998; Deheeger, Rolland-Cachera, & Fontvieille, 1997; Eisenmann, Barteel, & Wang, 2002; Ekelund et al., 2006; Giammattei, Blix, Marshak, Wollitzer, & Pettitt, 2003; Hanley et al., 2000; Hernandez et al., 1999; Kang et al., 2006; Moreas et al., 2006; Salmon et al., 2006; Serra-Majen et al., 2006; Te Velde et al., 2007; Utter, Neumark-Sztainer, Jeffery, & Story, 2003; Vandewater, Shim, & Caplovitz, 2004), with a number of studies finding a significant positive effect only in girls (Crespo et al., 2001; Kautianinen, Koivusilta, Lintonen, Virtanen, & Rimpela, 2005; Parsons, Power, & Manor, 2005; Treuth, Hou, Young, & Maynard, 2005) and one only in boys (Patrick et al., 2004). One study also found a significant effect of television viewing in those children with at least one obese parent (Vandewater et al., 2004). Positive effects were also found in both sexes in studies analysing the effect of playing video games (Chaput, Brunet, & Tremblay, 2006; Stettler et al., 2004; Vandewater et al., 2004; Von Kries et al., 2002) and only one in boys (McMurray et al., 2000). A small number of studies found a significant positive effect between computer use and weight status in both sexes (Attewell, Suazo-Garcia, & Battle, 2003; Chaput et al., 2006; Wardle et al., 2001) and two studies only in girls (Kautianinen et al., 2005; Utter et al., 2003). Most of the cross-sectional studies reported above were conducted in the United States. In Australia, a study of 2862 children aged 5-13 years found no relationship between obesity and time spent watching television, or playing video games or computers (Wake, Hesketh, & Waters, 2003). Null findings such as this appear, albeit less common in other studies (DuRant, Baranowski, Johnson, & Thompson, 1994; McMurray et al., 2000; Wolf et al., 1993).

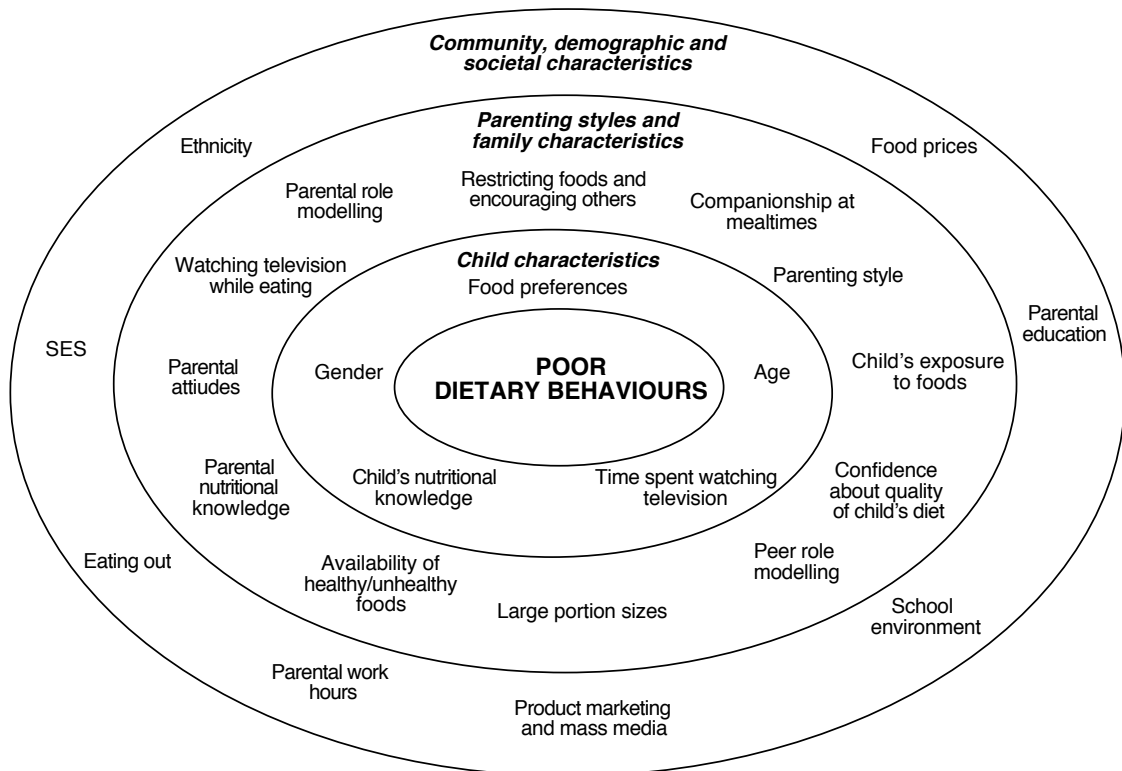
Consistent results exist among experimental, longitudinal and cross-sectional studies focusing on the effect of sedentary behaviours on a child's body weight. Inconsistencies that were shown may be a result of the role of sedentary behaviours being less understood compared to physical activity. The assessment of television viewing time as a proxy for inactivity is useful but methodologically limited at present (Dietz, 1996; Robinson, 1999) with many studies relying on self-report measures. Also, up to one half of the time children spend inactive may involve sedentary behaviours other than television viewing (Strauss, Rodzilsky, Burack, & Colin, 2001). The role of sedentary behaviours in unhealthy weight gain, therefore, may be further complicated by these other activities, which children tend to switch between or be engaged in simultaneously. It is hard to determine the role of each sedentary activity, particularly when this has been further complicated by technology changes. For example, interactive video games are not always sedentary (eg., wii consoles) and games that require children to use their hands to control movements may reduce opportunities to eat. Simply aiming to measure television viewing is, therefore, unlikely to quantify sedentary behaviour adequately. While some inconsistencies exist, there is a strong body of evidence across experimental, longitudinal and cross-sectional studies.

## **2.5 INFLUENCE OF CHILD, PARENT AND COMMUNITY CHARACTERISTICS ON THE KEY BEHAVIOURS**

While some findings are inconsistent, the majority of the evidence shows that each of the key behaviours, namely, dietary behaviours, physical activity, and sedentary behaviours, influence a child's weight status. The next step in reviewing the evidence for the Ecological Systems Model is to examine the child, parent and family, and community characteristics that relate to child weight status. It makes little sense, however, to examine the influence of these characteristics on weight status for two reasons. First, it is highly unlikely that a single characteristic will be significantly and independently related to weight status and second, most of the characteristics exert their influence on a child's weight status through the mediating effect of diet, physical activity, or sedentariness. As such, in the next section the evidence of the influence of child, parent and family, and community characteristics on each of the key behaviours will be reviewed. For each behaviour, this review will commence with a figure aligned with Davison and Birch's (2001) model that reviews and updates the evidence.

### 2.5.1 Dietary Behaviours

A number of reviews (Patrick & Nicklas, 2005; Pearson, Biddle, & Gorely, 2008; Taylor, Evers, & McKenna, 2005; Ventura & Birch, 2008) and original research (Campbell, Crawford, & Ball, 2006) have been conducted on the determinants of dietary behaviours and healthy eating in children and adolescents. The risk factors for unhealthy dietary behaviours in children identified in these studies are displayed in Figure 2.2.



**Figure 2.2:** Risk factors for poor dietary behaviours in children

Taylor and colleagues (2005) conducted their review between January 1992 and March 2003 and Patrick and Nicklas (2005) used Nicklas and colleagues' (2001) seminal work to explore the dietary behaviours of all children. Pearson and colleagues (2008) included 25 studies in their review of the association between the family environment and children's fruit and vegetable consumption. The majority of studies in this review used a cross-sectional design; over half of the studies assessed dietary outcomes through self-report, with Food Frequency Questionnaires being the most frequently used measure. Ventura and Birch's (2008) review incorporating 67 studies between October 2006 and January 2007, focused on the influence of parenting on children's dietary behaviours and weight status. Campbell and colleagues' (2006) original research focusing on the family food environment will also be discussed.



A small number of child risk factors were reported in the review conducted by Taylor et al (2005) and original research by Campbell et al. (2006). Taylor and colleagues (2005) found that age and gender influenced the dietary behaviours of children. These impacted on diet through a decline in diet quality and in breakfast consumption with age and an increase in snacking and the tendency for females to have a poorer diet than males. Their review also highlighted the impact of the child's food preferences and the nutritional knowledge of children and adolescents (Patrick & Nicklas, 2005; Taylor et al., 2005). Campbell and colleagues (2006) showed that increased television viewing time was associated with poorer dietary behaviours including increased energy intake, high-energy drink consumption and decreased vegetable intake.

Parental and family influences are critical in the development of children's dietary behaviours and patterns. Exposure to foods and the availability of healthy or unhealthy foods are key influences in developing food preferences and habits (Patrick & Nicklas, 2005; Pearson et al., 2008; Taylor et al., 2005). Parental modelling of behaviours was shown to influence a child's habits by increasing fruit and vegetable intake (Campbell et al., 2006; Pearson et al., 2008) and lowering energy intake (Ventura & Birch, 2008). Children are also influenced by what their peers eat (Patrick & Nicklas, 2005). Taylor and colleagues (2005) found that parental attitudes and knowledge about nutrition affected their child's diet quality. Campbell and colleagues (2006) found that a parent's increased confidence in the adequacy of their child's diet was associated with increased consumption of sweet and savoury snacks and decreased vegetable consumption. Large portion sizes were shown to be positively associated with energy intake (Patrick & Nicklas, 2005).

Parenting style has been shown as a risk factor of poorer dietary behaviours. Taylor and colleagues (2005) found that an authoritarian parenting style (defined as being demanding but not responsive) led to increases in children's preferences for and intake of restricted foods whereas a permissive parenting style (where the parent places very little demands on the child) was associated with inappropriate snacking and large portions of energy-dense foods. On the other hand, Ventura and Birch (2008) found that democratic parenting (a mixture of authoritarian and permissive parenting) was associated with higher energy intake and authoritative (defined as being sufficiently demanding and appropriately responsive) was linked to a higher intake of fruit and vegetables.

Parents restricting some foods and encouraging others have been related to children's preferences and intake. Researchers have found that parents encouraging or pressuring their

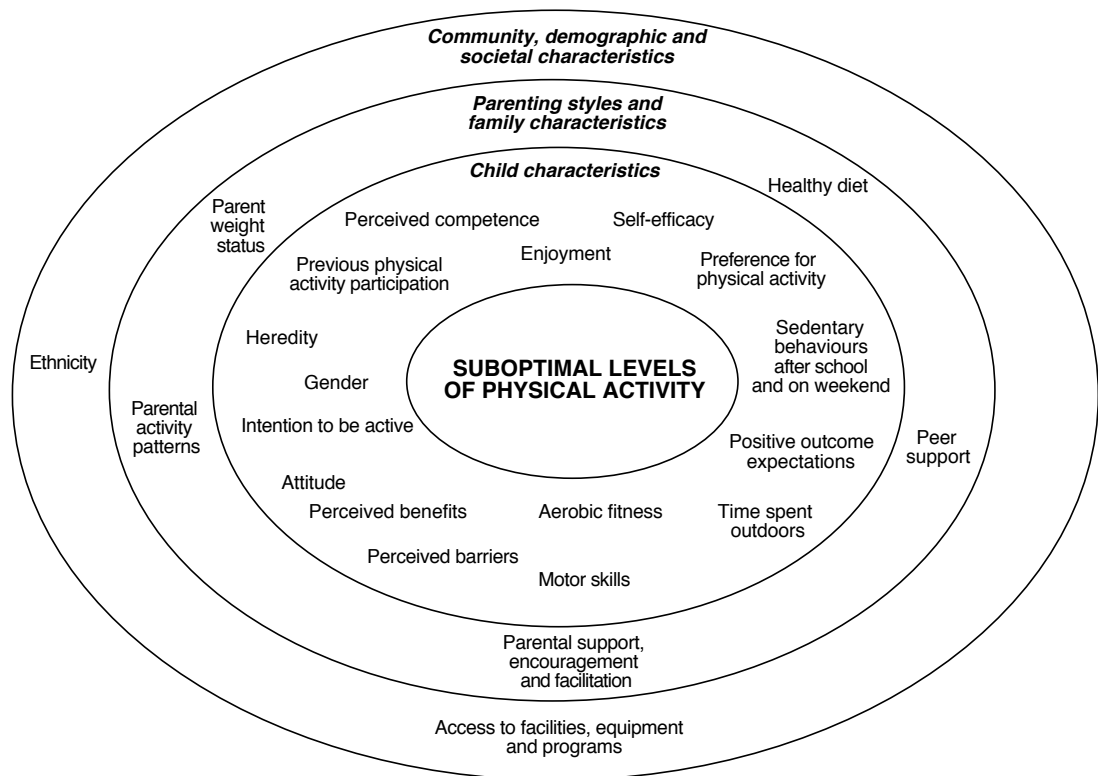
child to eat has been positively associated with energy intake (Campbell et al., 2006; Ventura & Birch, 2008). Pearson and colleagues (2008) found that family rules and parental encouragement was positively associated with a child's fruit and vegetable consumption. Restricting foods has been shown to increase a child's preference and intake of palatable foods (Ventura & Birch, 2008). Whether a family eats together has shown to have important effects on children's consumption patterns. Eating meals as a family has a positive influence on the diet quality of children and youth (Taylor et al., 2005), while watching television when eating has been associated with poor dietary behaviours (Patrick & Nicklas, 2005).

On a community and societal level, Patrick and Nicklas (2005), Taylor and colleagues (2005) and Campbell et al. (2006) highlighted a number of risk factors for poor dietary behaviours and patterns. Both reviews found that poor parental education was associated with a lack of health consciousness in food choices (Patrick & Nicklas, 2005; Taylor et al., 2005). Patrick and Nicklas (2005) showed that low socio-economic status was associated with poorer diet and Taylor et al. (2005) and Campbell et al. (2006) explained that high food prices leads to high-sugar and fat purchases. Parental work hours and eating out regularly was associated with a poorer diet (Patrick & Nicklas, 2005). Both reviews found that the school environment influences a child's diet through available foods, nutritional policies, nutrition and health curricula and peer modelling (Patrick & Nicklas, 2005; Taylor et al., 2005). Product marketing and mass media were shown to influence children's preferences, food purchases and children's food requests (Taylor et al., 2005). Ethnicity also played a role, with African-American children and adolescents having higher total energy intake (Patrick & Nicklas, 2005). In New South Wales, Australia, those children from Middle-Eastern backgrounds were more likely to engage in a number of poor dietary behaviours such as skipping breakfast, eating dinner in front of the television and eating fast food than children from English-speaking backgrounds (Booth et al., 2006).

As outlined in reviews (Patrick & Nicklas, 2005; Pearson et al., 2008; Taylor et al., 2005; Ventura & Birch, 2008) and original research (Campbell et al., 2006), there are a wide range of determinants influencing the dietary behaviours and patterns of children. While child and community risk factors play an important role, eating behaviour has been seen as a function of the social and physical environment (Story, Neumark-Sztainer, & French, 2002). Therefore, most of the research focuses on the range of parental decisions, family characteristics and community and societal factors influencing a child's poor dietary habits.

### 2.5.2 Physical Activity

Designing successful interventions to combat child obesity through the promotion of physical activity requires a thorough understanding of the determinants of physical activity for children and adolescents. Several reviews (De Bourdeaudhuij, 1998; Ferreira et al., 2006; Kohl & Hobbs, 1998; Sallis, 1994; Sallis, Prochaska, & Taylor, 2000; Sallis et al., 1992; Taylor, Baranowski, & Sallis, 1994; Taylor & Sallis, 1997; Trost, 2003; Van Der Horst, Paw, Twisk, & Van Mechelen, 2007; Wold & Hendry, 1998) as well as original research (Welk, Wood, & Morss, 2003) have focused on this issue. The physical activity risk factors outlined in these reviews and original research are displayed in Figure 2.3.



**Figure 2.3:** Risk factors for poor physical activity behaviours in children

For the purpose of this review, the reviews of Sallis et al. (2000), Trost (2003) and Van Der Horst et al. (2007) as well as original research conducted by Welk and colleagues (2003) will be the focus as they examine child, parent and family, and community and societal characteristics influencing the physical activity behaviours and patterns of children. While adolescents were included in all of these reviews, this section will focus solely on children, as they are the age group under investigation in this naturalistic inquiry. Sallis and colleagues (2000) reviewed 102 studies for children and adolescents from 1970 to 1998, however, for the purpose of this literature review, the 54 studies of children published

between 1976 and 1999 will be reviewed. For his discussion paper on the development of recommendations for children's and youth's participation in physical activity, Trost (2003) reviewed an unspecified number of relevant studies published up until February 2002 to focus on factors influencing physical activity behaviour in children and adolescents. Van Der Horst and colleagues (2007) followed up on the review conducted by Sallis et al. (2000) and examined biological, social and physical correlates of physical activity in 57 studies published from 1999 to January 2005. Of the 57 studies, 13 had children as the study population (aged 4-12 years) and four studies included both children and adolescents.

For child factors, age was surprisingly inconsistently related to physical activity among children (Sallis et al., 2000; Van Der Horst et al., 2007). Among the studies focusing specifically on children, both reviews showed that less than half of the studies found an association between age and physical activity. Evidence of a positive association between gender (male) and physical activity was found (Sallis et al., 2000; Van Der Horst et al., 2007). Trost (2003) found mixed evidence that heredity was a determinant of a child's physical activity behaviours. While Sallis and colleagues (2000) found self-efficacy had indeterminate relations with children's physical activity, both Van Der Horst (2007) and Trost (2003) found that self-efficacy was a consistent predictor of physical activity behaviour in children. Previous participation in physical activity was found to be positively associated with physical activity (Sallis et al., 2000). While Trost (2003) reported that perceived competence and attitudes towards physical activity were positively associated with physical activity, Sallis et al. (2000) was unable to determine a consistent relationship. Van Der Horst (2007) found no association between physical activity and self-perception and enjoyment, however, Trost (2003) reported that enjoyment of physical activity was positively associated with participation in physical activity. Trost (2003) found perceived barriers to being physically active was another important influence on a child's physical activity behaviours, however, Sallis et al.'s (2000) findings were inconsistent and Van Der Horst (2007) found no association. A positive association with physical activity was found for intention to be physically active (Sallis et al., 2000; Trost, 2003), preference for physical activity (Sallis et al., 2000), positive outcome expectations (Trost, 2003) and perceived benefits (Trost, 2003). Watching television and/or playing video games was frequently cited as a negative correlate of physical activity in one review (Trost, 2003) but no association was found in another (Van Der Horst et al., 2007). Among other reported child characteristics, Trost (2003) reported that a child's aerobic fitness and motor skills had a strong influence on a child's participation in physical activity.

Parental and family characteristics such as healthy diet, were related to physical activity (Sallis et al., 2000). While this could also fit easily under child characteristics, at this age it can be argued that the family environment, and in particular parents, have a strong influence on a child's dietary patterns. Sallis et al. (2000) and Trost (2003) reported a positive relationship between parental physical activity and children's physical activity. Van Der Horst and colleagues (2007) found a positive association between parental physical activity and boys' physical activity but not girls' physical activity. Van Der Horst et al. (2007) provided evidence for a positive association between parental support and children's physical activity. While parental participation with children in physical activity is often studied, Sallis et al. (2000) found this association was indeterminant. Sallis and colleagues (2000) also reported that, surprisingly, overweight parents tended to have more active children. Trost (2003) reported the influence of peer support as an important determinant of physical activity in children. Time spent outdoors had consistently positive associations with physical activity (Trost, 2003).

Original research has also been published, investigating correlates of physical activity in children. With a focus on parental influence on children's physical activity, Welk and colleagues (2003) conducted a cross-sectional study of 994 children from elementary schools. Children completed a survey with scales assessing physical activity, attraction to activity, perceived competence and perceived parental influence. Self-report data on the physical activity levels of parents were also obtained. Parental encouragement to be active was found to be a significant predictor of physical activity participation and parental facilitation of physical activity was found to be an important predictor of a child's interest and involvement in physical activity (Welk et al., 2003).

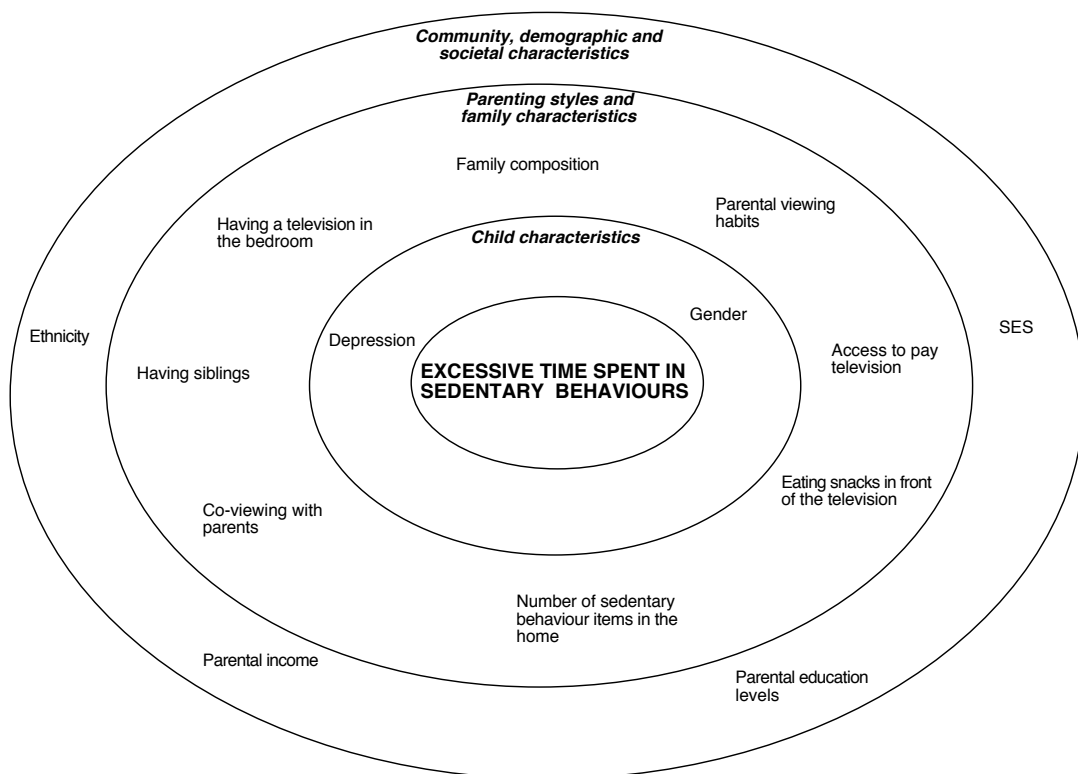
Community and societal characteristics influencing a child's participation in physical activity were found in the reviews conducted by Sallis and colleagues (2000), Trost (2003) and Van Der Horst and colleagues (2007). Environmental factors including access to facilities, equipment and programs were found to be positively related to physical activity by Sallis et al. (2000) and Trost (2003), however, no significant association was found between perceived access to facilities, play space or equipment by Van Der Horst and colleagues (2007). Ethnicity was found to be consistently related to physical activity by Trost (2003), with African-American and Hispanic children less active than white children. In New South Wales, Australia, girls from Middle-Eastern backgrounds displayed the lowest prevalence of physical activity compared with those from English-speaking

backgrounds (Booth et al., 2006). On the other hand, Van Der Horst and colleagues (2007), in their review, found no associations between ethnicity and physical activity in children.

This section highlights the child, family and community risk factors for poor physical activity behaviours of children through the reviews of Sallis et al. (2000), Trost (2003) and Van Der Horst (2007) as well as original research (Welk et al., 2003). Some of the inconsistent findings reported may be due to methodological differences, with many studies relying on self-reports measures. It is also important to recognise that each study included in the reviews conducted by Sallis et al. (2000) and Van Der Horst et al. (2007) were given the same weighting and therefore the quality of individual studies were not accounted for when determining the overall strength of evidence. Clearly, the interconnected nature of the Ecological Systems Model means that the development of risk factors are shaped by the existing child, parenting and family characteristics and community risk factors.

### 2.5.3 Sedentary Behaviours

A number of studies have been conducted focusing on correlates of childrens' and adolescents' sedentary behaviour. This section will outline reviews and original research published in this area, of which a summary of the findings is displayed in Figure 2.4.



**Figure 2.4:** Risk factors for excessive sedentary behaviours in children and adolescents

Gorely et al. (2004) and Van Der Horst et al. (2007) have reviewed the correlates of sedentary behaviour among children and young people. Gorely et al. (2004) reviewed 68 studies and Van Der Horst and colleagues (2007) included 57 studies in their review of physical activity and sedentary behaviour correlates, however, only 15 of Van Der Horst and colleagues (2007) examined sedentary behaviour correlates. Only three of these studies involved children and Van Der Horst et al. (2007) reported that evidence about the examined associations in these studies was insufficient. Gorely and colleagues (2004) grouped children and youth together in their review of the correlates of television viewing. While it is acknowledged that the risk factors may differ for children and adolescents, the factors influencing the sedentary behaviour patterns of adolescents reported by Van Der Horst (2007) will also be reviewed in this section.

In relation to child characteristics, age has been frequently studied but Gorely and colleagues (2004) found no consistent patterns and Van Der Horst and colleagues (2007) found a positive association among children in only one study and inconclusive evidence among adolescents. Gender (male) showed a positive association with watching television and videos and an inverse relationship was found with insufficient physical activity (Van Der Horst et al., 2007). Van Der Horst and colleagues (2007) also found that depression was positively associated with watching television and videos.

A number of parental and family characteristics were found in reviews and original research to influence the sedentary behaviour patterns of children. Gorely and colleagues (2004) found that young people in single-parent/guardian families consistently watched more television than those from two-parent/guardian families. Television viewing was also positively associated with parental viewing habits (Gorely et al., 2004). The home environment also played an important role as a relationship was found between having a television set in the bedroom and the amount of television viewed (Gorely et al., 2004).

Original research has been recently published focusing on parental and family determinants of sedentary behaviours. Hardy and colleagues (2006) used a self-report survey among 343 12- to 13-year-old adolescents and their parents to determine, cross-sectionally, the association between factors in the family and home environment and watching television, videos and DVDs. These adolescents were originally a part of the longitudinal Nepean Study and were followed up in the Nepean Kids Growing Up Study. The researchers found that there were a number of factors in the family and home environment associated with

adolescents watching more than two hours of television per day. These included having siblings, having access to pay television, co-viewing with parents, having a mother who watched more than two hours of television per day and eating snacks in front of the television (Hardy et al., 2006).

A number of risk factors were also found at the community, demographic and societal level. In relation to ethnicity, Gorely and colleagues (2004) found that African-American children watched more television than all other ethnic groups, whereas Van Der Horst and colleagues (2007) cited Caucasian children spent more time watching television. In New South Wales, Australia, the prevalence of engaging in more than two hours in small screen recreation was highest among girls from Middle-Eastern backgrounds (Booth et al., 2006). Socio-economic status was inversely associated with adolescents' television and video viewing (Van Der Horst et al., 2007). Parental income (Gorely et al., 2004) and education levels (Gorely et al., 2004; Van Der Horst et al., 2007) were consistently negatively associated with time spent watching television.

Reviews (Gorely et al., 2004; Van Der Horst et al., 2007) and original research (Hardy et al., 2006) have consistently outlined a range of risk factors for excessive sedentary behaviours in children and adolescents. Child, family and community characteristics all play an important role. The risk factors within the family context are the most researched and, therefore, may arguably be the most influential through the family's physical environment and accessibility to electronic media and the sedentary behaviour patterns of parents and siblings.

The factors influencing poor dietary behaviours, suboptimal physical activity, and excessive sedentary behaviours have been the focus of much research over the last 20 years. The knowledge that exists about these factors and the use of it to design interventions to prevent and treat child obesity, however, have not changed the prevalence of child obesity which is still high (Commonwealth Scientific Industrial Research Organisation, 2007) and interventions have only had modest short-term success (Atlantis et al., 2006; Collins et al., 2007; Epstein et al., 1998; Oude Luttikhuis et al., 2009). What is needed is a better understanding of the behaviours of obese children and the context in which these behaviours occur.



## **2.6 IMPORTANCE OF THIS CURRENT STUDY**

Evidence from systematic reviews shows that treatment focusing on improving dietary patterns and behaviours, increasing physical activity and decreasing sedentary behaviours in isolation or in combination, have shown moderate success (Atlantis et al., 2006; Collins et al., 2007; Epstein et al., 1998; Oude Luttikhuis et al., 2009), which could be the result of a number of factors. Many interventions use multifaceted designs (Baranowski et al., 2003; Beech et al., 2003; Golley et al., 2007; Kelder et al., 2004; Kyles & Lounsbery, 2004; Yin et al., 2005), which may be difficult to replicate due to the number of approaches used in the one intervention. Many of these interventions also target risk factors or behaviours, without a strong understanding of the context in which the behaviours occur and the way in which they interact. For example, interventions aiming to increase parental physical activity participation with their child often do not take into account the relationships between family members, the time parents have available for physical activity, backyard size, accessibility to facilities and confidence and ability of parents to participate in physical activities with their child.

Alternatively, a number of interventions have tried to target single behaviours, without considering the physical and social environments these individuals live in. Aspects of the child's micro and macro environment, including the availability of high energy-dense, palatable and inexpensive food, nutritional knowledge, food advertising, business and safety of neighbourhoods, availability of physical activity facilities, access to small screen recreation and families and peers may contribute to the environment. This has resulted in more community-based interventions focusing on changing behaviours among entire communities (Sanigorski, Bell, Kremer, Cuttler, & Swinburn, 2008; Schwendiman & Fager, 1999). Before looking at changing the behaviours of whole communities, families and individuals, however, it is essential to focus on what life is like for an obese child on both a micro and macro level and how these levels influence each other. This will assist in providing a more holistic view of the lives of obese children and their daily experiences.

Interventions taking place in highly resourced settings such as tertiary clinics may make it difficult to generalise to other settings (Golley et al., 2007). The "one size fits all" blanket approaches to promoting nutrition and physical activity assume that background factors are equal, however, a growing body of research demonstrates that people live in a range of environments, not all of which are conducive to healthy eating and physical activity (Ball, Timperio, & Crawford, 2006). Children participate in or make unhealthy choices about what they eat and their activity or inactivity levels and therefore a "one size fits all"

approach may not be appropriate for many children and families. It is imperative to examine how the child, family and community characteristics interrelate to better investigate how and why these behaviours exist among obese children and their families.

Many child obesity interventions have failed to include the entire family (Summerbell et al., 2003). Family members are influential in changing a child's behaviours (Ball et al., 2006; Summerbell et al., 2003; Ventura & Birch, 2008). In a recently released Cochrane review, Oude Luttikhuis and colleagues (2009) advocated that there is a strong need to focus more on both psychological and social factors such as self-esteem, a family's capacity to change behaviour, family characteristics, and aspects of the physical and social environments. The failure to measure and address these crucial psychological and social factors in child obesity intervention studies hinders the potential for intervention effectiveness (Oude Luttikhuis et al., 2009). The types of interventions designed and approaches developed to treat obesity, however, have also perhaps not been as successful because they have not considered the complex lives of families. Many families face a number of problems daily, with obesity being just one of these many issues (McKenry & Price, 2000). Working with obese children requires being sensitive to the intricate details of their families' lives whilst also investigating how this impacts on a child's behaviours. Focusing on the interaction between the child, his/her family and community would help researchers better understand the life of an obese child. Unless one follows and observes the life of an obese child one cannot completely understand his/her world or these interactions.

Increasingly, obesity is understood as a societal and environmental problem, rather than a purely individual one but researchers are still uncertain about which factors within the vast causal web are most central and changeable (Gilkey, 2007). An understanding of the context in which these behaviours occur and what causes these factors to take place is also necessary. Although some researchers recommend that a multi-pronged, ecological approach is needed for effective prevention and treatment (Davison & Birch, 2001; Swinburn, Gill, & Kumanyika, 2005), the sheer number and diversity of recommendations make it challenging to select the best intervention for a particular situation (Gilkey, 2007). At its most basic level, obesity is often thought of as an energy imbalance. Children gain weight when they consume more calories than they expend, suggesting that changes in caloric intake and physical activity are the primary factors responsible for national obesity trends. Previous research has failed to identify the context in which weight-related behaviours occur; that is, what is happening in the life of the child (Gilkey, 2007; Nicklas et

al., 2001). These findings have forced researchers to broaden their scope to consider a wide array of biological, psychosocial and environmental factors that may be at work. Researchers must adopt a multi-pronged, ecological approach that acknowledges the different environments critical to achieving and maintaining healthy weight status (Gilkey, 2007). Community-based research has taken a step towards this by aiming to change the social, physical and policy environments, which directly impact on the behaviours of children (Sanigorski et al., 2008). This is an important step as research has shown environmental and policy interventions are based on ecological models of behaviour and have the potential to influence entire populations (Sallis, Bauman, & Pratt, 1998). While this has shown promising results for communities (Economos et al., 2007), it is also important to gain a better understanding of the lives of the children and their families within these different communities. The most comprehensive way to do this is by looking at the life of the child at all levels of the Ecological Systems Model.

To improve our understanding of the context of these risk factors and why these risk factors exist, it would be beneficial to conduct naturalistic studies parallel to these quantitative studies. Without a deeper understanding of why these risk factors exist for these children, interventions will not reach their full potential to make lifelong behaviour changes. Naturalistic inquiries would require the researcher to be immersed in the lives of obese children, using naturalistic research and, in particular, participant observation methods to understand this complex issue. Evidently, research in this area is in its infancy.

## **2.7 CHAPTER SUMMARY**

This chapter outlined both the high and increasing prevalence of child overweight and obesity in Australia, along with the physical, psychological and social health consequences of obesity in childhood. A background to Ecological Systems Model as well as an explanation of its components was provided. The relationship between a child's weight status and dietary behaviours, physical activity and sedentary behaviours was explored along with their correlates. This review concluded by highlighting the gaps in child obesity research, in particular, a lack of contextual information which could be gained from naturalistic studies. Taking into account this literature review, Chapter 3 will outline the methods used in this current study to explore the day-to-day lives of obese children.

## **CHAPTER 3 – METHODOLOGY**

This chapter describes the steps involved in conducting the research. It explains the research design and the decisions made in order to investigate the behaviours, attitudes and experiences, which characterise the everyday lives of obese children. One of the main purposes of this inquiry was to present the stories of six obese children and their families in order to capture a clearer picture of the day-to-day life of obese children. This provided a foundation for which behaviours of the children and their surrounding context could be analysed to understand their influence on the weight status of each child. The reasons for selecting a naturalistic paradigm and, in particular, a multiple case study design, will be presented in this chapter in order to explain its suitability for such an inquiry. The theoretical orientation and conceptual framework within which the study took place will be further explored.

### **3.1 RESEARCH QUESTIONS**

The initial question directing this study was broad as it sought a general understanding of child obesity. What is day-to-day life like for obese children? Qualitative research questions, according to Strauss and Corbin (1990) “start out broadly, become progressively narrowed and more focused during the research process” (p.38). Further questions inevitably arose including, what weight-related behaviours are evident in their everyday lives? What are the similarities and differences in weight-related behaviours among the six obese children?

### **3.2 RESEARCH DESIGN**

#### **3.2.1 Qualitative Domain**

Most prior research in the area of obesity has adopted an empirical approach to research, which is often referred to as “scientific”, “rationalistic”, “post-positivist” or “logical positivist” paradigm of inquiry (Burns, 1990; Guba & Lincoln, 1994; Guba & Lincoln, 1987). This study, however, will be qualitative in nature, which Strauss and Corbin (1990) described as “research about persons’ lives, stories, behaviour, but also about organisational functioning, social movements, or interactional relationships” (p.17).

Miles and Huberman (1994) suggested that the main task of qualitative research is to “explicate the ways people in particular settings come to understand, account for, take

action, and otherwise manage their day-to-day situations” (p.7). They described several characteristics of qualitative data that provide the researcher with rich, well-grounded descriptions and explanations of processes in authentic contexts. For example, qualitative data can preserve a chronological flow, which aids in deriving accurate explanations that describe which events led to which consequences. In addition, they argue that qualitative studies have a quality of “undeniability” where words, rather than summarised numbers, provide a concrete, vivid, meaningful essence to the study (Miles & Huberman, 1994, p.1). Qualitative research was clearly the most suitable paradigm for this study.

The aim of this study was to seek greater understanding of the day-to-day lives and experiences of obese children by observing the lives of a small number of obese children. Although a great deal of research has been conducted on different factors affecting the weight status of obese children, no studies have focused on the totality of an obese child’s life. In this situation, I did not approach the study with a set of hypotheses to test. I was familiar with existing research, however, I did not attempt to impose external frameworks and models on the data before data collection.

### **3.2.2 Naturalistic Inquiry Paradigm: An Overview**

Naturalistic inquiry involves the researcher in sustained contact with people in settings where the subjects normally spend their time (Bogdan & Biklen, 1992), in an attempt to “make sense of, or interpret phenomena in terms of the meanings people bring to the setting” (Denzin & Lincoln, 1994; Mertens, 1998). Connelly and Clandinin (1990) defined narrative inquiry as “...a process of collaboration involving mutual storytelling and re-story-ing as the research proceeds” (p.4).

There is not one correct set of meanings that describe childhood obesity. Instead, multiple perspectives, entities, properties and relations are associated with this phenomenon. Given this research focus, it is believed that the most suitable paradigm for understanding the many factors which make up the culture of childhood obesity are framed by the epistemological and ontological principles which form the basis of the naturalistic paradigm (Cambourne, 2003). It is thought that a greater understanding will emerge if prolonged periods of time are spent being immersed in settings where these complex behaviours and experiences are found (Cambourne, 2003).

When using a naturalistic inquiry approach to explore these multiple constructions of reality, researchers are encouraged to adopt the role of “observer”. This role can range from “unobtrusive non-reactive” to “participant” depending on the needs of the researcher or the context of observation. Given the complex nature of child obesity, the use of traditional quantitative approaches (including the use of standardised surveys and tests) would not provide a comprehensive understanding of the social and environmental contexts of behaviours and why these behaviours occur among obese children.

Schwandt (1994) suggested that for the naturalist researcher

The world of lived reality and situation-specific meanings that constitute the general object of investigation is thought to be constructed by social actors. That is, particular actors, in particular places, at particular times, fashion meaning out of events and phenomena through prolonged, complex processes of social interaction involving history, language and action. (p.118)

Narrative and story have long been regarded as a way to describe and interpret the experiences of human beings through the centuries. Stake (1995) described the rudiments of a story as it shows that “characters in a certain setting have a problem” (p.127). Taylor (1989) stated that “we must inescapably understand our lives in narrative form” (p.51-2). In a similar vein, Polkinghorne (1989) asserted that narratives are “the primary form by which human experiences are made meaningful” (p.1). In order to gain a comprehensive insight into the day-to-day lives of obese children, it made sense to be guided by the naturalistic paradigm.

Through investigating individual cases from multiple perspectives, the way in which each family member viewed child obesity and how their interpretations and attitudes affected all aspects of their day-to-day life was determined. Therefore a multiple case study design involving participant observation was the most suitable for this study.

### **3.2.3 Multiple Case Study Design**

The literature provides a number of different definitions of the term “case study”. Burns (1997) stated “...the case study is a rather portmanteau term but typically involves the observation of an individual unit, eg. a student, a delinquent cliché, a family group, a class, a school, a community, an event or even an entire culture” (p.312). The purpose of a case study is to do an “...intensive and detailed study of one individual or of a group as an entity, through observation, self-reports, and any other means” (Tesch, 1990, p.39).

In order to describe the experiences of obese children as they participate in their daily lives, the unit of analysis for this study was each individual child. Miles and Huberman (1994) agreed that a phenomenon, such as the one in this study, could be investigated in a bounded context when the “case” is the unit of analysis. The purpose of a case study is to understand the case under review in-depth in its context, and to identify the complexities in its natural setting. The ability to focus on single groups, consider contextual conditions and explore six selected cases in-depth were the key reasons for the case study design choice in this study. Sturman (1999) argued that “case study researchers hold that to understand a case, to explain why things happen as they do...requires an in-depth investigation of the interdependencies of parts and of the patterns that emerge” (p.103).

As this study aimed to explore the social, cognitive, behavioural, and ecological factors, forces, influences and messages that are experienced by obese school children in the day-to-day ebb and flow of their lives, a case study format seemed appropriate for the need for “probing deeply and analysing intensively” (Burns, 1997, p.366). Berg (2001) supported the notion that case study methods involve “systematically gathering enough information about a particular person, social setting, event, or group to permit the researcher to effectively understand how it operates or functions” (p.225).

By framing case studies within a naturalistic inquiry framework, the researcher is able to focus on individual situations and to identify the diverse interactive processes at work (Bell, 1999). Denscombe (2003) agreed, suggesting that there “may be insights gained from looking at the individual case that can have wider implications and, importantly, that would not have come to light through the use of a research strategy that tried to cover a large number of instances” (p.30).

Case studies aim to portray “what it is like” to be in a specific situation through “thick descriptions” (Gertez, 1979, cited in Cohen, Manion, & Morrison, 2000). Bell (1993) explained that “a successful study will provide the reader with a three-dimensional picture and will illustrate relationships, micropolitical issues and patterns of influences in a particular context” (p.9).

Furthermore, Miles and Huberman (1994) stated that multiple-case sampling adds confidence to findings. They suggested that the precision, the validity, and the stability of findings are strengthened with this method. It is important to note, however, the

generalisability does not change with multiple cases. I studied six obese children and their families, however, I do not presume to generalise to other obese children.

### **3.3 METHODOLOGY DECISIONS**

Various paradigms of inquiry and the use of a range of data collection procedures and analysis techniques were employed for this study. Qualitative research is complex and the researcher makes a number of decisions with regard to the methodology. The methods and procedures of qualitative research are often more flexible than quantitative research. This idea was outlined by Daly and colleagues (2007):

It is the flexibility of qualitative method, its capacity for adaptation to a variety of research settings, that is seen as one of its strengths but it is this same flexibility that generates a range of study designs not easily captured in a single set of quality criteria. (p.44)

Relatively little standardised instrumentation is used in qualitative research, in particular naturalistic inquiries. The researcher is often the main measurement device in the study (Miles & Huberman, 1994). In order to ensure that I was effectively prepared to conduct the study, testing my data collection procedures in a small pilot study was necessary.

#### **3.3.1 Pilot Study**

Pilot studies are an important element of a good study design. During the months prior to this study, I tested the methods of my study with a family who were relatives of a close friend. Heidi was an eight-year-old girl who attended Year 3 at a local primary school. This child was not chosen because of her weight status, however, it was clear that she, her two brothers and parents were either overweight or obese.

##### **3.3.1.1 The Process**

As I already knew this family, gaining access to them and entering the field was a comfortable process. I contacted her parents and organised convenient days to observe Heidi. I also contacted the Principal of her school to seek permission to conduct observations in the school context.

I arrived at 7am, just as Heidi was getting out of bed. I observed during the period before school where she was also asked to wear the digital recorder I provided, while I took field



notes in a small notepad. At 8:15am Heidi left for school and I left for school five minutes later.

In the school environment I introduced myself to the Principal and then met Heidi's classroom teacher. I explained the study and the role I would play when observing Heidi. I explained the importance of other children not knowing that I was observing Heidi as this may have caused her to be singled out by her peers. I observed Heidi in her class and school environment for the entire day, however, I did not interact with her at all during this time. When school finished I walked to Heidi's home while she waited for her mother to finish work in the school office.

Heidi's after school activities involved swimming practice for the swimming carnival, which was due to be held the next day, and also jazz dance practice. I attended both of these activities. Heidi was only asked to wear the digital recorder when she was in the home environment due to ethical concerns and I therefore took thorough notes throughout the day. I left the house at 9:00pm, shortly after Heidi had gone to bed.

### **3.3.1.2 What Was Learnt**

No matter how prepared you are, things will go wrong. I had talked to the Principal at Heidi's local primary school about my study and was informed that the Principal would discuss this with Heidi's teacher. Her teacher, however, did not know that I was coming to observe Heidi and had not been informed at all about the study. The teacher allowed me to observe the classroom activities, however, I felt restricted in becoming involved in the classroom activities. It would also have been helpful to find out where Heidi sat in the classroom as this would have allowed me to use all my senses in observations, instead of relying solely on sight as I was unable to hear conversations that took place. It is therefore important that I discuss my study with the Principal and the classroom teacher before the observation days in order to overcome some of these issues.

It also became apparent that it is impossible to observe and record everything. When observing Heidi in the school playground I turned around for a split second and ended up losing where she was for approximately 20 minutes.

Heidi was asked to wear a digital recorder with an attached microphone when she was in the home environment. When transcribing from the digital recorder I found that at times I

could not understand what Heidi was saying, however, every other person could easily be interpreted. Piloting the digital recorder allowed for further testing to take place in order to avoid this lack of clarity.

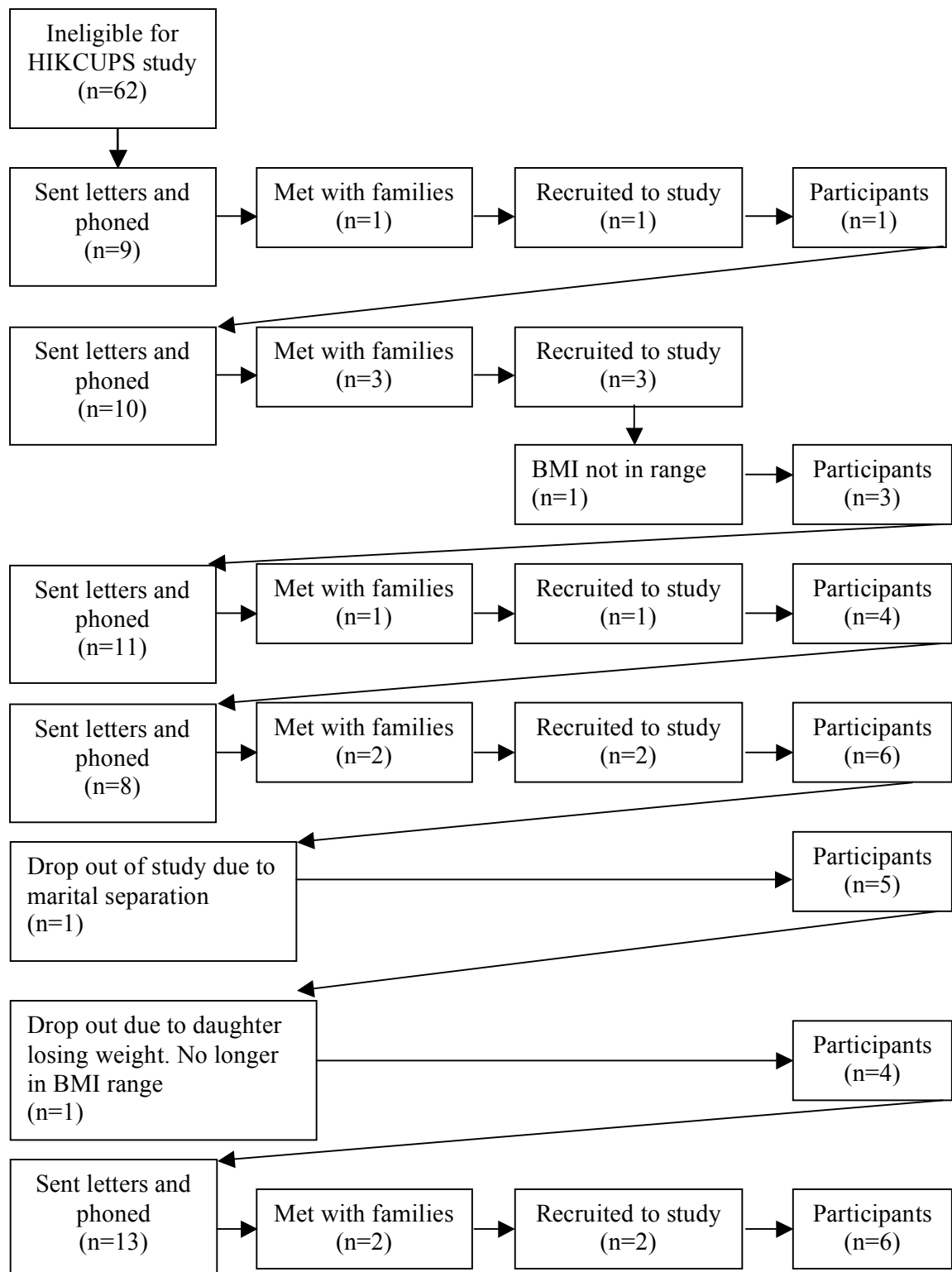
Piloting my methods assisted me to overcome these problems before data collection began. Effective and thorough organisation allowed me to reduce the risk of things not going to plan in my data collection with the six children.

### **3.4 DATA COLLECTION**

#### **3.4.1 Ethics Approval**

I presented an application to conduct the research to the University of Wollongong Human Research Ethics Committee and it was approved on September 28, 2006 (HE06/193). I also applied for approval from the Department of Education and Training and the Catholic Education Office, which was approved on the 29th of December 2006 and 29th of January 2007, respectively. Recruitment letters were sent out to 41 families who were ineligible to participate in the Hunter and Illawarra Kids Challenge Using Parent Support (HIKCUPS) in 2005/06. The reasons for ineligibility included not being able to make the program day and no means of transport to travel to the venue. A week later, the families were contacted by telephone and I met with them to discuss the project. Ten letters were sent out at a time, in order to avoid recruiting too many families to the study. I asked both the children and their parents to read through separate information sheets and sign the consent forms (Appendix A). I made sure they understood that they were able to freely withdraw from the study at any time. The recruitment process is outlined in Figure 3.1.

The participants were informed of any changes and developments within the research project. This was particularly important as “ethical matters shift and change as we move through the inquiry” (Connelly & Clandinin, 1999).



**Figure 3.1:** Recruitment of participants

### **3.4.2 Sample**

#### **3.4.2.1 Participants**

Miles and Huberman (1994) advised that qualitative researchers work with a small sample of people “nested in their context and studied in-depth – unlike quantitative researchers, who aim for large numbers of context-stripped cases and seek statistical significance” (p.27). The participants for this study consisted of six obese children, four male and two female between the ages of 7-12 years, and their families. By restricting the number of cases conducted as part of the study, I would be afforded the time to gather the type of detailed data required to answer the research questions. By having six cases I was able to compare and contrast the day-to-day lives and behaviours of these children. This age group was chosen as all these children were in primary school, making it much easier to observe their day-to-day activities, particularly in school. These families had contacted the Child Obesity Research Centre in 2005 or 2006 to be involved in a weight-management program for children, however, they were deemed ineligible. These six families represented Australian, Maori, South American and Maltese ethnic backgrounds. The marital statuses of the children’s parents were single parent, divorced, blended and nuclear families, with these families being from lower, middle and upper socio-economic strata.

The participants of this study were selected using a purposeful sampling technique as “purposeful sampling seeks information-rich cases which can be studied in depth” (Patton, 1990). Information sheets were sent to parents of ineligible children (Appendix A). As only six participants were required for the study, the information sheets were sent out to approximately 10 families at a time. These participants were then contacted approximately a week later to see if they wanted to participate or to meet to go through more information.

After recruiting, I visited these families a number of times, thus establishing a sense of trust, especially with respect to allowing the researcher to be a participant observer in their home, school and other environments.

Taking into consideration the views of Rice and Ezzy (1999), selecting information-rich cases to study in-depth was the primary aim when determining a sample in this study. Burns (1997) stated that participants for an in-depth study are often selected on the basis of their ability to provide insight into the chosen phenomenon being investigated, and this was the case in this research project.

Before observations took place I discussed my research project with the Principals at each of the six schools, either in person or on the phone (depending on the Principals' requests). Each Principal was given information about the study (Appendix B) and the classroom teacher was also given separate information and asked to sign a consent form (Appendix C). This ensured that those involved with each of the children in the school setting knew my intentions, the role I would play in the school setting and the importance of protecting the privacy of the children involved in the study.

### **3.4.3 Data Collection: An Overview**

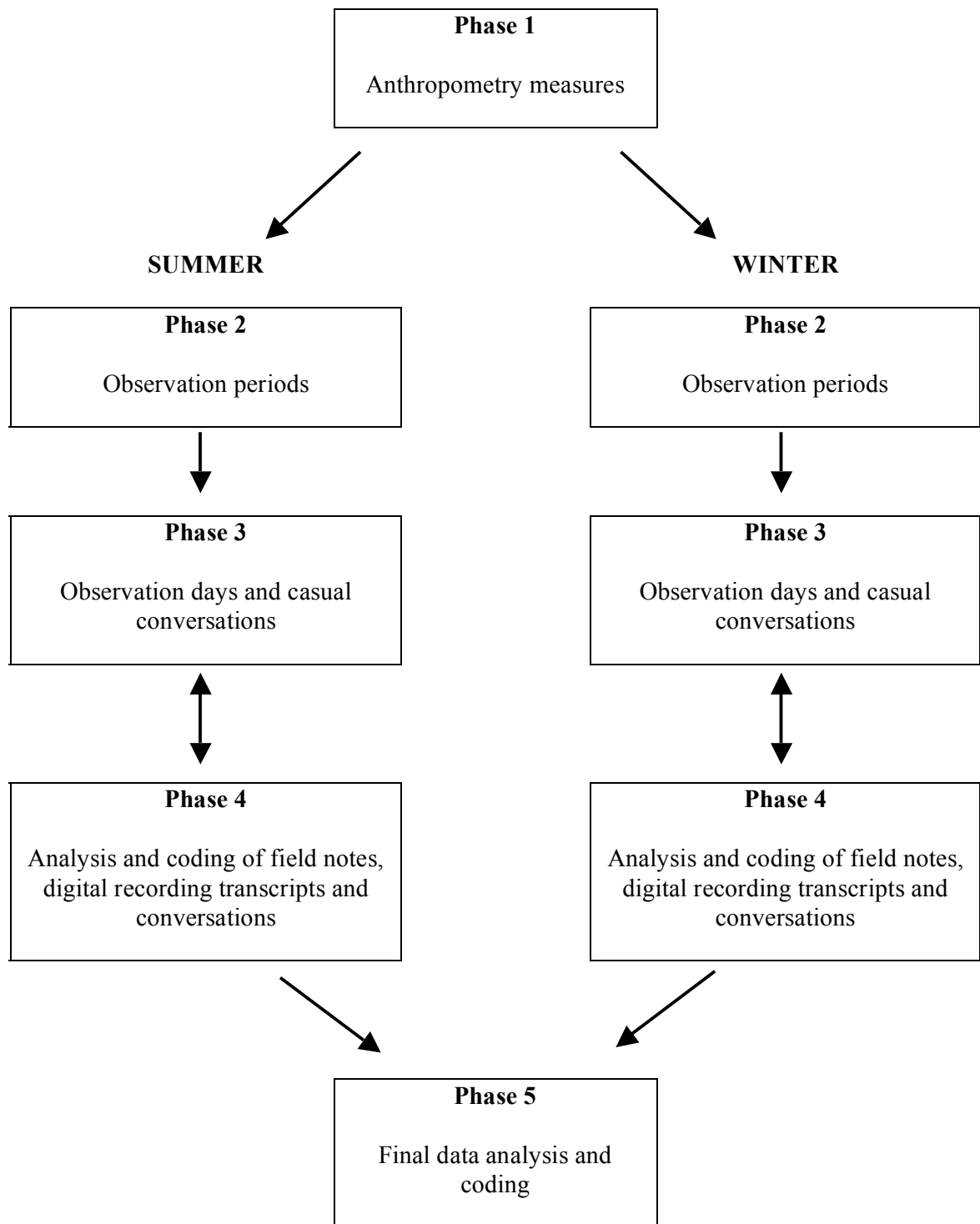
In this study, Bogdan and Biklen's (1992) advice to naturalistic researchers played an important role in the way this study was conducted. They explained:

As you conduct research you participate with the participants in a variety of ways. You joke with them and behave sociably in many ways. You may even help them perform their duties. You do these things, but always for the purpose of promoting your research goal. (p.90)

The aim of my study was to capture the day-to-day experiences of obese children and in order to do this I considered it necessary to present a narrative of each child to show their daily experiences. This meant that I needed to become immersed in their behaviour settings on a number of weekdays and weekend days. Cohen, Manion and Morrison (2000) stated that being immersed in an environment for a long period of time allows you to gain a holistic view of the factors and the way in which they interact.

Guba and Lincoln (1987) explained that the researcher is the primary data collection instrument in a naturalistic study. "The human instrument builds upon his or her knowledge as much as if not more than upon propositional knowledge, and uses methods that are appropriate to humanly implemented inquiry: interviews, observations, document analysis, unobtrusive clues, and the like" (p.187).

Van Maanen (1983) described certain methodologies as "personalised", and this was certainly reflective of this inquiry. I decided to use the pronoun "I" to describe the methodology used as naturalistic inquiries rely heavily on the human element. This project drew heavily on Patton's (1990) concept of "methodological appropriateness" and therefore it was carefully considered which forms of data collection would be most suitable. In order to follow the naturalistic mode described by Guba and Lincoln, observations were used as the main data collection procedure, with casual conversations being supplementary data. The methods of data collection and the processes are outlined below in Figure 3.2.



**Figure 3.2:** The data collection process

#### **3.4.3.1 Phase 1: Anthropometry Measures**

After each participant consented to the study, I visited each family's home to measure the child's height and weight. This determined the BMI for each child to confirm that the child was obese before data collection took place. One child who consented fitted into the overweight category as opposed to the obese category and was therefore not included in this study. Another child was recruited to replace this child.

#### **3.4.3.2 Phase 2: Observation Periods**

Approximately three hours on three separate days were spent with each family leading up to the official data collection days. This was to ensure that each family felt comfortable around me and could behave normally in their day-to-day settings.

#### **3.4.3.3 Phase 3: Observation Days and Casual Conversations**

Observation is an everyday activity but this often occurs in casual ways. Aylott (2006) explained:

Things we see or hear may or may not register or may be quickly forgotten. This may be largely because in everyday life we have no pre-determined strategy, structure or purpose to look for specific things, or to record or retain what we observe. (p.39)

Participant observation in naturalistic settings is developing as a “technique that is particularly well suited to studying young children in a variety of contexts” (McKechnie, 2006, p.191). The value of observation is that it allows researchers to study individuals in their everyday environment in order to understand “things” from their perspective (Baker, 2006). Observations are the classic method of data collection in naturalistic research and observation studies are defined by Gorman and Clayton (2005) as those that involve “the systematic recording of observable phenomena or behaviour in a natural setting” (p.40). Observations can lead to deeper understandings than interviews alone, because they provide information about the context in which events occur, and may allow the researcher to see things the participants themselves are not aware of, or they are unwilling to discuss (Patton, 1990).

##### **3.4.3.3.1 Participant Observation**

I became immersed in the research setting as a participant observer, “in which the observer participates in the daily life of the people under study...observing things that happen,

listening to what is said, and questioning people, over some length of time” (Becker & Geer, 1970, p.133).

Fine and Glassner (1979) stated that a very close association between the researcher and the participants could enhance the outcome of the study. A close relationship allows the researcher to immerse himself/herself in the setting or situation, while gathering extensive evidence that describes the setting and events. In terms of the implications of the researcher taking on a disciplinary role, adults may attempt to use participant observers for their own uses, particularly in gaining information about their child (Fine & Glassner, 1979). This was the case for two of the families as parents were interested as to how their child performed in class. I ensured that I did not provide any details to the parents as I felt that this would have compromised the trust the children had in me.

Fine and Glassner (1979) explained that whatever role a researcher uses to observe their participants it must not be overlooked, and “all data collected from children must be scrutinized for possible artifacts arising from adult presence” (p.166). It needs to be recognised that children have a culture of their own, which made this study challenging at times. Stone and Church (1968) highlighted this idea in the following:

Children have a special, separate subculture with traditions, games, values, loyalties and rules of its own. The culture of childhood shares many of the attributes of primitive culture. It is handed down by word of mouth, it includes many rituals and magical formulas whose meanings have been lost, it is hidebound and resistant to alien influences and to change. (p.370)

While observation is generally seen as the least intrusive data collection method, Baker (2006) explained that it could also be an abuse of a person’s privacy. I found that there were many issues associated with observing families, as families are typically very closed and private groups.

It was critical for me to recognise these difficulties as this acknowledges the need to understand private-public boundaries. Daly and Dienhart (1998) asserted, however, that “many families are willing to talk to researchers about some of the most intimate and private aspects of their lives” (p.109). Many children are concerned about the information they provide, and it is unlikely that the observer will gain full access to the private behaviours of the children and their families until they feel that the observer has shown that they are trustworthy (Fine & Glassner, 1979). Before the observation days, time was spent with each family, allowing them to become familiar with me. This meant that they felt far



more at ease in letting me enter the physical, social and psychological boundaries of their family.

#### 3.4.3.3.2 Gaining Access and Leaving the Field

In relation to gaining consent from participants, Fine and Glassner (1979), Corsaro (1981), and Mandell (1988) stated that adult permission is not adequate; children themselves are gatekeepers of their participation in the study. Carey and colleagues (2001) explained that gaining access and trust depends entirely on feeling and showing respect for participants and their points of view. Maintaining access requires being flexible and working around the needs and schedules of work and family (Carey et al., 2001) and this was the case in this study as I needed to be adaptable to the busy schedules of each family. The emotional attachment formed between myself and participants in each family made the departure in this study far more complicated than anticipated.

#### 3.4.3.3.3 Ethical Considerations

Due to the complexity of fieldwork research, it is impossible to adopt a single set of standards and procedures (Spradley, 1980). It is suggested, however, researchers follow the guidelines of the American Anthropological Association, which include:

- (1) Study participants come first; (2) their rights, interests, and sensitivities should be safeguarded by the researcher; (3) participants have the right to know the aims of the researcher; (4) the privacy of the participants must be protected; (5) the participant should not be exploited or harmed in any way; and (6) reports should be made available not only to the sponsors but also the participants and the general public. (Spradley, 1980, pp.21-25)

I ensured that I was familiar with these standards before entering the field and made sure that each of these principles was met throughout the study.

#### 3.4.3.3.4 The Process

As Baker (2006) explained, in order to obtain rich and in-depth information, it is important to know the best times to observe and meet with participants. Prior to observations, I discussed with each family suitable days for observations to occur. Three observation days took place in summer/autumn months (February/March) and three in the winter/spring months (July-September) in 2007. This was because research has shown that physical activity participation is affected by seasonality (Mattocks et al., 2007). Two days were weekdays and one day was a weekend day during both the warmer and cooler months. I

was unable to complete one weekend day in winter for one family as they had family issues, which made it impossible for me to spend time with them. Observations took place from when the child woke up in the morning until they went to sleep at night.

I took field notes on a range of different aspects, including the physical setting, characteristics of the family, accounts of events, conversations, and the child and their family's behaviours. Every child action and behaviour was recorded, with time notations. The actions of family members, peers, friends, teachers and any other person were not recorded unless it directly related to the target child's behaviour. The context of behaviours, patterns or conversations that were unclear when recorded were marked with an asterisk. During the course of the day, the child or family members were questioned concerning the background to the marked notations.

The target child wore a digital recorder in order to capture the exact conversation taking place in the home environment. The digital recorder, however, was only worn in the home environment when I was present due to ethical reasons. By taking the advice of Spradley (1980), I identified the speaker using quotation marks, ensured that I made a record verbatim of what a person said and also used concrete language. This was to ensure that I did not generalise the details but instead "expand, fill out, enlarge, and give as much specific detail as possible" (p.68).

I adopted the role of a participant observer as it allowed me to predominantly observe but also interact with the child and family, carrying out casual conversations to discuss certain things that were observed. By taking on this role, my identity became more overt to participants, however, as suggested by Adler and Adler (1994), it was important to remain "strongly research oriented" and "not cross the friendship domain" (p.380). I found that by sharing my own identity with participants, they were far more comfortable and willing to talk and open up to me.

In order to capture what happened in the school environment, I observed the child in this setting. Prior to conducting these observations, I met with the classroom teacher and Principal of the school. I ensured that the other children were not aware that the target child was being observed as it was recognised that this might have impacted negatively on the child. I received ethics approval from the New South Wales Department of Education and

Training and also the Catholic Education Office of New South Wales, as one child attended a Catholic school.

A number of other settings were also observed on weekdays and weekends, including: after-school care; swimming lessons; a football match; grocery shopping; lunch at a restaurant; two children's birthday parties; a car wash; the beach; Maori culture dancing and singing; athletics carnival; friends' houses; Grandma's house; an adventure climbing centre; and a family friend's house.

#### 3.4.3.3.5 Time of Observations

It was important to collect data during both the warmer and colder months as it was thought the behaviours of the children might differ during these times. I wanted to collect my summer data in February, however, as my research involved spending time observing each child in their school environment I thought that it was important that the child had time to settle into their new classroom environment. I thought that beginning data collection in Week 5 of Term 1 would allow the children enough time to settle in. This meant that some observation days actually took place in the beginning of autumn as opposed to summer. Considering that the temperatures in February and March in New South Wales are not considerably different and the thought that children would be more settled in their environment later in Term 1, I chose to start my observations mid-February.

#### 3.4.3.3.6 Casual Conversations

While this method of data collection is often referred to as "semi-structured interviews" in qualitative research, in this study this method was more aligned with casual conversations. As Dewalt and Dewalt (2002) explained "the type of 'interviewing' that is part of participant observation is usually informal, and is usually more like a casual conversation among acquaintances" (p.120). Casual conversations were carried out to ensure that I understood correctly what was being observed. This provided the opportunity to follow-up "on points raised by another person during the natural flow of conversation" (p.122).

In order to receive accurate information during both observations and conversations, maintaining positive relations between the entire family and myself was imperative. These times provided opportunities to discuss the nature of behaviours taking place, for example why a person behaved in a certain way. Fontana and Frey (1998) also encouraged the notion

of rapport as they argued that it is imperative in achieving “understanding” which is the aim of such interviewing. They explained that “close rapport with respondents opens doors to more informed research...” (p.60). Casual conversations were used throughout this research inquiry as they allowed for flexibility in interactions between family members and myself (Mertens, 1998).

#### **3.4.3.3.7 Keeping a Reflective Journal**

Holly and Mcloughlin (1989) explained that a journal is “a comprehensive and systematic attempt at writing to clarify ideas and experiences; it is a document written with the intent to return to it, and to learn through interpretation of the writing” (p.263).

The use of a reflective journal was a key method of data collection. Van Manen (1990) explained that “keeping a journal, diary or log can be very helpful for keeping a record of insights gained, for discerning patterns of work in progress, for reflecting on previous reflections, for making the activities of research themselves topics for study” (p.73). He also stated that “reflective accounts of human experiences...are of phenomenological value” (p.73).

#### **3.4.3.4 Phase 4: Analysis and Coding**

Narrative inquiry produces a voluminous amount of data, in this case in the form of field text, conversations and transcriptions from a digital recorder. Lincoln and Guba (1985) described that when deciding how to analyse data it is important to consider “the best means to ‘make sense’ of the data in ways that will, first, facilitate the continuing unfolding of the inquiry, and, second, lead to a maximal understanding of the phenomenon being studied in its context” (pp.224-5).

While qualitative analysis software such as N-vivo is available, there are mixed reviews of the influence of these software packages on the findings of a study. Bourdon (2002) explained this in the following:

The influence software can have on the analysis process is either seen as mildly positive with regard to its time saving potential or as a threat to some kind of methodological purity, distancing the researcher from the data or imposing some rigid and foreign framework on the analytic process. (p.1)

I decided that due to the vast amount of time spent with each family (approximately 95 hours), I wanted to sift and sort through the data manually. Some researchers such as Richards (1998) discussed the issue of qualitative researchers becoming too close to data. To ensure intercoder reliability, an independent researcher also separately coded the data with 96% consistency being achieved between the two sets of codes. Where there were inconsistencies, a third researcher separately coded these data and all codes were then discussed until all three researchers were in agreement.

In qualitative research, most analysis is done with words. Miles and Huberman (1994) explained that “the words can be assembled, subclustered, broken into semiotic segments. They can be organized to permit the researcher to contrast, compare, analyse and bestow patterns upon them” (p.7).

Miles and Huberman (1994) defined data analysis “as consisting of three concurrent flows of activity: (1) Data reduction, (2) Data display, and (3) Conclusion drawing/verification” (p.10). Data reduction helps to sort, focus, discard and organise the data in a way, which allows for final conclusions to be drawn and verified. Data display, which is the second activity, means taking the reduced data and displaying it in an organised and compressed way so that conclusions can be more easily drawn. The final analytical activity, conclusion drawing and verification are where the researcher begins to decide what things mean.

Analysis was a continuous process, with the researcher coming to the formal stage of data analysis having passed through much informal analysis (Hitchcock & Hughes, 1995). It is suggested by Hitchcock and Hughes (1995) that qualitative data requires this continuous approach to analysis due to the sheer variety and rich descriptiveness of data.

In naturalistic studies researchers are often swamped by the sheer volume of collected data. To overcome this, it has been recommended that the researcher develop methods for reducing the data (Bogdan & Biklen, 1992; Miles & Huberman, 1994; Schatzman & Strauss, 1973). This ensured that the relevant data were extracted from the mass amount of collected data and organised in a readily accessible form. In order to accomplish the task of data reduction in this current study I employed the coding of observational field notes, transcripts and conversations.

Soon after each observation, field notes were typed up and data recordings transcribed. Typed field notes and transcripts included three columns, one for codes, one for data and the other for notes (see Table 3.1 for a snapshot or Appendix D for an entire day's field notes). Codes were attached to field notes and transcripts and this material was assessed to identify "similar phrases, relationships between variables, patterns, themes, distinct differences between subgroups, and common sequences" (Miles & Huberman, 1994, p.9). Codes are "tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study" (Miles & Huberman, 1994, p.56). I then isolated patterns and themes, similarities and differences and took these out with me on my next observation day. This same process took place after each observation day, which ensured that I had a thorough understanding of what had been observed already and assisted in determining potential areas to monitor during the next observations. This process took place for each family.

**Table 3.1:** Snapshot of data from field notes

Coding	Observations	Notes
PA – Type – Home-organised	<b>HOME</b> - 6:30am – Arrive at the Brown’s and Jacqui informs me they had a street party last night so the children are very tired. Andy had nippers on Sunday too.	
SB – Type – SSR	- 6:55am – Andy gets up. Tells me he got a new Playstation game yesterday but can’t beat a monster in it.	
DB – Parent – Choice	<b>PUT ON DIGITAL RECORDER</b> - Jacqui asks Andy what he wants for breakfast and he says “honey toast”.	
DB – Content	- Jacqui gives him one piece of toast with butter and honey and a glass of orange juice.	
DB - Eats slowly (pattern)	- Watches TV intently as he eats his breakfast very slowly.	Does his eating pattern change at all when he isn’t watching TV?
SB – Type of SSR	- Andy watches the sport highlights on TV. - Andy changes the channel to ABC Kids.	
DB – Energy-dense/ high-sugar	- Jacqui explains that Andy isn’t a big breakfast eater. Andy likes a cooked warm breakfast but they only usually have that on the weekend. They usually have pancakes one morning on the weekend. - 7:25am – Andy finishes breakfast but continues to watch TV.	
DB – Lunch content	- Andy explains he used to have peanut butter sandwiches for lunch but he got sick of them so then had a lunch order everyday and got chicken wedges. Now he only has a lunch order on a Wednesday.	
DB – Choice and encouragement	- Jacqui asks if Andy wants something else for breakfast and Andy says “no”. - 7:30am – Ella gets up and asks for a drink of Milo and Jacqui gets it for her. Jacqui explains she usually has this first and then will have breakfast later on.	
	<b>TAKE OFF DIGITAL RECORDER FOR ANDY TO GET CHANGED.</b>	

In taking the advice of Strauss and Corbin (1990) and Guba and Lincoln (1989) “the constant comparative method of analysis” was used to seek initial codes. Every line of data in my field notes from observations and transcripts from the data recorder were searched and categorised using this method. This process took place for all of the observations.

#### **3.4.3.5 Phase 5: Final Analysis and Coding**

Pattern coding was employed as a way of grouping sections of data into a smaller number of sets, themes or constructs (Miles & Huberman, 1994). As Hitchcock and Hughes (1995)

suggested, categories will emerge from the data, and this will allow for the identification of patterns, themes, consistencies and exceptions to the rule. This provided a greater understanding of what was happening in each child's day and the similarities and differences in their behaviours.

After categorising all field notes, transcripts, and casual conversations for each family, I read through all the data and recategorised these by collapsing codes together in an organised and logical way. Two other researchers also independently coded the data to ensure that any potential biases were minimised. These codes were then organised into five main categories: dietary behaviours; physical activity; sedentary behaviours; personal factors; and social factors. In order to compare the findings across all six cases, grids were developed for each of the five main categories (Appendix E). The social factors and personal factors categories were then joined together. To compare and discuss these findings across the six cases, they were split into three categories including: high occurrence factors, moderate occurrence factors and low occurrence factors. High occurrence was defined as factors which were evident in five or six of the cases, moderate occurrence in three or four of the cases, and low occurrence was factors present in only one or two of the cases.

#### 3.4.3.5.1 Information Package

Although not part of the formal research project, after all data had been collected each family received an information package. This was individualised in order to cater for the needs and behaviours of each family. For four of the families, fourth year students from the Faculty of Education worked on devising the information package for the child as a part of a University subject. I assisted these students by discussing what I had observed in each family. The remaining two families asked for an information package, which was quite concise and only had the most relevant information. I developed these to allow them to have the most important information related to the behaviours and issues impinging on their child's weight as well as some practical ideas and information. Each information package included some of the risk factors to developing unhealthy weight-related behaviours which were observed in each family. The second part of the package consisted of different strategies each family could employ to improve dietary behaviours and patterns, increase physical activity and reduce sedentary behaviours.



### **3.5 PRESENTING THE FINDINGS**

The most basic presentation of this inquiry's findings was to have a separate section on each child encompassing narrative descriptions followed by an additional layer of analysis. The narrative descriptions incorporated data from field notes, digital recordings and casual conversations. The data from these three sources were read and re-read to enable me to identify the themes and categories of information that emerged as relevant to this inquiry. Once the themes had been compared across all six cases, the findings were mapped against a theoretical framework, which will be discussed below.

#### **3.5.1 Theoretical Framework**

Ecological Systems Model, which was previously discussed in Chapter 2, suggested that behaviour cannot be explained or predicted without also accounting for the context in which the individual exists. This not only includes the child's immediate environment but also the "contexts within which that context is situated" (Davison & Birch, 2001, p.160).

Ecological Systems Model was both relevant and useful in describing and explaining the factors affecting the weight-status and behaviour of the six obese children in the current study. Using this model assisted in examining these children's lived experiences, choices and behaviours in a range of environments in their everyday lives and determining how their context influenced their behaviours. The development of childhood obesity involves a complex set of factors from a range of contexts that interact with each other to influence the weight-status of a child. As the current study was a naturalistic inquiry, I did not draw on Davison and Birch's pre-established model prior to data collection as it was thought this might influence what I observed and recorded in my field notes. Instead, after data collection and analysis, I found that these results could be best presented using Davison and Birch's model. This theoretical framework will, therefore, be discussed in further detail in Chapter 5 in relation to the findings of my study.

### **3.6 CONFIDENTIALITY**

The issue of confidentiality emerged during this inquiry as a major concern. The participants have been referred to by pseudonyms throughout in the attempt to protect their identity. It was impossible to avoid adding descriptive details to the narrative as this allowed for the individual personalities to emerge and the stories to develop. Only three supervisors and I were able to identify the participants.

### **3.7 ENSURING THE TRUSTWORTHINESS AND CREDIBILITY OF THE FINDINGS**

#### **3.7.1 Trustworthiness**

Lincoln and Guba (1985) suggested that given the different axioms of naturalistic inquiry, criteria for scientific trustworthiness including internal and external validity, the traditional concepts of reliability and objectivity are inappropriate to these kinds of studies. The naturalistic inquiry analogues of these concepts are credibility, transferability, dependability and confirmability. The steps below were taken to ensure that these concepts were met in the data collection and analysis methods of this study. It is important to provide details about the researcher to acknowledge potential biases that I may have brought to the study. I am a 26-year-old female with an education background. I do not have any children and am of a healthy weight. These features may have meant that it was more difficult to understand the realities of having a family and the difficulties faced in being obese. While these aspects may have influenced data collection and analysis, the following steps were taken to minimise subjectivity and the potential bias of the researcher.

##### **3.7.1.1 Credibility**

- Prolonged engagement: This term involves spending sufficient time in the field to learn or understand the phenomenon of interest (Lincoln & Guba, 1986). In this study “the investment of sufficient time to achieve certain purposes” (Lincoln & Guba, 1985, p.301), including learning the day-to-day life of an obese child and understanding the views of family members was employed. Data were collected on a regular basis and contact was maintained for three years. This was important in order to take account of “distortions that might otherwise creep into the data” (Lincoln & Guba, 1985, p.302). Approximately 95 hours were spent with each family, which included time before data collection had commenced and the three days in summer and three days in winter, generating approximately 200 pages of data for each family.
- Persistent Observation: While prolonged engagement serves to temper distortion caused by the researcher’s presence, persistent observation emphasises that presence by actively seeking out sources of data identified by the researcher’s design (Lincoln & Guba, 1985). Observations were made throughout the data collection process and took place in a range of different behaviour settings. Field notes were taken, sorted and continually referred to throughout the data collection and analysis process. Casual conversations were also conducted with key individuals.

- Triangulation: This is an approach to data analysis that synthesises the data from multiple sources. Data were collected from various settings and at different times. Field notes and digital recordings were complemented with casual conversations.
- Peer debriefing: “It is a process of exposing oneself to a disinterested peer in a manner paralleling an analytical sessions for the purpose of exploring aspects of the inquiry that might otherwise implicit within the inquirer’s mind” (Lincoln & Guba, 1985, p.308). Peer debriefing was utilised in order to ensure that interpretations I made were credible. Different insights were gained from supervisors who assisted in maximising the credibility of the research.
- Member checks: These were conducted at the end of the data collection process with participants, providing them with the opportunity to “correct errors of fact and challenge what are perceived to be wrong interpretations” (Lincoln & Guba, 1985, p.314). This process provided an opportunity for me to summarise the findings and minimise subjectivity. Only one family did not take part in this process as they were having family issues.

### **3.7.1.2 Dependability**

Dependability refers to whether one can track the procedures and processes used to collect and interpret the data (Lodico, Spaulding, & Voegtle, 2006). To ensure dependability, the researcher provided rich details about the research process as well as any contextual factors that influenced decisions surrounding the research process.

### **3.7.1.3 Transferability**

Qualitative studies can often face problems in generalising from the sample to the population. Johnson (1997) explained that this may be due to the fact that in qualitative studies, participants and settings are not randomly selected and a number of researchers are often interested in studying “what is unique about a certain group of people” (p.289), which was the case in this study. He stated that a number of researchers argued that rough generalisations could be made from qualitative research. To do so, however, the group studied must be similar to the group one wishes to generalise to (Baker, 2006). Johnson (1997) suggested providing information on the number and kinds of people in the study, how participants were selected, contextual information, the researcher’s relationship with the participants and data collection and analysis methods used. This information would allow the reader to make a decision about whom the results can be generalised to and this

information was therefore provided by the researcher in this study to ensure that readers could make their own generalisations.

#### **3.7.1.4 Confirmability**

Confirmability is associated with “assuring that data, interpretations, and outcomes of inquiries are rooted in contexts and persons apart from the evaluator and are not simply figments of the evaluator’s imagination” (Guba & Lincoln, 1989, p.243).

One method suggested by the literature is the employment of an “audit trail” (Altheide & Johnson, 1998). Schwandt and Halpern (1988) discuss the significance of using an audit trail.

Highly structured record keeping is important in naturalistic evaluation because the evaluator is an integral and potentially undisciplined biasing force during data collection. Therefore, the auditee (evaluator) must document in a structured way the thoughts and otherwise hidden decisions that drive the direction of the evaluation both methodologically and theoretically. (p.82)

Researchers propose that using an audit trail can be beneficial in laying out a complicated research process in a way which makes it more accessible and accountable to those who read it, therefore enhancing a study’s dependability and confirmability.

### **3.8 CHAPTER SUMMARY**

This chapter has discussed the methodological underpinnings and details, which support this thesis’ narrative approach and aspects of its methodology. I have presented a case for my choice to conduct a naturalistic study in the form of multiple case studies informed by participant observation, digital recordings and casual conversations. Within the strengths and limitations of the chosen methodology, this study proposed to provide in-depth, vivid descriptions of the lived experiences of obese children and their daily behaviour. Finally, I detailed and explained the relevance of Davison and Birch’s Ecological Systems Model in explaining my findings.

## **CHAPTER 4 – FINDINGS**

The purpose of this study was to gain an understanding into the lived experiences of obese children. The six children's lives are presented here by using a narrative, multiple case study method. This chapter is divided into two sections. The first, is a description of the children's lives using a narrative format in order to provide a real-life picture of what a number of days looked like for six obese children. Walcott (1994) explained that, "Description addresses the question, 'What is going on here?' Data consist of observations made by the researcher" (p.12). As such, the narrative descriptions are comprised of the child's background and their daily experiences during the observation days. In addition to this, a typical day was created for each child based on the six observation days. It needs to be acknowledged, however, that these observations provide only a snapshot into the lives of these children.

The second section related to how the child's behaviours and their context related to the child's weight-status. Davison and Birch's Ecological Systems Model (2001) was applied to examine the contextual risk factors in a child becoming overweight or obese, which were evident in their daily lives.

#### **4.1 THE DAY-TO-DAY LIFE OF ANDREW BROWN**

When I first met Andrew I was astounded by his good manners and easy-going and calm nature. He had blonde hair, blue eyes and a freckly face. Andrew lived in a quiet street down the road from the local beach with his mum, Jacqui, his dad, Glenn, and his younger sister, Ella. They lived in a town just north of Wollongong, which is a high socio-economic area. The Browns were a very social family and often interacted with families in their street as they had young children also. Andrew was seven years of age and Ella was a very demanding three-year-old girl. Andrew and Ella did not spend much time together due to their different interests and ages. Andrew got along very well with his mum and dad. Jacqui worked as a librarian four days a week at Andrew's school and Glenn worked in the mines five days a week. Glenn left for work at 6:00am every morning and often did not get home until 6:00pm in the evening. Both Glenn and Jacqui were quite slim, however Jacqui often talked about wanting to lose one or two kilos. They lived in a big house but had plans to extend and renovate over the next year. Andrew was a quiet boy who interacted and got along with a wide range of adults and children. He did nippers [surf lifesaving skill development for children] at the surf club on the weekend and had piano lessons and swimming lessons during the week. Andrew's house had two televisions, one in the lounge room and one in the eating area, which had Andrew's Playstation connected to it.

Andrew attended Cedar Public School, which had approximately 320 students. Andrew was in Year 2 and had Jill Levis as a teacher, who was completely dedicated to school and her class. She recently separated from her husband and spent all her spare time on school work. Cedar Public School had a large concrete area for children to play handball and other games and a larger sloped grass area. Most of Andrew's peers were quite slim and active. Andrew had a lot of friends, in particular Sam and Nathan.

##### **4.1.1 Summer**

###### **4.1.1.1 Day One (Weekday)**

Andrew awoke at 6:30am this morning after spending a late night with his family socialising with neighbours in their street. He explained that he got a new Playstation game the previous day but could not beat the monster in it. Andrew sat on the lounge and watched the sport highlights on television before changing the channel to "ABC Kids" cartoons. Jacqui asked Andrew what he would like for breakfast and he said "*honey toast.*" Jacqui explained, "*He's not a real good breakfast eater. He's not mad on toast and doesn't like*

*cereal. Normally he really likes a cooked breakfast but he can't have that every day. We usually have that of a weekend."*

Jacqui gave Andrew a piece of toast with butter and honey and a glass of orange juice. Andrew ate his breakfast on a small plastic chair at a small square wooden coffee table in front of the television. Jacqui offered Andrew something else for breakfast but he declined this offer and continued watching his cartoon. Jacqui explained the importance of having a good breakfast. *"It's really important to have a good breakfast because if you do you're not hungry for ages, like until lunchtime."* Jacqui explained that last year they got into bad habits with Andrew's lunch.

*Jacqui: I feel like we're at the tail end of our bad habits. Yeah we had a lot of bad habits going. We used to get lunch orders a lot last year. He didn't really like sandwiches and I used to cave in a lot and just give him lunch orders. But now we just have a lunch order on a Wednesday and he likes tuna sandwiches so he'll have those most days.*

Andrew got changed into his school uniform behind the lounge. Jacqui asked Andrew if he had enough food and he asked her to pack an orange too. Jacqui packed Andrew's lunch: a tuna sandwich with butter, banana, orange, two Cruskits [savoury crispbread] with butter and honey, a piece of homemade chocolate slice and a bottle of water.

*Jacqui: So he's got a sandwich and Cruskits. I normally make a chocolate slice or something and he has a bit of that and some fruit. I sometimes give them a little packet of chips. I'm not sure if I should do that but I try to make them sometimes foods so that they don't want to binge on them or anything.*

Ella woke up and Andrew gave her a hug. Andrew continued watching cartoons on television. Andrew and Jacqui explained that Andrew was starting football soon. *"Yeah so he's doing nippers and he'll be doing footy too. Then he'll start footy training on Thursday. He likes all that stuff though. He did soccer for a year but now he wants to try something different."*

At 8:00am Andrew, Jacqui and I left for school, with Andrew singing to Johnny Cash in the car the entire way to school. Andrew sat on a seat at school for 20 minutes. His friends arrived and they began to play handball for 15 minutes. The school began their fitness session and Andrew's class did fitness in the school hall, which involved doing movements

such as jumping, twisting, squats, kicking and high knees as instructed by four Year 6 leaders. Andrew's movements were slower and he had difficulty bending all the way down, running on the spot and hopping.

Andrew went to his class and was instructed by Mrs Levis to do his spelling. He was the last person to start his spelling but listened well to all instructions given by his teacher. Andrew involved himself in class discussions and put his hand up to answer questions asked by Mrs Levis. Andrew was the last to finish his spelling words and began rushing his words to try and finish quickly. The class began their reading groups and Andrew's group did a cloze activity in which he helped his group members with some missing words. The class went on with a handwriting activity where Andrew was again told to work faster, *"Your work is beautiful but I just need you to write a bit faster."*

At recess, Andrew sat with a friend and ate his Cruskits and orange wedges. He ate very slowly and most of Andrew's friends went to play, however, Andrew finished eating by himself. Andrew put the rest of his orange back in his lunchbox and began eating his remaining Cruskits. When the bell rang Andrew was still eating his Cruskit while his friends returned from playing in the playground.

Andrew's class began their Mathematics where the class counted by tens using a "jump strategy". Andrew was very focused and put his hand up to answer every question that Mrs Levis asked. Andrew's class went to the library for their library session with Jacqui. Andrew sat by himself and listened to his mum read a story to the class. Andrew borrowed two dinosaur books and then the class was instructed to go to the Covered Outdoor Learning Area (COLA) for assembly.

At lunch, Andrew ate his tuna sandwich very slowly at his desk. Andrew started talking to Nathan and stopped eating. Mrs Levis told the children they could go out to play if they had finished eating and most of the class went outside. Andrew started eating his chocolate slice and was the last child to leave the classroom. Andrew sat on the hill by himself for 10 minutes while he watched his friends play soccer. Andrew ran 20 metres down the hill to play cricket but got puffed along the way and began to walk. He walked over to a tree and leant against it for a couple of minutes. Andrew then walked back up the hill to the canteen where he bought himself a packet of corn chips. He sat in the shade by himself and began eating these. Two of Andrew's friends tried to get him to play with them, however, Andrew



continued eating his chips and his friends ran back over to the playground. Andrew finished eating his chips and sat down with some other friends and talked for the rest of lunch.

The bell rang and Andrew looked hot and sweaty as he finished off his handwriting. Children were told to stand up and stretch and Andrew found it difficult to get up from the floor. Mrs Levis asked the class questions about their descriptive writing and again Andrew put his hand up for every question. Andrew took a long time to get started on his writing and was the only child to not finish his work. The bell rang and Andrew waited for Jacqui to finish her work in the library before they left school.

In the car, Andrew began discussing his Playstation games and explained that he has had his Playstation since he was two years of age. We arrived home and Andrew began playing the Playstation straight away. Jacqui explained to him that he could play for half an hour but then had to get ready for swimming lessons.

*Jacqui: Ok Andy you can have about half an hour on that and then it goes off. It's five past four now so you can have it on until 4:30 and then you'll have to get ready for swimming and that's all you'll have on today.*

Jacqui offered Andrew a plate of watermelon and grapes, however Andrew declined this offer. Jacqui told Andrew to stop playing the Playstation a number of times, however, he did not listen to her.

*Jacqui: Andrew we've gotta go mate.*

*Andrew: Can I finish this?*

*Jacqui: Finish it quickly and then we've got to go.*

Jacqui explained that they had to go to swimming and Andrew finally turned off the Playstation.

Andrew got ready for swimming and they picked up Ben, Andrew's cousin, on the way. Andrew swam non-stop laps of the 20-metre pool for half an hour and appeared to find this physically difficult, particularly freestyle and butterfly. Jacqui explained that Andrew became red and puffed very easily.

While Andrew was swimming, Jacqui stated that Andrew was very conscious of what he looked like and a lot of teachers had commented on his weight. She said that they used to eat McDonalds once a week but now do once every three weeks due to Andrew's weight

status. Jacqui explained that she found it difficult as Glenn works long hours and it was difficult to get the children to their afternoon activities as well as cook a healthy dinner. Andrew's grandma gave him a lot of unhealthy foods and Jacqui thought that this was where he acquired a taste for those types of foods.

When we arrived home Jacqui allowed Andrew to play the Playstation as she explained he had had a busy day.

*Jacqui: You're going to have to stop playing that.*

*Andrew: Can I just finish doing this guy?*

*Jacqui: Yeah well when you can save it, save it and we'll go through your spelling words.*

Andrew played for 40 minutes before Jacqui told him to stop playing so he could do his spelling words. Andrew continued to play the Playstation until dinner was ready even after Jacqui and Glenn instructed him to turn it off several times. Jacqui told him that he could pause it and finish the game for a couple of minutes after dinner. Jacqui explained to Andrew that they needed to make a rule about the Playstation as he had been playing it too much.

*Jacqui: You've been on that way too much. We're going to make a rule now that you've got a lot of homework. You can only go on it for half an hour when you get home from school and that's it. You don't go back to it, ok?*

Jacqui explained that all Andrew's friends loved playing the Playstation. *"All Andrew's friends are into the Playstations. I didn't mind that Eye Toy because that was very active. He would be sweating by the end of it. So I let him go on that because he used so much energy."*

Jacqui asked Andrew if he wanted water or cordial with his dinner and Andrew said cordial. Andrew sat at the dinner table and Jacqui served his dinner of chicken breast, two boiled potatoes, broccoli, carrot and gravy. Jacqui explained that Andrew's portion size was a big problem as he had a big meal for dinner and then would be allowed a treat after dinner. She explained that normal dinners for them included spaghetti bolognese, tacos, curry and rice, chicken schnitzel and Dominos pizza as Andrew loved pizza. Andrew did not finish his chicken and he said he did not like the bone. Jacqui told Andrew there was more chicken if he wanted some more but he left the table to play the Playstation. Glenn got annoyed with

Andrew and told him to turn it off so he did. Jacqui asked Andrew if he had enough for dinner and Andrew said that he was still hungry.

*Jacqui: Do you want something else to eat?*

*Andrew: Yeah.*

*Jacqui: Do you want choc slice and light milk?*

*Andrew: Yeah.*

Jacqui explained that she only just started giving Andrew light milk as he never used to like the taste. Andrew had his chocolate slice and milk in front of the television.

Jacqui said good night to Andrew as she left for her nightly walk. She told Andrew that he should read for 15 minutes and then watch 15 minutes of television. Andrew read his dinosaur books on his bed for half an hour. He came out of his room and played with his juggling balls before Glenn told him that it was time for bed. Andrew read his book before turning out the light that night at 8:30pm.

#### **4.1.1.2 Day Two (Weekday)**

Andrew got out of bed that day at 6:45am and began making shapes with a new set of magnets. Jacqui asked Andrew if he would like an egg and bacon sandwich for breakfast because they had bacon left over from camping. Andrew told Jacqui that he would just have bacon and eggs but not bread or toast. Andrew sat and watched “ABC Kids” cartoons while he waited for his breakfast. Jacqui made Andrew’s lunch consisting of a tuna sandwich, two premium crispbreads with Vegemite and butter, one cheese and biscuit dip, one piece of chocolate slice and an orange cut into wedges.

Andrew explained that he did not have swimming training the previous day as it was his cousin Ben’s birthday. Andrew yawned and Jacqui explained they were eating lollies and were up late the previous night, which was why he was so tired. Andrew concentrated hard on the cartoons and told me about a Playstation game where they used the same actions. Andrew explained that Jacqui might buy him the new John Cena toy, “*Mum said if I’m good for a whole week then she’ll get me John Cena.*” Andrew began singing to the “ABC Kids” theme song.

Andrew ate his breakfast in front of the cartoons. He had chopped up fried egg and bacon with tomato sauce and a glass of orange juice. Andrew moved the table closer to him. Jacqui asked Andrew how his breakfast was and he said, “*Good.*” Jacqui explained “*Glenn*

*does the hot breakfasts. He's the hot breakfast person on the weekends."* Andrew ate breakfast very slowly in front of the cartoons. He pulled some fat off the bacon and left it to the side. Andrew became very distracted by the cartoons. Jacqui told Andrew to use his fork. *"Use the fork please. You're being a piglet Andy, use your fork."*

Ella came over and gave Andrew a tight hug. Andrew told me about one of his Playstation games, *"I've got this game and I always play it and I'm always my favourite, John Cena."* Andrew began throwing his football up and catching it. At 8:05am Jacqui, Andrew and I left for school, with Andrew singing to a times table CD on the way. Jacqui reminded Andrew to eat his fruit first at recess.

Andrew stood and talked with his friends at school before the morning bell. Fitness took place, which involved jogging on the spot, doing high knees and walking around the library. Andrew found high knees particularly hard to do, however, he kept a good pace walking around the library. He mostly walked by himself but then also walked with friends at times. Mrs Levis complained to the other teachers about how much time fitness took up and how difficult it was to fit it into their busy schedule.

Andrew began working on his spelling in class. Mrs Levis asked Andrew to get a folder from the staff room as he has big muscles and Andrew appeared embarrassed by this. When Andrew returned the class began working with their reading groups. Andrew's group read "Spectacular Spain" and Andrew tried hard but was not very fluent. The class then moved onto editing and then handwriting and Andrew was told he was sitting and listening beautifully.

The recess bell rang and Andrew sat with two friends on the concrete outside. He ate four orange wedges, his cheese dip and then his chocolate slice. Andrew's friends left to go and play on the oval, however Andrew, remained sitting eating his chocolate slice and licking the chocolate off the plastic. Andrew got up and began walking around with his friends for two minutes before the bell rang.

Andrew's class worked on adding with blocks on the floor of the classroom. Scripture then took place and after Scripture the class went straight back onto their Mathematics work. Children were directed to draw certain numbers in their books, however Andrew found this task difficult and asked Nathan for assistance.

The lunch bell rang and Andrew's friends were sitting on the floor to eat their lunch. Andrew sat at his desk by himself and began eating his tuna sandwich extremely slowly. One of Andrew's classmates showed Mrs Levis that her lunchbox was able to stick to the wall and Mrs Levis joked that she wished she could stick students to the wall when they were naughty.

*Andrew: I'd probably pull the wall apart with my weight.*

*Mrs Levis: Don't be silly Andy.*

*Classmate: Yeah how much do you weigh Andy?*

*Mrs Levis: No we don't discuss weight in here because it upsets me because I don't want people to talk about my weight.*

Children were told to go out and play and Andrew finished the last bit of his sandwich and went straight to the library where his mum was working. Andrew looked at a "Jurassic Park" book and then drew a picture of a dinosaur and a person. The rest of Andrew's friends played outside on the field.

The bell rang and Andrew told me about a pizza day they were having at school the next day. Mrs Levis read "Diary of a Tadpole" and the class drew the lifecycle of a tadpole and then wrote their story. Andrew put up his hand to answer a number of questions related to the story.

The bell rang and Andrew met his mum at the library. We went to pick up Ella from Andrew's grandma's house. Andrew asked Jacqui for a can of soft drink from the fridge and Jacqui allowed him to have a glass full but not the entire can. Jacqui poured a glass of lemonade for Ella and gave the rest of the can to Andrew. Andrew's grandma put out some large rice crackers on the table and while everyone had two each, Andrew had five to eat.

At 4:00pm Jacqui took Andrew to piano lessons. She explained that she wanted him to do piano lessons as she thought it was valuable for Andrew to learn an instrument. Half an hour later Jacqui, Ella and I picked up Andrew. We stopped off at the shops to get a few things for dinner and Andrew asked if he could have an ice block. Jacqui told him that he could have an ice block but not an ice cream. Andrew got a Splice ice cream and Ella had a chocolate Paddlepop thickshake. Jacqui then told Andrew "*no more food before dinner now so don't ask me.*" Jacqui explained to Andrew that he needed to eat the whole orange instead of sucking the juice out of it.

*Jacqui: Now can I just tell you Andy that you've only had one piece of fruit and you see how you suck the orange? Did you know that all the good things for your body, the things that help you go to the toilet and help you digest your food is in the actual eating of the fruit? You peel it off from one end. This is how Mummy does it. I'll show you. This is how Mummy does it. I hold this bit and then peel it away.*

When we arrived home Andrew asked Jacqui if he could go on the trampoline. Jacqui said yes but when he comes in he needed to do some reading and spelling and then he could have free time. Andrew jumped on the trampoline for 10 minutes and then came inside and Jacqui went through Andrew's spelling words with him. Andrew tried hard with his words even though they were quite difficult. Jacqui then told Andrew *"read a couple of chapters now and then have your Playstation before dinner and then you can read it before bed."* Andrew read two chapters of his book and then Jacqui told Andrew he could play the Playstation if he would like to. Andrew played "Smackdown" while Jacqui made tacos for dinner. He explained, *"I killed the other guy and he's got a chest pad and I don't even have a chest pad. He does some mad tricks. I like to make the Undertaker's eyes white, like he can do this. They're fully white."* Jacqui explained that she really enjoyed reading. *"I love reading but once I get a good book I can't put it down."*

Jacqui explained that she found it hard to try and juggle everything especially when Glenn worked such long hours. *"It makes it hard on us too because I have to do everything here."* Jacqui explained that Andrew usually had adult portions of the dinners that he really loved such as tacos and pizza but stated, *"He is a big boy though and is growing."* Jacqui got frustrated at Ella as she was trying to cook dinner but Ella kept interrupting her.

After an hour of playing the Playstation Jacqui told Andrew to turn the Playstation off several times. Similar to previous days, Andrew continued to play until Jacqui got angry with him and he finally turned the game off. Andrew asked Jacqui if he could eat dinner in front of "The Simpsons" because Ella was allowed.

*Jacqui: Andy you can have yours at the table because I'm just letting Ella do that because she's tired.*

*Andrew: But how come Ella gets to sit there?*

*Jacqui: Oh I suppose you can have your dinner in there tonight mate because Dad's not home.*

Jacqui explained that she was letting him relax in front of the television tonight because he had had a very busy day. *“I’ll let them sit down there tonight cause Glenn’s not here and they can relax a bit because he’s had a very busy day.”*

Jacqui gave Andrew three tacos with mince, cheese, lettuce, tomato, sour cream and salsa and a glass of water. Jacqui said that he would probably ask for more. Andrew put on “The Simpsons” DVD to watch while he, Jacqui and Ella were eating, however, he got very distracted by it. Jacqui said, *“Don’t concentrate on that, concentrate on dinner. That’s why we don’t eat down here...Concentrate on that otherwise I’ll put you back at the table.”* Jacqui had to tell Andrew a number of times to concentrate on his food and explained, *“I don’t like them eating down here because they look at the TV too much.”* Andrew finished eating but left a lot of his salad. Jacqui asked Andrew if he was going to eat his salad and he said no.

At 6:50pm Glenn got home from work. Jacqui asked Andrew if he wanted to go to surf club or to Michael’s party on the weekend as he could not do both. Glenn wanted Andrew to go to surf club, however Andrew could not decide.

*Glenn: Well what do you want to do, do you want to go to surf club or you want to go to the party? Andy?*

*Andrew: I don’t know.*

*Glenn: Well you’ve got to make up your mind. Surf club starts at 10 so he could go to surf club and then go to the party.*

*Jacqui: For an hour? Cause the party goes from like 10:30 until about 2 or 3 so it’s one or the other. It’s up to you Andy. One or the other it will have to be, Glenn.*

Andrew goes straight to the toilet after dinner and complains of stomach cramps. He was quite sick the rest of the night and cried and screamed at different times. He then had a shower and read in bed for the rest of the night. Andrew thought that maybe he ate too much but Glenn told him that he had the same problem that morning. He went to sleep at 8:15pm tonight.

#### **4.1.1.3 Day Three (Weekend Day)**

Andrew awoke at 7:00am that morning. Jacqui agreed to let him play the Playstation and Andrew turned on the Playstation and positioned a chair two metres away from the screen. He explained that he was playing his favourite game “Smackdown”, which he received

from his friend Ben. Glenn told Andrew to get changed but Andrew continued playing his wrestling game, ignoring his father. Glenn asked Andrew and Ella if they would like French toast for breakfast that morning. Ella said no as she had just had a Milo, however Andrew quickly said yes. Glenn asked Andrew to go and get changed but Andrew explained that he just wanted to finish something on his game.

*Andrew: I made a guy bleed in the head. I made him bleed. I did, I made a guy bleed in the head. I kept on falling on him. He kept on tripping me over and I kept falling and then I accidentally head butted him in the head. He tripped me over. He gave up. He gave up because he knew I was going to beat him. He had blood all over him and I made him bleed in the head. I kept on punching him and head butting him and that's how I destroyed him.*

Andrew got changed and continued to play the Playstation. Glenn instructed Andrew several times to turn off the Playstation as breakfast was ready, however, Andrew continued playing. He finally turned it off, announcing that he beat the Undertaker wrestler.

Glenn allowed Andrew to eat his breakfast in front of the television.

*Glenn: Do you want to sit down in front of the TV or do you want to sit here and eat it?*

*Andrew: I'll sit down there.*

Andrew sat at the small table in front of the cartoons. Glenn brought over his breakfast, two pieces of French toast with tomato sauce squeezed over the top. Glenn asked Andrew if he would like a drink with his breakfast and Andrew asked for orange juice. Glenn brought Andrew a glass of green cordial and placed it on the table. Normally Andrew ate his meals quite slowly, however, he finished his toast quickly. Glenn offered Andrew some more breakfast several times, however, Andrew declined his offers.

*Glenn: Do you want some more Andy?*

*Andrew: Um, no thanks.*

*Glenn: I only gave you one and a half pieces of bread. Do you want some more or not?*

*Andrew: No thanks, Dad.*

Andrew played with his wrestling figurines, explaining what moves they could do. Glenn asked Andrew if he wanted to ride to the shops with him to get the rugby league draw, however, Andrew was not paying attention and continued playing with his toys. Andrew



started watching “Round the Twist”. Jacqui told Andrew to clean his teeth but Andrew explained that he wanted to finish watching his show. Glenn then told Andrew to go and brush his teeth and he got up straight away.

Andrew asked Glenn if they could play Battleships together. After they played for 45 minutes, the game ended and Andrew asked Glenn if they could play again but Glenn said no as they had to go to surf club. Andrew was disappointed and explained that he did not want to go to the surf club anyway.

*Andrew: Can we have another game after this?*

*Glenn: No cause we’re going after this.*

*Andrew: Where to?*

*Glenn: For a ride to the surf club.*

*Andrew: Do we have to?*

*Glenn: Yeah we do.*

*Andrew: No we don’t.*

*Glenn: I’m going over there and you’re coming.*

*Andrew: No you can’t tell me I have to come.*

*Glenn: Well Ben and Logan and everyone else is going for a ride.*

*Andrew: Yeah but they don’t have anything else on. I do.*

Andrew agreed to go, however, he refused to take his board shorts even though Glenn was convinced he would want to swim when they got there.

*Glenn: Take your cossies because I bet once we get there you’ll want to go in.*

*Andrew: I don’t want to.*

*Glenn: Yeah we’ll see.*

*Andrew: Once I get there I probably won’t want to.*

*Glenn: Oh yeah, we’ll see.*

*Andrew: I bet you I won’t want to.*

*Glenn: I reckon you will once we get there.*

Andrew explained that he usually participated in flags, sprints, swimming and games and Glenn said that Andrew enjoyed the swimming events the best. Andrew was disappointed when he realised he would not get to see some of his friends at surf club and Glenn explained that that is why he wanted Andrew to go to surf club instead of the party that day.

*Andrew: Oh that reminds me, damn. I won't get to see one of my best friends from my school.*

*Glenn: Yeah, they're all going to be there Andy. That's why I want you to come.*

*Andrew: Oh damn it. They're friends from my school. They're in a different surf club. There's Lachlan and Nathan.*

Andrew got his bike out and Glenn explained that Andrew had only been riding bikes in the last year as he was too big for bikes and would often overbalance. Andrew and Glenn rode to surf club. Andrew had difficulty riding and had to stop several times to catch his breath. As soon as Andrew arrived at surf club he began talking to Logan and Ben. Andrew decided to compete in the 110-metre sprint against his friends. He covered his body with his towel until it was his turn to race. He was the biggest boy at surf club. Andrew was coming second last most of the race and then fell over and ended up walking the remaining part of the race and, therefore, came last. Glenn explained that he thought that Andrew purposely fell over as he was tired and could not be bothered to push himself to run anymore. Andrew said that he would have had a good chance of winning the race had he not fallen over.

Andrew and Glenn went for a swim in the pool and they arrived home at 10:35am. Jacqui was quite upset with them as Andrew was supposed to be at the party at 10:30am. Andrew had a quick shower and 10 minutes later Andrew, Jacqui, Ella and I left for the birthday party.

Andrew joined Michael, Aiden and Nathan on the slides at Zoom [Indoor Play Centre]. Michael's mum Nicky bought Andrew an Oak strawberry milk and Michael gave Andrew a lolly bag filled with lollies and chocolates. Throughout the party Andrew frequently came back to the table to drink his milk and eat lollies from his bag.

The boys played on the slides for 45 minutes before Nicky called the boys for lunch. Each of the boys received a plate full of hot chips and five chicken nuggets each. Andrew did not talk at all while he was eating. He was the last boy to finish eating and ate a lot more food than his friends did. Andrew left three nuggets on his plate and then told Jacqui that he could not finish his lunch. Andrew quickly drank two big cups of cordial and then joined his friends on the slides.

The boys played on the slides for another half an hour until they were called for Michael's cake. Andrew received a piece of cake that was almost twice the size of the other pieces. Andrew ate the whole piece very quickly, getting upset with Ella for taking his seat.

The boys left Zoom and arrived at Michael's house for a swim in the pool. Jacqui agreed to go for an hour as she had work to do for the next day. The boys found pretend guns and started running around the house with them. Andrew got organised to go into the pool, with Jacqui insisting that he wore a rash shirt and sunscreen even though the other boys were not. The boys and Ella went for a swim in the pool. Andrew sat on the step of the pool the entire time. After an hour and a half of swimming Jacqui said they needed to leave so she could begin her work. She found it extremely difficult to get Andrew to come with her. Andrew finally got out of the pool, dried off and then ate a chocolate bar from his lolly bag.

As soon as he arrived home Andrew asked Jacqui if he could play the Playstation. Glenn suggested that Andrew went for a swim, however, Jacqui let him as she thought he had been quite active all day. Glenn allowed Andrew to play the Playstation for half an hour. Andrew quickly turned on the Playstation and loaded "Smackdown" while Jacqui started doing her school work. Andrew sat quietly playing his game on the Playstation.

Twenty minutes later Jacqui suggested that Andrew go down the road to Logan's house to have a "run around" but Andrew did not want to do this. Jacqui offered Andrew a piece of fruit and said they had oranges, apples, pears, bananas and nectarines. Andrew said that he would like banana but he did not feel like it at the moment. Jacqui left it on the table for him for when he wanted it and ate an orange herself.

Andrew asked Jacqui if he could go to Ben's house for a swim. Jacqui explained, *"I'm trying to work mate and I don't want to have to walk you up there and across the road love. Now be fair, you've had a pretty good day, lots of activities."* However, she then agreed that he could go down for an hour.

Andrew got changed and asked Jacqui if he could have a cookie to eat but Jacqui said no as his banana was still sitting on the table. Jacqui walked Andrew up to Ben's house. Ben, Andrew and Ben's younger sister got straight into the pool. Ben was a very slim and extremely active child. Unlike earlier in the day, when Andrew swam with Ben he was very active. Ben's mum, Louise, stated that Andrew was very active but just loved his food too

much. Andrew got puffed during this time as he continually got in and out of the pool, ran around the side of the pool and played tag in the pool. While in the pool, Andrew and Ben talked about nippers, wrestling and Michael's party.

Louise told the boys to get out of the pool because it was about to storm, the boys simultaneously said, "NO." At 5:30pm the boys got out of the pool and ran over to the cubby house in Ben's backyard. They sat in there and talked for 20 minutes until it started to thunderstorm and rain and Andrew, Jacqui and I walked home.

Andrew arrived home and watched television. Andrew asked Jacqui if he could play the Playstation "because there's nothing else to do" and Jacqui said yes but then suggested that he practise the piano instead. Andrew began to whinge but instead of listening to his mum he put the Playstation on anyway and began to play "Crash Bandicoot". Jacqui explained that she did not have much more work to do and then she would start cooking dinner and Andrew said, "Yay." Glenn got home and suggested that Andrew come outside with him, however, Jacqui stood up for Andrew and said that he had been busy that day.

*Glenn: Is he on that thing again?*

*Jacqui: Yeah he's got nothing else to do.*

*Glenn: He can come outside with us.*

*Jacqui: Glenn he's had a pretty busy day.*

Glenn told Andrew to turn off the Playstation several times, however, Andrew ignored his father's requests and continued to play while Jacqui and Glenn cooked dinner.

*Glenn: Andy, no more.*

*Andrew: Oh, can I...*

*Glenn: No more.*

*Andrew: Can I finish up what I'm doing?*

*Jacqui: Finish up what you're doing while I chop the salad.*

*Glenn: You've been playing for a long time mate.*

Jacqui asked Andrew if he wanted some bread with his dinner to put his sausages on and if he wanted some steak and Andrew said yes. Jacqui then asked if he wanted some fish on his plate but Andrew said no as he did not want any bones. Jacqui explained that the tail end had most of the bones, however, Andrew was not convinced.

Both Jacqui and Glenn told Andrew to turn off the Playstation a number of times before he actually did turn it off. Andrew went straight outside to jump on the trampoline with Ella. Glenn encouraged Andrew while he was on the trampoline. Jacqui explained that their family was very busy and sometimes Andrew did not know what to do when he had spare time.

Jacqui asked Glenn, Ella and Andrew if they would like to come in and eat and Andrew yelled out, *"Not yet."* Andrew showed Jacqui some of his moves on the trampoline. Glenn told Andrew that it was Ella's turn on the trampoline so Andrew started swinging on the swing. Ella got off the trampoline and Andrew got straight on and jumped for another five minutes before returning inside.

Andrew sat down at the dinner table and was served three sausages. Andrew said that he was not having much to eat tonight as he was only having two sausages. Jacqui corrected him by saying, *"No, three"* but Andrew explained, *"No because I'm having one on my sandwich so it doesn't count."* Jacqui served Andrew some garden salad and potato wedges and Andrew asked Jacqui to cut two sausages into pieces for him. He made a sausage sandwich with the remaining sausage and ate this first. Andrew ate the remaining food on his plate quickly. Glenn offered Andrew some steak and Jacqui offered Andrew some salmon and he ate both. Jacqui said that he should start having fish when they have a barbeque as opposed to sausages. Andrew drank two glasses of orange juice with his dinner. Jacqui explained that she has to try and keep her fridge and freezer stocked and think about what she will cook the night before, as life was too busy.

After finishing dinner, Andrew asked Jacqui if he could put a movie on but Jacqui said, *"No it's quarter to eight. No. It's too late. The day's over."* Andrew whispered in Jacqui's ear, *"Can I have a treat?"* and Jacqui answered yes and asked him what he wanted. Andrew asked for a packet of chips and Jacqui gave him a packet of plain potato chips. Andrew ate these quickly in front of "The Simpsons". Jacqui explained that she needed to watch what her children ate.

*Jacqui: See he'd rather eat quality food whereas she'll sit and eat sour worms until they're coming out of her ears so we've really got to watch her. Although now when she's had a bit of junk she does ask for fruit, whereas Andy asks for sandwiches and bigger type of more fattening foods.*

Andrew watched television for 15 minutes and then had a shower. After getting out of the shower, Andrew went to bed and read his book for 15 minutes.

#### **4.1.2 Winter**

The Browns had knocked down their existing house and were building a new house in the same place. Since April they had been living in a small two-bedroom flat two doors down from their house. Andrew was playing football on Saturdays and trained on Thursday evenings. He was still playing piano and doing swimming lessons.

##### **4.1.2.1 Day One (Weekend Day)**

I arrived at 8:00am and the Browns had forgotten I was coming and were very surprised to see me. Glenn was cooking bacon and eggs for breakfast and Jacqui explained, *“He’s doing a big breakfast this morning.”* Andrew asked if he could play the Playstation while he waited for his breakfast but both Jacqui and Glenn said no as he played it all day the previous day and the games were too scary for Ella. Andrew explained that he was seeing “The Simpsons” movie the next day. Andrew played with his wrestling figurines. *“This is John Cena, my favourite. He’s my favourite too. And my other favourite one I haven’t got yet, he’s rare. The Boogeyman, he’s hard to get.”* Andrew showed me how the Boogeyman dances.

Andrew explained that he had football that day and he was supposed to train Tuesdays and Thursdays but he only trained Thursdays as he had piano on Tuesdays and still did swimming on Mondays. He told me that he played prop position in football and a number of his friends were in the team also. Andrew said that Glenn, Logan, Ben and he were going to watch the Dragons play rugby league that night. He said that he wanted to have a sleep over with Ben tonight but Glenn told Andrew that they had to go straight to bed when they got home and were not to play the Playstation.

Andrew said, *“I’m starving”* as Glenn gave him his breakfast, a bacon, egg and tomato sauce sandwich cut into quarters and an apple juice pop top. Andrew sat at a table in front of the television and Glenn explained that now that they were in the flat they only had the small table in front of the television to eat at. He said they were letting the children eat in front of the television every now and again but now they had no choice.

Andrew picked the bacon off his sandwich and put it on the side of his plate. Glenn said that he should have just given him an egg sandwich but Andrew explained that he only does it sometimes and still liked the bacon taste it gave the sandwich. Andrew ate fairly quickly with his hands. Andrew and Glenn watched television as they ate and when Glenn asked Andrew what he was watching Andrew did not know. Andrew and Glenn talked about wrestling and they told me that they went to see a wrestling show at the Fraternity Club. Andrew finished eating his sandwich and began eating his bacon.

Ella decided she wanted to make chocolate choc chip muffins and Jacqui helped her do this. She was sick that day and was being very demanding and quite moody. Andrew told Jacqui that the muffins looked really nice. Andrew explained to me that he got two transformers in Happy Meals from McDonalds last week.

Jacqui gave Andrew a big hug. Andrew continued to watch cartoons and play with his wrestling figurines in front of the television. Andrew told me that he set up a try when he had all the players on him the previous week in football. Andrew talked to Ella about music and told her what bands he liked.

At 10:20am the family left to go to Scarborough to see Andrew play football. Andrew got very tired and was very slow while playing. He really enjoyed playing but seemed to be quite worried about hurting the other children as he was a lot bigger than them all. The game finished and Andrew saw Ella eating lollies from the canteen and asked Jacqui for something to eat from the canteen. She offered him a banana or Saos [savoury crispbread] but he did not want either.

*Andrew: Can I have something from the canteen?*

*Glenn: What do you want?*

*Andrew: Anything.*

*Jacqui: No you had a big breakfast and we're going out for lunch. You can have a banana or Saos I bought. We're being healthy remember?*

*Andrew: Pretty please.*

*Jacqui: No Andy. Do you want a banana?*

*Andrew: No thanks.*

*Jacqui: All the way from Queensland.*

*Jacqui: I only gave Ella some lollies to keep her happy.*

Andrew asked Jacqui and Glenn if he could play the Playstation when they got home but they said no because he played it all day the previous day and it was such a nice day. The Browns went to a local pub for lunch. Jacqui ordered Andrew and Ella a “fire engine” to drink and told Andrew he could choose between the two kid’s meals, either chicken and chips or calamari and chips. Andrew chose chicken and chips. He drank his soft drink very fast and asked for another drink to have with his lunch and Jacqui gave him another “fire engine”. Andrew ate his chips first and then ate his chicken that Glenn had cut for him. Andrew ate very fast and ate mainly with his hands. Andrew then ate some of Ella’s chips. Andrew and Ella began to have an argument and then Ella punched Andrew and hurt him.

The Browns arrived home and Andrew began playing with his wrestling figurines. Glenn asked Andrew if he wanted to go for a walk on the rocks but Andrew said not yet.

*Glenn: Do you want to go to do something? Go for a walk on the rocks again?*

*Andrew: Yeah.*

*Glenn: Okay well we’ll do it now and I’ll shovel later.*

*Andrew: Why don’t you shovel now and get it over and done with and then we’ll go to the rock pool later.*

Glenn tried to encourage Andrew to help him shovel dirt up at their new house but Andrew did not want to. Andrew asked Jacqui if he could put a movie on and she said yes but that it was such a nice day that they should go outside. “*Yes put on a movie love. What are we going to do? It’s a nice day, what are we going to do? Let’s do something.*” Andrew said he wanted to go walking on the rocks but Jacqui explained that it was too windy. Ella decided she wanted to help Glenn shovel and Andrew then decided he wanted to help also. Jacqui gave Andrew some Hubba Bubba bubblegum before he went to help. Ella and Andrew had another fight before they left.

*Ella: I hate you.*

*Jacqui: I don’t want to hear I hate you anymore Ella.*

*Andrew: She keeps whacking me.*

*Jacqui: No more whacking Ella.*

Andrew helped for half an hour and came back inside.

*Jacqui: What’s going on? Do you want to play the Playstation for a bit?*

*Andrew: Yeah.*

*Jacqui: You’ve earned it today but we need to put a time limit on it. It’s 2:35pm, you can have til...*



*Andrew: An hour?*

*Jacqui: No til 3:15pm.*

Jacqui told Andrew that they would have an early tea before they went to the football that night. She gave him a choice between noodles or rice and tuna.

*Jacqui: If I make some rice and put some tuna in it or some noodles or something easy. Which would you prefer?*

*Andrew: Rice and tuna.*

*Jacqui: Okay and I can put some tomato and cucumber in it. How does that sound?*

*Andrew: Good.*

Glenn came inside and was annoyed that Andrew was on the Playstation. Jacqui told Glenn that she let him go on it for a little while. Andrew asked Jacqui for a chocolate choc chip muffin but she told him that she accidentally left them out so they were hard but Andrew still wanted one.

*Jacqui: These muffins are ruined. They're rock hard.*

*Andrew: What muffins? Can I have one?*

*Jacqui: They're hard.*

*Andrew: Can I please? Can I please have one Mum?*

*Jacqui: Oh sweetheart they're not very nice.*

*Andrew: Just please.*

*Jacqui: Righto. Here you are.*

Andrew paused his game and started eating the chocolate choc chip muffin. Jacqui told him to throw the rest out because it would not be very nice, however, Andrew kept eating it. Jacqui told Andrew that he had not had any fruit that day either. Andrew asked Jacqui to keep him another one before she threw them out but Jacqui refused to. Jacqui told Andrew that they might go to the park after he finished the Playstation so they could kick the footy around.

Jacqui told Andrew that he could play one more game but then needed to finish up. Andrew finished the game and asked if he could play one more game and Jacqui agreed. Andrew finished the game and turned off the Playstation. He looked at what was on television and then put on "The Crocodile Hunter" DVD and started drawing pictures of wrestlers while he watched. "I know the next one I'm going to draw. I am doing the mask. I like my Undertaker." Jacqui asked Andrew again if he wanted to have macaroni and cheese with

Ben or tuna and rice at home for dinner and he chose tuna and rice. Jacqui explained that Andrew ate almost anything. *“Andy’s really good to feed. He eats gourmet food. He’ll eat anything.”* Jacqui and Glenn told Andrew to have a shower several times and he finally stopped drawing and had a bath with Ella. Ella and Andrew laughed and played in the bath.

Jacqui said she was going to give Ella a Happy Meal from McDonalds for dinner. *“I was going to get Ella a Happy Meal because they’re all having Happy Meals down there but I’m going to feed Andrew up here.”* Andrew ate his dinner at 5:00pm in front of the television. Jacqui gave him a big bowl of rice, a can of tuna, a small plate of chopped up tomato and cucumber and a glass of water. Ben arrived and sat with Andrew while he ate his dinner. Jacqui told Andrew not to eat all his dinner if he was full but he said he was not full. Andrew ate most of his rice, tuna and cucumber but left almost all of his tomato. Glenn asked Andrew if he was going to eat his tomato and he said no. Glenn and Jacqui discussed how many snacks and drinks the boys needed at the football. Jacqui asked the boys what flavour chips they wanted packed and Andrew asked for Salt and Vinegar.

Andrew and Ben drew at the table and Andrew told Ben that he wished he did not have to miss “Australia’s Funniest Home Videos” which was on television that night. Ben and Andrew discussed different wrestling moves. Andrew showed Jacqui his drawings and she told him that he was very talented.

The boys went to the football to see the Dragons play. Andrew ate a packet of salt and vinegar chips and quite a few chicken chips and drank green cordial. The boys got home at 9:30pm and played the Playstation for an hour before going to bed.

#### **4.1.2.2 Day Two (Weekday)**

Andrew got up at 7:00am that morning and started watching his wrestling DVD. Jacqui asked if Andrew wanted left over rice and tuna for breakfast and he said yes. Andrew ate his rice and tuna and orange juice at the table in front of the television. Andrew ate fairly quickly and when he was finished Jacqui told him to get ready for school. Andrew paused the DVD and got changed. Jacqui explained that they went to a friend’s house the previous night and the children were playing for a long time. Ella was at Jacqui’s mum’s house that day and Jacqui explained that Andrew really enjoyed it when she was not there as it was quiet around the house. Jacqui explained how much easier it was to get organised without

Ella there. *"It's amazing the difference it makes only having one child. It's so quiet and I found that I'd done everything and still had a lot of time left over."*

Andrew continued watching his DVD. Jacqui wrote Andrew's lunch order for the canteen.

*Jacqui: A chicken and lettuce sandwich mate. Is that okay?*

*Andrew: Yeah. Am I allowed a milk too?*

*Jacqui: Yeah but try and eat all your sandwich cause otherwise you come home starving. He's not a big sandwich eater, which is hard.*

*Jacqui: A banana milk Andy?*

*Andrew: Yeah.*

Andrew asked if he could have some of his boiled lollies and Jacqui said no because *"they're only for every now and again"* but then agreed to let him have one. Jacqui told Andrew to eat his fruit first at recess that day. Jacqui packed Andrew a banana, mandarin and a Vegemite Cruskit as well as ordering his lunch. *"You have a banana and a mandarin and then you've got your nice lunch to look forward to. I'll do a Vegemite Cruskit."* Jacqui explained that she was playing netball that night. *"Mum's playing netball in her Sharon Strzelecki skirt. I want it to be fun and not be a chore. If I enjoy it then I'll stick with it every Monday."*

We left for school at 8:00am and as we arrived Andrew took out his wrestling toys to show his friends. When more of his friends arrived they started to play handball and Andrew lined up to play. He stayed in for quite a while before getting beaten and lining up again. The bell rang and the school started Fitness; Mrs Levis rolled her eyes. Andrew's class was doing the fun run that day. They did some stretches and Andrew was not very flexible and almost overbalanced a couple of times. The class had to jog along the longer sides of the rectangle and walk around the shorter sides. Andrew jogged with Sam and found it physically hard. They then played Octopus where some children were in the centre and the others had to run through and try not to get tipped. Andrew was quite slow and the first to be tipped. He had to freeze where he was and try and tip other children. Fitness ended and Andrew's face was very red and sweaty.

In class, Mrs Levis went through this week's spelling words with Andrew's group. Andrew contributed to discussions surrounding what each word meant. The class then went on with reading groups where Andrew paid attention very well. Andrew appeared to enjoy reading

and tried to answer a number of questions asked. The class went onto editing where Andrew was very involved in his group's discussions.

At recess Andrew sat on a rock by himself the entire time. He ate his banana first and then ate his four Cruskits very slowly. Andrew's friends finished their food and started playing near him, however, even when Andrew had finished his food he remained seated on the rock.

During Mathematics, Andrew opted to work by himself as opposed to working with a partner during counting activities. The class had library and Andrew wandered by himself trying to find a new book. He borrowed two new books and the class then went to assembly.

Jacqui told me that she forgot the canteen was not open that day and therefore had to buy Andrew's lunch down the road from the school. She said that she wanted to get him a cheese and bacon roll but they did not have any so she bought him a sausage roll. At lunch, Jacqui took Andrew up to the staff room so she could heat up his lunch. Jacqui bought him a sausage roll and banana milk. Andrew went back to the classroom and ate his sausage roll and sauce and drank his banana milk at his desk. He ate fairly quickly and when the children were told to play he took his banana milk outside.

Andrew played handball and played well but at times he found it hard to get down low and he overbalanced. Another boy came over to play but then Andrew did not get a turn so he started playing with some other people from his class. Andrew's other friends were playing down on the field.

The bell rang and Andrew lined up, looking tired and sweaty from handball. Andrew asked a girl if she was alright as she got hit in the head with a ball during lunch. Mrs Levis began reading "Charlotte's Web" to the class and Andrew tried to answer a number of questions asked by Mrs Levis. The children started making spiders.

After school Jacqui and Andrew went to Woolworths [supermarket], as she needed to pick up some groceries. Jacqui explained that Andrew did not really like toast or cereal. She would let him have left overs from the night before if they had any but she knew he should not be having something hot every day. Jacqui said she did not know if she was too lenient

when he was younger and that was why he did not like those things. Jacqui said that she had tried all different types of cereal. Andrew asked for chocolate milk and Jacqui said no as he had already had a treat that day. Andrew asked if he could have his Friday treat that day but Jacqui said no but then let him have a magnet man [bendable figurine]. Jacqui bought fruit and vegetables, juice, yoghurt, butter and chicken for dinner.

When they arrived home, Andrew asked if he could watch his wrestling DVD and Jacqui agreed but then told Andrew that it was not going on that night. Andrew then asked for a hot chocolate and Jacqui started making it. Andrew asked if he could have some biscuits with it but Jacqui said that he could not have biscuits but could have watermelon. Andrew had his hot chocolate and a big plate of rockmelon and watermelon at the table in front of the wrestling DVD. Ben and Louise came over to pick up Andrew and he finished off his food and then left for swimming. Andrew swam for half an hour non-stop and looked very tired when he finished. Louise stated that Andrew was very self-conscious.

At 6:00pm Andrew arrived home and Jacqui asked him if he wanted to eat now and Andrew said yes as he had hunger pains. Andrew sat on the lounge and watched "The Simpsons" and said he had a tummy ache. *"I have a tummy ache. It might be because I'm so hungry."* Jacqui explained that that night's dinner was a throw-together dinner and Andrew said that he was starving. Andrew asked what was for dinner and was extremely excited when Jacqui told him. *"Yum yum yum yum yum yum yum."* Glenn got home from work and talked to Andrew about Andrew's day. Andrew ate a large serving of rice and chicken with broccoli and carrot on the side with a glass of water. He watched "The Simpsons" while he ate and got very distracted by the television. Andrew ate very slowly and ate his vegetables first and then ate his chicken and rice. Jacqui asked Andrew if he was enjoying his dinner and Andrew said he loved it. Jacqui and Glenn sat down to eat their dinner just as Andrew was almost finished. Jacqui explained that it was a difficult task trying to find a meal that everyone likes. Andrew licked the remaining rice with his hands. Andrew told Jacqui he loved that chicken and Jacqui said that she would have to cook it more often. Jacqui asked Andrew if he was still hungry.

*Jacqui: Still hungry?*

*Andrew: Yeah.*

*Jacqui: Just hang out for a bit and you can have something. You can have a biscuit.*

*Andrew: Can I have a chocolate milk?*

*Jacqui: Yes you can.*

Andrew began doing his homework in front of “Top Gear”, which Glenn was watching. Andrew asked for a chocolate and Jacqui said yes and offered him a glass of milk with it. Andrew ate his chocolate bar and drank his milk while doing his homework. Jacqui told Andrew that they had their last football training session on Thursday and they “*will have to make that our do something fun day.*” Jacqui gave Andrew a hug and kiss and left to play netball. She told Andrew, “*You need to be in bed by eight tonight Andy cause you’ve had a few late nights in a row.*” Andrew brought out his library books to show Glenn and they spent time together looking through the book. “Top Gear” finished and Glenn told Andrew that he needed to go to bed as it was now 8:30pm.

#### **4.1.2.3 Day Three (Weekday)**

Andrew got up at 6:45am and put “ABC Kids” on television. Jacqui asked Andrew what he would like for breakfast and said they did not have much so he might have to have toast. She asked what he wanted on his toast and he asked for peanut butter and a Milo [chocolate drink] to go with it. Andrew ate very slowly in front of the television and got distracted by the cartoons. Andrew told me that he was going to dress-up for Book Week as the Boogeyman as Jacqui had bought him a John Cena belt.

Andrew and Ella played together that morning and Andrew re-enacted a part of “The Simpsons” movie, which they saw at the movies and now own on DVD. Jacqui packed Andrew’s lunch and explained that she hated making school lunches. She packed Andrew a sandwich with salami and butter, two chocolate chip biscuits, two Saos with Vegemite and butter, a muffin bar and an orange cut into wedges.

Andrew listened to his “So Fresh” CD as he waited for his mum in the car. We dropped off Ella and Ben came to the car to see Andrew and show him his book. When we arrived at school Andrew played handball with a group of 12 boys. Andrew’s handball skills had improved as he stayed in for a longer time. The bell rang and Andrew’s class did aerobics for fitness which was run by Year 6 students. Andrew could not get down very low to stretch his legs. They did a lot of arm and leg movements and Andrew participated willingly, however, he found it difficult to do some of the bending leg movements.

The children went back to class where Andrew worked in his reading group. His fluency had improved and he participated in his group’s discussions. Andrew then completed spelling activities at his desk. Andrew answered a number of questions showing his level of

understanding of the meaning of difficult words and ability to apply them to real life situations. Mrs Levis gave him a sticker but, again, told him to work faster. Mrs Levis directed the class to work on their writing pieces and although Andrew's writing was big and messy he concentrated well.

Andrew sat by himself at recess. He ate his muffin bar first and then ate his cookies very quickly. Andrew took out his orange wedges, looked at them and put them straight back into his lunchbox. Andrew showed some of his friends his wrestling dances and they laughed at him. Andrew followed Sam, Nathan and two other girls around the garden and then sat by himself on a tree stump.

After recess the class worked on their artwork and then went onto counting Mathematics on the board. Andrew was very confident with this and put up his hand to answer every question. Mrs Levis told me that Andrew's behaviour never changed and he was always wonderful.

At lunchtime, Andrew sat with Sam and took the salami off the first quarter of his sandwich. He ate the salami by itself and then ate the buttered bread separately. He did this for the other quarters of his sandwich. Andrew ate very fast and talked to Sam while he ate. The children were told they could go outside to play and Andrew quickly shoved the last few pieces of salami into his mouth. He went outside with Sam and Blake and wandered around. Andrew asked a teacher if the back playground was still open and she said that it was too wet. Sam had a \$2.00 canteen voucher and bought himself and Andrew a chocolate frozen milk ice cream. He sat down and ate his ice cream while four of his friends stood near him. Andrew followed Sam and Blake as they wandered through the garden, however, once they started running around Andrew laid down on a rock until the bell rang. Andrew's class watched a movie for the afternoon.

Jacqui had to visit her niece in hospital and asked her friend Nicole to look after Ella and Andrew for the afternoon. Jacqui said that in the past Nicole used to mind the children a lot and she had to tell Nicole not to feed Andrew too much as it was getting out of hand. Jacqui thought that that was where Andrew's problems began. Jacqui explained that she needed to do something about Andrew's weight. *"I needed to do this now for Andy because I didn't want his weight to affect and spill over into other things."* She explained that when Andrew

said he was bigger than the other children she told him he was going to be a big boy but imagine being a little string bean and Andrew always laughed at this.

Andrew said that he always ate all his food but Ella did not. *"I eat everything on my plate but Ella will have meat and vegetables still on hers."* Andrew told Jacqui he enjoyed the chocolate ice cream Sam bought him that day. As we arrived at Nicole's she was cutting up a fruit platter and she explained that she did not eat fruit. Andrew went straight over to the chicken chips and although Nicole let him eat some, Jacqui told him he had to have fruit first. Andrew got upset but did as he was told. Nicole put out a platter of strawberries, banana, kiwi fruit, apple and cheese cubes. Andrew sat at the table and ate a lot of cheese and kiwi fruit. Andrew then asked Nicole if he could have some chicken chips and she got a bowl and poured a big bowl for him.

*Andrew: Can I have chicken biscuits now?*

*Nicole: Yeah but just a few. Can you get a bowl?*

*Andrew: Is that all?*

*Nicole: Yeah that's enough.*

Nicole offered Andrew and Ella a juice box and Andrew asked for a tropical one. Andrew ate his biscuits and drank his juice extremely fast. Andrew told Nicole about how nice the ice cream Sam bought him that day was. Andrew went out on the trampoline by himself and then Ella hopped on and they jumped together. They jumped for five minutes before Nicole tried to encourage them to come inside and watch a movie as it was getting cold. Ella got off the trampoline but Andrew refused to get off. Nicole gave up and went inside with Ella and Andrew came in 10 minutes later.

After coming inside Andrew asked Nicole for a lollipop and she gave him one.

*Andrew: Can I have something to eat?*

*Nicole: Oh there's still fruit.*

*Andrew: Can I have something else to eat?*

*Nicole: What do you want?*

*Andrew: Can I have one of those lollipop fizzes?*

*Nicole: Yeah.*

Andrew ate it in front of the television where he and Ella watched cartoons. Ella pushed Andrew off the lounge and he hurt himself and then he hit Ella. They began to fight before Nicole took Ella into the kitchen to play with playdough. Twenty minutes later Andrew



came out and said he was still hungry and wanted another lollipop. Nicole said no and then Andrew asked her if she had grapes. Nicole offered Andrew a banana or a pear but Andrew claimed he did not like pears. Andrew accepted Nicole's offer of a strawberry snack pack and said it was very nice. Nicole told Andrew, *"That's it now. You can't have anything else to eat."* Andrew asked for another juice box but Nicole said no. Andrew continued watching cartoons.

Andrew started to wrestle Nicole. He started being aggressive and really hurt her as he started punching, kicking and twisting her arms back. Nicole told him to stop as he was too strong but Andrew refused to stop.

*Nicole: Alright that's enough.*

*Andrew: No I haven't pinned anyone yet.*

After five minutes Andrew finally listened to Nicole and he stopped wrestling and went back to watching his cartoons. Andrew asked Nicole when "The Simpsons" was on.

At 6:00pm Jacqui picked up Ella and Andrew. Ella was very tired and punched and yelled at Andrew in the car. As we arrived home so did Glenn. Jacqui told Andrew to put on "The Simpsons" while she cooked their dinner. Andrew said he was very hungry and asked for something to eat before dinner. Jacqui asked him what he had eaten already and he said that he did not know.

*Jacqui: Andy would you eat two or three chicken sticks this evening mate? Are you hungry?*

*Andrew: Three chicken sticks.*

*Jacqui: Please Mum?*

*Andrew: Please Mum.*

*Jacqui: And plenty of rice?*

*Andrew: Yes please Mum.*

Andrew said he was starving. Glenn asked Andrew if he would like to play cards and Andrew said yes. Andrew played against Ella and Glenn but then Ella threw a tantrum so Andrew and Glenn played by themselves. Jacqui gave Ella a piece of bread to eat.

After finishing cards Andrew continuously asked when dinner would be ready and he was getting frustrated.

*Jacqui: It's almost ready. I know you're hungry.*

*Andrew: You're damn right I am.*

Jacqui asked Andrew what he would like to drink and he said cordial. At 7:10pm Jacqui served his dinner of rice, three chicken skewers, chopped up tomato and cucumber and a glass of cordial. Andrew ate fairly slowly while watching “The Great Outdoors”. He ate his chicken sticks and cucumber first and then went on to eat all his rice. Andrew left his tomato as he did not like it but asked Jacqui if he could still have Smarties [chocolate balls] if he did not finish his tomato.

*Andrew: Mum am I allowed to have some Smarties?*

*Jacqui: I would like to see you eat some more there.*

*Andrew: I don't like the tomato. It's disgusting but I had other fruit.*

*Jacqui: What other fruit?*

*Andrew: Like kiwi fruit, orange, Feta cheese, strawberries. Am I allowed to have my Smarties?*

*Jacqui: Yes matey.*

Andrew gave six Smarties to himself and six to Glenn. Glenn ate all his Smarties at once and Andrew watched his father and then did the same. Andrew asked for some Dairy Milk chocolate and after asking him how many Smarties he had Jacqui gave him three squares. Andrew complained that Glenn received more and Jacqui then gave Andrew five more pieces. Jacqui put the leftovers from that night's meal in the fridge and explained that Andrew would have that for breakfast the next day. Andrew watched the rest of “The Great Outdoors” and then Jacqui told him to go to bed and read.

#### **4.2 A TYPICAL DAY IN THE LIFE OF ANDREW BROWN**

Based on the six days' observation, the following is what a typical weekday may look like for Andrew Brown, however, it does need to be noted that no day would be the same for any child, due to the complexity and changing nature of people's day-to-day lives.

7:00am	Watches television (cartoons)
7:20am	Eats breakfast (bacon and eggs or left over chicken and rice from the previous night's dinner) in front of television
7:40am	Gets ready for school
7:50am	Watches television
8:00am	Gets lift with Mum to school
8:10am	Sits on seat and waits for friends to arrive
8:30am	Plays handball or talks with friends
9:00 - 9:30am	Fitness (actively participates)
9:30 - 11:00am	School
11:00am	Sits and eats recess (one piece of fruit and up to four other snacks, consisting of items such as crackers, cookies and chocolate slice)
11:30 - 1:00pm	School
1:00-1:50pm	Eats one sandwich (with tuna and butter) at his desk. Sits down or plays handball with friends
1:50 - 3:00pm	School
3:00 – 3:20pm	Waits for his mum
3:20 – 4:30pm	Afternoon activities (grocery shopping, visits family or friends, swimming lessons, football training or piano lessons)
4:30 – 4:50pm	Homework and afternoon snack (possibly fruit or Cruskits)
4:50 – 7:00pm	Plays Playstation or watches television
7:00pm	Eats dinner (chicken with rice and salad on the side) in front of the television or at the kitchen table
7:30 – 8:00pm	Watches television and eats an after dinner snack (consisting of chips, chocolate or biscuits)
8:15pm	Reads in bed

Number of hours slept: 10

### **4.3 THEMES FOR ANDREW BROWN**

#### **4.3.1 Dietary Behaviour Factors**

Both of Andrew's parents were observed to be of a healthy weight and were concerned about having too much excess weight. Andrew's sister who was only three years of age was very slim also.

Andrew had an inappropriate breakfast each morning which was often energy-dense, as he did not like cereal or toast, however, his portion size was reasonable. Jacqui recognised that the breakfast Andrew was provided with was inappropriate, however she continued to give Andrew these types of foods in order to keep him happy. It seemed easier for Jacqui to give Andrew what he wanted rather than try to make him eat something he did not like, especially since she recognised that breakfast was the most important meal of the day and was often very rushed in the morning. Glenn cooked a hot breakfast every Sunday and therefore Glenn was encouraging the consumption of high calorie and energy-dense foods at that time. Andrew's lunch was energy-dense at times, however, the portion size was appropriate.

Andrew's snacks were moderately healthy at times, however he frequently consumed high-sugar morning, afternoon and evening snacks. The portion sizes of all of the snacks were too big during the day but usually substantial at night. Even though Jacqui often requested for Andrew to eat his piece of fruit first at recess, he was still given too much food and would therefore spend too much time eating and not have enough time to play with his friends. Andrew regularly asked for food. On weekend days, Andrew would ask for high-sugar and high-fat snacks and although Jacqui refused at first, when he was persistent, Jacqui often gave in to his requests to keep him happy. Different rules existed for Ella and Andrew and often Andrew would point this out so that he could have what he wanted. Jacqui blamed his love for these types of foods on both his Grandma and her friend, Nicole. Jacqui, however, did not want to deprive her children of foods, as she feared they would binge on these foods otherwise and therefore allowed them to have high-sugar snacks. At times, she restricted the types of foods Andrew was allowed to eat, deterring him from high-sugar snacks. Jacqui kept a number of high-sugar and energy-dense foods in the house, and therefore they were readily accessible for Andrew and often asked for because they were there. Andrew also viewed these types of foods as treats as he was allowed a treat each Friday and after dinner if he finished what was on his plate and these treats were either high

in sugar or energy-dense. Andrew was often rewarded with food if Jacqui felt he had had a busy day.

Andrew's portion sizes at dinner were also large, with Andrew eating an adult-size meal each night despite his younger age. Andrew's parents often asked him how much he wanted to eat at mealtimes. His dinner meals were often quite healthy, however, they were far too big and Jacqui often encouraged Andrew to try different foods after he had finished his dinner. Andrew drank apple or orange juice with most of his meals at home and was allowed cordial or soft drink when available as this was what Andrew liked to drink.

Both Jacqui and Glenn provided Andrew with choices for breakfast, lunch, dinner, snacks and drinks and this often led to unhealthy selections and large portion sizes. Andrew ate his breakfast in front of the television each morning and at dinner when Glenn was not home. Andrew became distracted when eating in front of the television, however, Jacqui allowed him to eat there to keep him happy. In winter, there was no choice but to eat meals in front of the television as they had no kitchen table when living in the flat.

Both Jacqui and Glenn had a fairly balanced diet, however, Glenn did like to regularly cook hot breakfasts on the weekend. Jacqui tried to watch her eating patterns as she was trying to lose a little bit of weight that she could not lose after she gave birth to her children. Even though Glenn ate quite a lot of food, he used this energy as his job was quite physically demanding and he was often active at weekends. Ella, on the other hand, was a very fussy eater and opted to eat a lot of high-sugar foods as opposed to nutritious foods.

Jacqui had limited time available to prepare dinner as her daughter was quite demanding, she often had preparation for her library classes, and regularly had to drive her children to afternoon activities. Andrew rarely ate take-away as Jacqui tried to prepare healthier options but when he did, this was often McDonalds. They were from a moderate socio-economic background and, although they were building a bigger house, they had enough money to spend on a variety of different food products.

Andrew's school did not have a "fruit break", however, Andrew often ate a substantial amount of fruit and vegetables in a day. Cedar Public School had implemented the NSW Healthy School Canteen Strategy (see Appendix F), whereby there were a large number of "green" foods (foods low in saturated fat, sugar and/or salt and rich with nutrients) as well

as still having a range of “amber” foods (foods moderate in saturated fat, sugar and/or salt and moderately high in energy) and a very small number of “red” foods (foods lacking adequate nutrients and high in saturated fat, sugar and/or salt and contributing to excess kilojoule intake). Andrew ordered his lunch approximately once a fortnight. At times, he was given money to buy a treat from the canteen, which was usually chips or ice blocks, and these were from the amber food group. When he ordered his lunch, Jacqui tried to encourage Andrew to choose a sandwich, which was listed in the green food group.

#### **4.3.2 Physical Activity Factors**

Andrew enjoyed participating in physical activity with his friends even though he did find some activities difficult. Organised activities in which Andrew participated outside of school were of high intensity and he often found a number of these activities or sports difficult. He lacked confidence in his ability to perform well in a number of physical activities.

Some of Andrew’s friends played on the oval at lunch and were quite fit and active. Andrew, however, rarely participated in these activities as they involved a lot of running, which Andrew found physically difficult. He was motivated by his friends to be involved in organised activities outside of school such as football. This was something that limited his participation in non-organised activities at home as he often did not have anyone to play with after school and a lot of the time on the weekend.

Andrew had a strong relationship with his mum and dad, and was very loved. Due to Glenn’s long hours, however, he only saw his dad for a couple of hours each night and spent some time with him on the weekend. Jacqui spent more time with Andrew, however, this was often spent in activities that Jacqui needed to do, including visiting friends and doing grocery shopping. Alternatively, Andrew was left to entertain himself while Jacqui did jobs around the house. Both Jacqui and Glenn were concerned about Andrew’s weight and, at times, Glenn seemed slightly frustrated that Andrew was not more active. Andrew and Ella got along well, however, at times when Ella was not in a good mood or was tired they fought. Andrew was very patient with her but did get frustrated at times. They did not spend a lot of time together as they did not share common interests.

Both Jacqui and Glenn were good role models, participating in physical activity on a daily basis, however, only Glenn encouraged and participated with Andrew and this could only

take place of a weekend. It seemed important to Glenn that Andrew was fit and active and he therefore pushed Andrew to be involved in organised and non-organised sports during the weekend. Glenn was not always encouraging and supportive and often became negative and frustrated when Andrew did not live up to his unrealistic expectations of Andrew's physical abilities and attitude towards physical activity. Jacqui, on the other hand, felt that Andrew should be doing whatever made him happy, whether it was physical activities or sedentary activities and therefore did not encourage or participate with him.

Andrew behaved very well at both school and home and most often listened to instructions and abided by rules and regulations. Andrew was a very social child, was liked by most children and adults and was able to socially interact with a range of people. He had a few very close friends with whom he spent time in and out of school and he lived in close proximity to a number of his friends. Andrew was also liked by all his peers, as he was a friendly and easy-going child. Andrew's friends were all very active and slim and he shared some interests with his school friends and a wider number of interests with his cousin, Ben.

Andrew's family was from a moderate socio-economic background and therefore Andrew was able to participate in organised activities outside of school, including swimming and football. Jacqui and Glenn were happy for Andrew to try different activities and were happy that they could afford to spend money on uniforms, registration and travelling to and from these activities.

Andrew participated well in school fitness, which took place three times a week, however, this was run by Year 6 students and the activities were of light to moderate intensity. A number of the instructions given by the Year 6 students were unclear and often the routines and activities were quite repetitive, with Andrew becoming bored at times. Some activities involved tipping and because Andrew was not fit he would often be tipped first and therefore have to sit out the rest of the game. Mrs Levis was not a very good role model in terms of activity and even though she was supposed to take the children out for sport once a week, this often did not eventuate as she felt the curriculum was too crowded to accommodate for it.

The time that Andrew had available to be active at recess and lunch was inadequate, however this was partly due to the long time he spent eating. Overall, Andrew was not very active at recess and lunch and spent a lot of time sitting. At lunchtime, Andrew sometimes

participated in handball with his friends, however there was only a limited space for this popular activity. This meant that Andrew often played with 8 to 10 reserves and therefore most of his time was spent waiting for a turn. Even when he did play this was a very low-intensity activity.

Andrew's activity was highly influenced by the encouragement and support he received from Jacqui and Glenn, which was, in turn, influenced by the time parents had available for such activities. Even though Andrew did live close to some of his friends, Jacqui was often too busy to take him there and his friends were quite often busy themselves. This meant that Andrew was not very active at home. Glenn was not home until late during the week and Jacqui was often too busy with household duties or looking after Ella. Ella and Andrew had different interests and he was therefore left to play by himself regularly. They had a large backyard for him to play in during summer, however in winter the flat only had a small backyard. Andrew did not know how to participate in activities by himself, apart from jumping on the trampoline, which only kept him interested for a short amount of time and was an activity of moderate-intensity. It was therefore easier for him to be involved in sedentary activities as they are often designed so that one person can play, in particular Playstation games.

#### **4.3.3 Sedentary Behaviour Factors**

Andrew enjoyed sedentary activities and felt confident and happy when participating in them, which made it difficult for Jacqui to restrict his participation in these types of activities. Whenever he was not busy, Andrew would want to participate in sedentary activities. Andrew spent far too much time in sedentary activities, in particular, screen-related games such as the Playstation and television watching. Notably, the games Andrew played on the Playstation were not age-appropriate, having a rating of MA15+ and involving a high level of violence and killing. He also read both fiction and non-fiction books daily, some of which were advanced for his age.

In summer, Andrew had a separate television, which had his Playstation attached to it, making it easy for him to participate in this activity. During winter, however, he was not allowed to play the Playstation as much as there was only one television in their flat and they believed some of the games Andrew played would not be suitable for Ella to observe.



Jacqui often had a lot of household jobs and other tasks to get done after school and on the weekend and it was therefore easy for her if Andrew was happy and quiet, participating in both screen-related and non-screen-related sedentary activities. Ella and Andrew did not spend much time playing together, but he did have a lot of friends that lived close-by that he would have been able to spend time with. At times, however, Jacqui did not have time to walk him to his friends' houses.

Both Jacqui and Glenn were aware that Andrew was spending too much time on the Playstation and they tried to set restrictions, however, they did not follow through with this. Glenn was more forceful with limitations than Jacqui, however, on weekdays Glenn did not get home until late and was therefore unable to limit the amount of time Andrew spent on the Playstation.

Jacqui often used the Playstation or television as rewards when Andrew had had a busy day or had finished his homework. This made Andrew want to play these types of games more. Jacqui and Glenn had different parenting styles and rules when it came to sedentary activities and Glenn was more forceful when telling Andrew to turn off the Playstation, often encouraging Andrew to participate in physical activity instead. On the other hand, Jacqui would often be persuaded by Andrew when he would ask to play one more game or finish a certain part of the game.

#### **4.3.4 Personal and Social Factors**

Jacqui and Glenn played an influential role in the adoption of Andrew's unhealthy weight-related behaviour. Their busy lives meant that they frequently gave in to Andrew, letting him have treats, watch television and play Playstation games to keep the peace. The family regularly had barbeques with their neighbours, resulting in Andrew having a smaller number of hours sleep.

Andrew was a very happy, quiet and calm-natured child. Andrew was an enthusiastic student in class, concentrated for long periods of time and applied himself to all tasks at school as well as his homework. He wanted to please Mrs Levis during class and always contributed to class discussions and put up his hand to answer questions. Andrew was a very clever child and excelled in most areas of his schoolwork. Andrew's vocabulary improved substantially from summer to winter.

Andrew was very confident when it came to acceptance by friends and peers, schoolwork and his behaviour. Andrew was concerned, however, about his weight and often made comments about being heavy, or tried to cover his body up when going for a swim or getting changed.

Mrs Levis and Andrew also got along well, however she was not a very good role model for Andrew. She was obese herself and had developed unhealthy weight-related behaviours. Because of Andrew's maturity and intellect, he was able to understand the underlying meaning of a number of his teacher's comments and jokes that escaped the other students.

#### **4.4 THE DAY-TO-DAY LIFE OF BENJAMIN BLACK**

Ben was a very tall 10-year-old boy, with blonde hair and blue eyes. His family lived in a busy area in Maple, approximately 10 minutes walk from Maple School. Ben was a fairly quiet child, however, by winter he had become more confident and was very strong-willed. Ben lived with his mum, Anne-Maree, and three older sisters, Jessi (17 years of age), Phoebe (15 years of age) and Paige (13 years of age). His eldest sister, Brooke (21 years of age), lived in Wollongong with her boyfriend. Ben did not spend much time with his sisters as they had vastly different interests.

Anne-Maree was in her last year of full-time nursing at University and worked at the Chinese Restaurant inside the local Leagues Club six nights a week. Anne-Maree had financial problems and had to work hard to put food on the table and support the children. Anne-Maree had separated from her husband, John, and received very little financial support from him. He lived in Maple and worked one day a week in a butcher shop and occasionally stopped over to provide some meat for the family and their dog. Anne-Maree had recently started dating a teacher from a public school nearby and believed that he was a good role model for Ben as he was a physical education teacher. Ben often slept in Anne-Maree's bed as he had trouble sleeping alone. He would not go to bed at night unless Anne-Maree sat outside his room and stayed there until he fell asleep. Even when he fell asleep in his own bed, he often climbed into Anne-Maree's bed in the middle of the night. Anne-Maree was frustrated with this but she was unsure of what to do.

Ben's family also had two dogs and a fairly small backyard with a pool. They had two lounge rooms with a television in each and the Playstation connected to one. The computer also sat in the main lounge room. Ben and his sisters owned a large number of movies and DVDs.

Ben was in Year 4 at Maple Public School, where there was a total of 400 children. Ben's teacher, Mr Barren, did not set a lot of work for the children and often did not appear as if he enjoyed teaching. None of the students had a close relationship with Mr Barren and Ben was no exception. There was a small asphalt area undercover to play handball and when it was wet weather this section became very crowded. There was also a large grass field for children to play on and equipment was often put out for students to use. There were quite a few overweight and obese children at Maple School. Many children at the school ate

unhealthy items for recess and lunch and appeared to be quite unfit and inactive. Ben played with a number of girls, in particular Shania, Sarah and Tarryn.

#### **4.4.1 Summer**

##### **4.4.1.1 Day One (Weekday)**

Ben had slept in Anne-Maree's bed the previous night and awoke at 5:55am to go for a walk with his mum and sister, Phoebe. Anne-Maree and Phoebe walked while Ben rode his bike. Anne-Maree explained, *"Ben rode his bike. We went for a bit of a longer walk because we had to buy milk and bread. You have to walk all the way around because they're doing renovations."* Ben did not seem hot or sweaty when they returned at 7:00am. Ben got himself Weetbix for breakfast and ate this at the bench. He explained that he usually had Weetbix for breakfast. Anne-Maree made Ben's lunch and explained that he usually had chicken meat, peanut butter or cheese. Anne-Maree explained that Ben was only allowed a lunch order on his birthday, as they could not afford it. For recess he usually had some cookies, a packet of chips, or a Milo Snack Pack [chocolate mousse]. Anne-Maree asked Ben what he wanted to take for recess and he chose a snack pack. Anne-Maree explained that he would take fruit if they had it but they often did not have it. Anne-Maree made lasagne that morning as she explained that she would be at University all day and would not have time later on.

Ben finished breakfast and watched cartoons on television for 10 minutes before he changed. He then went back to watching his cartoons. Anne-Maree explained that she did not let Ben walk to school as she believed that the path was too close to the road and unsafe. She had to get a doctor's certificate for Ben in order for him to be eligible to be picked up since they did not live within the two-kilometre radius. Anne-Maree told Ben that she would ask Jessi to walk him over to the bus stop. Phoebe asked Anne-Maree for a cheese and ham toasted sandwich for breakfast and Anne-Maree made it for her. Anne-Maree stated that she was very busy at University. *"It's so much work. So much workload. I have two journal things due next week and then a big essay the week after. I'm also working about four shifts a week but normally it's like five or six."* Anne-Maree rushed to get ready for University and at five past eight her friend picked her up. She gave Ben a kiss and said, *"Love ya. Mwa. See ya mate. I love ya. Give me a kiss. Have a good day."* Phoebe and Paige left to walk to school while Ben continued to watch his cartoons. Ben explained that he hated Mathematics. *"I hate Maths. Mr Barren does the most annoying Maths."*

Ben explained that he used to watch cartoons in the afternoon but no longer did so because he did not enjoy them and Jessi explained that he watched movies instead.

*Jessi: Don't they have good cartoons on ABC anymore?*

*Ben: No.*

*Jessi: Don't they?*

*Ben: No. Yeah but they aren't good shows and in the afternoon they are good. I never watch them in the afternoon though. I don't watch them anymore.*

*Jessi: I know. You just watch movies.*

At 8:25am Jessi walked Ben to the bus stop, which was directly across the road. Jessi explained that she and Phoebe cooked chicken burgers at 10pm the previous night and ate them. Ben arrived at school ten minutes later and began chatting to two girls sitting on a metal seat, while most of the other children played handball. Ben's classroom teacher, Mr Barren, explained that Ben had played football last year but did not like it and therefore was not playing this year. Mr Barren described Ben as a "friendly giant".

During spelling Ben worked extremely well and was one of the first to finish. Ben went on with Australian artwork and talked to the boy next to him while he did this. Shania showed Ben her artwork and Ben helped her with some of her art. A different girl came over to Ben and let him smell her potpourri doorstop she had brought in to show the class.

At 9:45am Mr Barren told the children to put away their art and get a reading book and Ben took longer than other children choosing a book. Girls continued to go over to Ben and talk to him. Ben continued reading even while other students were distracted. At 10:30am Ben started talking to Shania about the story. Reading groups ended and Ben continued to read, however, he then put his book away. The class was told to continue their artwork and Ben drew some more pictures for Shania. She told Ben how good his artwork was. Ben started slumping down in his chair and stretching his arms above his head. The class was very uncontrolled, as children wandered around the entire time, played with textas and talked. Considering this, Ben worked fairly well, however, he chatted to Shania a lot. Ben showed Mr Barren his artwork and Mr Barren said "beautiful" and he hung it on the wall in the classroom. Instead of going on the computer which is what the fast finishers are told to do, Ben went back to his desk and talked to Shania. When Mr Barren told the class to pack up, Ben already had. Mr Barren led the class in a game of "Heads Down Thumbs Up" and Ben got excited when he guessed the right person and got to have a turn out the front.

Ben took his recess snacks from his bag and went outside and sat down next to Shania. He ate his snack pack quickly and talked to Shania once he had finished. When the teacher on duty told them they could go and play, they stood on the grass and talked for 10 minutes. The bell rang and Shania and Sarah ran up to the COLA. Ben walked and then began to run, however, he realised that he could not keep up with them and walked again.

The class went to the library for an hour where Ben was interested in a number of books. When he returned to the classroom Mr Barren had put a number of Mathematics questions on the board, which they had to complete and then go on with a specific page number in their textbook. Ben looked at Shania's work, realising he made a mistake. He had explained that morning that he did not like Mathematics. The class was being very unproductive and noisy again with Shania and the boy on the other side of Ben talking to him while he finished his work. Ben was one of the last children to finish his Mathematics work. He was the last student to take his book to Mr Barren to get checked. Ben took out the book "Eragon" from under his desk and began to read.

At lunch, Ben sat in his class line to eat his sandwich. He ate very quickly and then began talking to Shania and reading a dinosaur book. He had to wait a long time for his friends to finish eating as he finished his sandwich very quickly. When they were told they could play, Ben stood around and talked to Shania and Sarah. Sarah bought Shania and herself a red ice block each and bought Ben two red Zooper Doopers [ice blocks]. They sat down for ten minutes and Ben finished his ice blocks and waited for the girls to finish. Shania got up and began skipping. Ben eventually got a skipping rope from a tub in the playground and began skipping. He had a couple of attempts, however, it appeared that the rope was too short for him. Shania, Ben and Sarah began using a longer rope, with Ben and Sarah swinging it while Shania jumped in the middle. Eventually Ben had a turn skipping for 30 seconds. They put the ropes away and stood there to chat until the bell rang.

One of the teachers explained that even though Ben was liked by most of the boys, he felt more comfortable playing with girls. The teacher explained that one day last year Ben did not want to do gymnastics and pretended to feel sick, however, the teacher made him do it and once he started he was fine and realised he could do it.

When he returned to class, Ben finished off his artwork and the rest of the class either read or finished their work. Ben travelled on the bus to his house and walked across the road.

Ben made himself a chicken meat sandwich straight away and watched a movie called “Spirit” by himself. During the movie he went to get a drink of water. Anne-Maree explained that he usually watched movies in the afternoon or rode down to Blake’s house. She said that sometimes he would go in their pool.

At 3:45pm Anne-Maree arrived home from University. She made sure that Ben and the other girls had had something to eat after school and then encouraged Paige to have something else to eat. Anne-Maree explained that Ben did go to his dad’s on some days with Paige, however, he did not like it as all he did there was sit and eat and there were no games to play. Anne-Maree explained that often John criticised Ben.

Ben continued watching his movie but then went in the kitchen to ask Anne-Maree when they were having dinner.

*Ben: What time’s tea?*

*Anne-Maree: Six o’clock.*

*Ben: Oh I’m hungry now.*

*Paige: Have a piece of toast. That’s what I had.*

*Anne-Maree: No just wait for tea.*

*Paige: I just had toast.*

Jessi and Phoebe started teasing Anne-Maree about her new boyfriend and Ben’s sisters then discussed their favourite types of pizza and Ben explained that his was meatlovers.

*Jessi: Oh yum pizza. My favourite is chicken.*

*Paige: My favourite is chicken and BBQ.*

*Ben: Meatlovers.*

*Anne-Maree: We all know yours is meatlovers mate.*

Ben’s movie finished and Anne-Maree asked Ben if he had done his homework and he answered no. Anne-Maree began helping Ben with his homework. He found the Mathematics work hard and did not enjoy it, however he appeared to become more confident when Anne-Maree taught him to subtract properly. Anne-Maree provided a lot of positive reinforcement, “*Yep. It’s a bit harder this one. Ah very good. Next one.*”

The Blacks discussed how nice the ice cream that Anne-Maree had bought on Monday was and they all talked about their favourite flavours.

*Anne-Maree: What are you getting?*

*Jessi: Some ice cream. I really feel like some nice flavours.*

*Anne-Maree: From where?*

*Jessi: Kiama.*

*Anne-Maree: Why don't you just get it from Woollies and get one of those flavoured ones that I got the other day? It's cheaper.*

*Jessi: Oh that was so good.*

*Paige: Yeah yum.*

*Ben: I like caramel thickshake ice cream.*

*Jessi: Yeah but I wouldn't get caramel.*

*Phoebe: Get cookies and cream.*

*Jessi: I don't like that as much.*

*Ben: I love cookies and cream. It's heaps nice.*

Ben continued his homework but then sat and talked with his family, while resting his feet on the coffee table. Ben began looking through his new library books and then decided to put on "Jurassic Park". Jessi explained that Ben always watched "Jurassic Park". "*Oh Ben usually watches the first one and then the second one and then the third one.*" Ben lay down on the lounge and talked to Jessi and Paige about "Jurassic Park". Ben said that he usually did not go to bed until after 10:30pm. He continued to watch the movie and was very focused, even though there were a lot of conversations happening around him.

Anne-Maree and Ben had an argument as Ben explained that he did not want to have a shower. Anne-Maree ended up allowing Ben to get his own way, saying that he did not have to have one.

*Anne-Maree: Have you had a shower?*

*Ben: No I don't want to have one tonight.*

*Anne-Maree: Yes go and have one.*

*Ben: No I'll have one tomorrow night.*

*Anne-Maree: No.*

*Ben: I'll have one tomorrow night.*

*Anne-Maree: No come on.*

*Ben: No, no.*

*Anne-Maree: Why not mate?*

*Ben: I don't want to. Okay, Mum?*



*Jessi: Do you know what happened when you don't have a shower everyday? Rats come and eat the hair and lick the oil in it and then they climb inside your mouth. He used to believe that and he'd be straight in the shower.*

Anne-Maree explained that Ben usually lay down and watched movies at night. Anne-Maree explained that she was worried about Ben playing with girls all the time and that sometimes Ben played horses with the girls. She said that Ben had been friends with Shania since Kindergarten but sometimes was caught up in girls' jealousy issues.

*Anne-Maree: Yeah well all the boys started playing soccer and he didn't want to play soccer and the boys wouldn't include him so I brought it up with his teacher last year in an interview and she said, "Oh well I'll watch out for that" but nothing has come of it. Now he sits up in the COLA and he'll play with the girls.*

She also said that Ben was going to Blake's house the next afternoon after school and had been to a boy's birthday party on the weekend.

Jessi helped Anne-Maree do her hair and got frustrated with her when she would not sit still.

*Jessi: Mum stop moving your head. Far out!*

*Anne-Maree: All right.*

*Paige: Your hair looks so cool now.*

At 6:15pm Ben had dinner at their new kitchen table, which was situated five metres from the television. He ate his plate of lasagne while watching "Jurassic Park". Ben explained many of the parts of the movie to Jessi and myself. When he finished his lasagne Ben went into the kitchen and ate some more from the tray. Anne-Maree walked in.

*Anne-Maree: What's wrong?*

*Ben: Nothing. Is this for anyone?*

*Anne-Maree: No mate. Are you trying to hide it from me?*

*Ben: No.*

Ben got a red Zooper Dooper to eat in front of the movie. Anne-Maree explained that the children had been complaining as she stopped buying cordial and would only buy juice occasionally as they were going through it too fast and it ended up being too expensive.

*Anne-Maree: Did you notice he's drinking water Lauren? The last two or three months I've stopped buying cordial. They're all used to it now, aren't ya?*

*Phoebe: No.*

*Ben: I'm not really.*

*Phoebe: I miss cordial.*

*Anne-Maree: Sometimes I'll buy juice.*

*Phoebe: You never buy juice.*

*Anne-Maree: What did you have the other day? What was that I bought and you had two glasses of it as soon as I brought it home? Apple juice.*

Ben started playing pinball on the computer while he watched "Jurassic Park". He explained, *"I've forgotten how to play this game."* At 6:30pm Anne-Maree went out to dinner at a local restaurant for her sister's 50<sup>th</sup> birthday. Ben showed me the dinosaur figurines he had collected. Ben tired of "Jurassic Park" and turned it off. He started watching "Spirit" again in the other lounge room. Jessi explained that Ben watched that movie a lot.

*Ben: I might want to watch a different movie in there.*

*Jessi: You watch "Spirit" every single day.*

*Ben: So? You watched it yesterday.*

*Jessi: Yeah but it's the first time I'd seen it.*

Jessi and Ben discussed "Harry Potter" and they both said they could not wait for the next one to come out and Ben stated, *"I'm hoping that number five comes out for my birthday."* An hour later, Ben and Paige began playing with Paige's bow and arrows and they began to fight over these. Ben then went back to watching his movie. Jessi asked Ben if he wanted some ice cream as she had just bought some from the shops and Ben said yes without hesitation.

*Jessi: Do you want some ice cream?*

*Ben: Yeah. I've never had cookies and cream.*

*Jessi: No neither have I.*

Jessi dished him up a big bowl and Ben ran into the kitchen when he was told it was ready. He ate very fast on the lounge in front of his movie. Jessi explained that her boyfriend comes over after work most nights and brings over lollies and chips for everybody to have.

At 8:45pm Ben's movie finished and he came and collected another movie, "Elizabethtown". Forty five minutes later Ben came out to the other lounge room to watch a movie with Paige as he explained that he had seen "Elizabethtown" several times before. After he watched Paige's movie for 15 minutes, Ben got an ice block and started eating it in

the other lounge room in front of “Elizabethtown”, looking very tired. At 10:15pm Ben fell asleep on the lounge in front of the movie. When Anne-Maree arrived home five minutes later she woke Ben up. Ben went to bed, firstly making sure that Anne-Maree was going to sit on the lounge outside his room. Anne-Maree explained that Ben had attachment issues and would not go to bed unless she sat on the lounge outside his room. *“I feel like I have to peel him off me sometimes.”* While Anne-Maree and I were talking, Ben continually opened the door to make sure that Anne-Maree had not moved. Anne-Maree explained that that is why he would have fallen asleep on the lounge as he would not go to bed until she was home. Anne-Maree believed it was easier for her in the short-term if she let him do what he needed to do so that it did not cause a scene.

#### **4.4.1.2 Day Two (Weekday)**

Ben got up at 7:00am that morning and sat on the lounge. He did not go for a ride with Anne-Maree, however, Anne-Maree explained that he had been with her the previous day. Ben said that he had gone over to Sarah’s house the previous day and they spent most of the day in the pool and playing Singstar [singing game] on the Playstation. Anne-Maree explained that Ben slept in her bed the previous night as she had a University assignment due that day and it was easier in the short-term if she just allowed him to sleep there.

Ben made himself two pieces of toast and spread a thick layer of butter and then a small layer of Vegemite. Anne-Maree made Ben’s sandwich and accidentally put peanut butter on it instead of jam.

*Ben: I said jam.*

*Anne-Maree: Jam? Is peanut butter all right?*

*Ben: Okay.*

*Anne-Maree: I thought you said peanut butter mate, sorry.*

Anne-Maree also packed Ben a Milo Snack Pack for recess. Anne-Maree had University from 8:30am until 3:30pm and then had to work at night. She was busy finishing her assignment and explained that she did not know what she would do for dinner for the family that night.

Ben dressed in his school uniform and then put the television on to watch his cartoons. He sat on the lounge and watched intently. He explained that he had not watched many movies the previous day.

*Lauren: Did you watch many movies yesterday?*

*Ben: I only watched two cause I went over my friend's house yesterday afternoon. Oh and I watched another one on TV last night.*

Anne-Maree instructed Ben to take his jacket to school, however, Ben explained that it did not fit him. Anne-Maree explained that it would fit him as it was a big size but Ben said he would not want to wear it anyway.

*Anne-Maree: Do you want to take your jacket today mate?*

*Ben: No. It doesn't even fit me.*

*Anne-Maree: It does.*

*Ben: No it doesn't even do all the way up.*

*Anne-Maree: It does fit you. We only bought it last year, it will be fine.*

Anne-Maree took her car down to the mechanics and was picked up from there by her University friends. Jessi was asked to take Ben across to the bus stop. While he watched the cartoons, Ben explained how he disliked it when the sequel to a movie used different people or voices from the first one. *"Yeah cause like Tarzan and Jane on number two are different and on Brother Bear they're different. I hope that Johnny Depp is in Pirates of the Caribbean 3."* Ben explained how excited he was for Easter.

*Ben: I can't wait til Easter.*

*Lauren: Yeah?*

*Ben: I will get lots of Easter eggs and also toy dinosaurs.*

*Lauren: What's your favourite type of chocolate?*

*Ben: Mmm. White.*

At 8:25am Jessi took Ben over to the bus stop and did not talk to Ben much at all. When Ben arrived at school he sat down and talked to Sarah. The bell rang for class and Ben's class began working on their spelling words. Throughout the lesson, a number of girls came up to Ben and asked him what they had to do. Reading groups then took place and Ben was the first student to finish all his sheets. He took them over to Mr Barren, however, Mr Barren got annoyed with Ben for disturbing him. *"Go do a reading card if you have to but don't disturb me while I'm working with a group. Have you done all your sheets?"* Ben answered yes and Mr Barren then told him to do a find-a-word.

Shania was away from school and a boy sat in her seat next to Ben. The class was told to pack away their work and Ben began talking to the boy beside him. Ben began reading a

book on animals and then asked the boy next to him if he could read his book, however, the boy said that he could not. Ben started reading a cartoon book and the boys either side of him began to read with him. Most of the class was off-task, however, Ben and the other boy continued reading together. At 10:52am the class was told to pack up for recess and the class played “Heads Down Thumbs Up” for five minutes. Ben got picked again and correctly guessed who it was.

Ben sat next to a girl from his class, Tarryn, and ate his chocolate snack pack very quickly. He licked the container after he was finished and then started to talk and laugh with the girls beside him. He told one girl to hurry up and eat her apple so that they could play. The teachers let them play and Ben and one girl started to play handball under the COLA. Ben became hot and red straight away even though the weather was quite cold. When the ball rolled away or one of them missed it Ben just stood there and let the other girl get it. This happened a number of times and the girl started to get annoyed about this. Ben played for the rest of recess. Mr Barren explained that for physical education he tried to choose activities that both boys and girls would enjoy. He stated that Ben participated well and would not stand back when playing.

The bell rang and Ben’s class went to computers where he worked well with the boy next to him. The computer teacher said that Ben was a good all-round child and she had never had any problems with him. Ben worked with the boy beside him, however, he kept turning around to talk to some girls behind him. The class returned and began their Mathematics where they did 10 Mathematics mental questions, 10 revision algorithm questions and 2 problem questions. Ben was one of the last to finish and began talking to a boy about his work. Ten minutes before the lunch bell Mr Barren told the children to keep themselves busy and *“If you can’t find something for you to do yourself then I’ll find something for you.”* Ben began to read a book at his desk. Mr Barren marked the Mathematics with the class and Ben answered most questions correctly.

The children went out for lunch and Ben sat with a group of boys from his class and Tarryn. He ate his peanut sandwich extremely quickly and then talked to the boy next to him. He asked Tarryn for some of her cupcake but she said no and offered him some of her rice cakes to which he said no. When they were told they could play, Ben and a boy asked if they could play on the play equipment. The teacher said yes and they played there for two minutes before the boy Ben was playing with ran away. Ben continued to play, expecting

the boy to come back, however he did not. Ben began playing with two smaller boys for ten minutes and then walked away. He called out to Sarah and then went to run to her, however, she ran away. This happened twice but Ben realised that he could not catch her as it involved running up the hill. He got frustrated and walked over to the play equipment. Here, Ben started playing with Sam and they played a hiding game where they had to try and find each other. Sam ran away and although Ben could see him he knew he would not be able to catch him and gave up.

In class, the students were instructed to write a “little talk” poem which was on the board about insects talking to each other. After finishing this, Ben took his work out to show Mr Barren, however, he was told to sit down as he was blocking the board. Ben caught the bus and arrived home just after Anne-Maree arrived home from University. Anne-Maree explained that her University friends bought her cake, fruit and vegetables and bread as they knew she did not have much money. *“They dropped it off. They knew I didn’t have money. They’re good friends.”*

Anne-Maree explained that Ben wanted to watch a movie with her all day on Saturday, however she had to help the girls with assignments and he got upset that she would not watch it with him. Anne-Maree believed that as Ben was getting older he was becoming more attached to her. Paige agreed with Anne-Maree, explaining that he would not do swimming or go to his dad’s unless Paige went with him and she was getting sick of it. Anne-Maree stated, *“He doesn’t like to go if Paige isn’t going. Like Michael will take them to the swimming club and he will only go if Paige does.”*

Anne-Maree offered Ben some watermelon, however Ben said that he wanted some custard pecan cake first and he helped himself to some of it. He removed it from the fridge and Anne-Maree cut it for him, Paige and Phoebe.

*Anne-Maree: Do you want some watermelon? I’ll cut some watermelon up for you?*

*Ben: Yeah I do but I want some cake first.*

*Anne-Maree: I’ll cut it up for you.*

*Ben: Is that like a custard cake?*

*Anne-Maree: Yeah.*

Ben ate this quickly and then ran over to Blake’s house where, Anne-Maree explained, they usually played the Playstation or watched television or videos. Anne-Maree told Ben that he had to be home by five o’clock. Anne-Maree explained that Ben would play with Blake

approximately two afternoons a week and sometimes a girl up the road would play too. Anne-Maree explained that when there were the three of them, Ben usually was left out.

Anne-Maree clarified that it did not bother her that Ben played with girls. Paige explained that she asked Ben why he did not play with the boys.

*Paige: One day I asked Ben why he doesn't play with the boys and he said it's because they always play down the back and they're always playing sports and Ben doesn't really like it.*

*Lauren: Yeah.*

*Paige: Yeah he doesn't like doing sports as much.*

*Anne-Maree: No well he's not a sporty type of person.*

Anne-Maree said that Ben made her write a note so that he did not have to go in the swimming carnival, however, then he decided he wanted to go in it but it was too late.

*Anne-Maree: He didn't go in the swimming carnival this year. He made me write a note. He said he didn't want to go and it was on in the first week when school went back and I said, "Look mate I think it's important that you do go" and he said, "I don't want to swim" and I said, "How about you go in your house colours and you go and support your team?" He said, "All right I'll do that but you have to come and tell Mr Barren, you have to come and tell him" so I went up to the school and I said "Look Ben doesn't want to go in the swimming carnival and I told him that even if he didn't participate he could come and support" and he said, "Okay that's fine." So I came home that afternoon and said to Ben, "I've talked to Mr Barren" and he said, "Oh I'll see how I feel, I might go in it now." And I said, "Well sorry mate I've already told him." ...I think he gets himself all worked up and he probably went to school and was talking to the other kids and what not.*

At 4:15pm Ben came home with Blake and showed Anne-Maree the five movies that Blake had loaned him. Anne-Maree made dinner which consisted of roast beef, vegetables and gravy. She used all the items her friends bought her and she became extremely excited about the pot full of vegetables and said, *"This will be yummy."* Anne-Maree explained that if the girls had not brought over all the vegetables then she would have given the children meat on sandwiches because that was all she had.

Jessi called the zucchini, cucumber, and when cooking Anne-Maree asked me how to cut and cook zucchini.

*Anne-Maree: Do you take the skin off these?*

*Lauren: No I don't.*

*Anne-Maree: Chop them up like that?*

*Lauren: Yeah or you can sort of do them like carrot sticks.*

*Anne-Maree: Oh yeah. Do they take as long to cook? Like can I put it in one pot?*

*Lauren: Yeah you can. They probably take a little bit less time than carrot and broccoli.*

Anne-Maree said that Ben did not eat vegetables and that he did not like mashed potato but Anne-Maree made him eat mashed potato but not vegetables or salad.

*Lauren: Is there anything that Ben doesn't like eating?*

*Anne-Maree: Yeah this. Veggies. He doesn't like mashed potato either but I have to make him eat mashed potato.*

*Lauren: So he won't eat any veggies?*

*Anne-Maree: Nup. Not even peas. He eats corn, he likes corn. I buy corn on the cob.*

Ben showed Anne-Maree the book club magazine he had received from school, and told her what book he wanted. Anne-Maree told him that he would have to ask his father as she did not have enough money. Ben told Anne-Maree to ask him, however, his sisters explained that he would not say no if Ben asked.

Phoebe and Paige told Anne-Maree that they did not want any vegetables but Anne-Maree explained, *"Well this is what dinner is tonight."* Phoebe and Jessi ate their dinner at the bench, while Anne-Maree ate standing at the bench. Phoebe stated, *"This is the first time you've ever made us eat vegetables."* Ben was still playing with Blake on the Playstation when the girls ate their dinner. Anne-Maree told the girls that Ben had to eat his dinner before he had cake or anything else.

Anne-Maree began to get ready for work. She said that some nights she worked or was at Michael's house so the children usually had a number of things including: two minute noodles; spaghetti on toast; meat pies; sandwiches; or bacon and cheese under the grill. She explained that two days previously the children made chicken burgers and got hot chips from the diner which was just around the corner from their house. Jessi said that Anne-Maree cooked about one night a week and they had to organise their own dinner approximately five nights a week.



When Anne-Maree left for work she told Ben that she wanted him to eat all his dinner, including the vegetables. He seemed very worried about what vegetables he would have to eat.

*Anne-Maree: Ben, your dinner's over there and I want you to eat all of it, including the veggies.*

*Ben: Oh, what veggies are there?*

*Anne-Maree: Just veggies.*

*Ben: What veggies?*

*Anne-Maree: A mixture.*

*Ben: What ones?*

*Anne-Maree: Broccoli, carrot, cauliflower.*

*Ben: I can't eat carrot. I almost spewed last time.*

*Paige: Yeah he did Mum. When Auntie Lorraine made him eat it he almost spewed. He was crying Mum.*

*Ben: I don't want veggies.*

*Anne-Maree: You have to eat what is on your plate.*

Ben and Blake stopped playing the Playstation and began playing games on the computer. Ben and Blake then started to watch a movie and Ben yelled at Phoebe to turn down the music as he could not hear the movie. Paige said that he gets very angry when he cannot hear what he is watching. Ben explained that he borrowed a lot of movies from Blake.

Blake went home and Ben turned his attention to his dinner straight away and picked up his carrot and said that he was not eating some of his vegetables. *"Yuk carrot and I'm definitely not eating this, whatever it is."* Ben put sauce on his plate and rested the plate on his lap and ate it in front of "Dr Dolittle" in the lounge room. Ben explained that he would not eat vegetables and he always picked them up and moved them to the side of the plate. He loved meat and almost always asked for extra meat. Ben went into the kitchen to get a drink but realised there was only water and did not get a drink. He looked for more meat or food on the bench but realised there was not any. Ben did not eat his carrots, broccoli, cauliflower or zucchini. He ate all his meat and potatoes and a tiny bit of cauliflower. He used a lot of tomato sauce on his meat and potato also. Jessi sat with Ben and watched the movie. She gave Ben a nectarine to eat and then she began eating her Triple Deck chocolate. Ben explained how much he loved that chocolate and asked her for a piece but she said no. Ben said that he would ask for it for Easter.

At 7:15pm Ben began watching “Treasure Planet” and explained that he would watch “Daddy Day Care” next. Ben laughed a lot in the movie as he lay on the lounge. After watching this for half an hour, Ben began looking very tired. At 8:00pm Ben went into the kitchen to make himself a large bread roll with light peanut butter. He returned and ate the roll on the lounge while watching his movie. The movie finished 20 minutes later and Ben put on “Daddy Day Care”. He explained that he had been trying to find the Peter Pan movie everywhere and Blake had it. *“I was trying to find Peter Pan everywhere and when I went over to Blake’s, his movies are like a video store.”*

Anne-Maree arrived home at 9:00pm and told Ben to have a shower but Ben complained that he wanted to watch the movie.

*Anne-Maree: Go and have a shower.*

*Ben: No.*

*Anne-Maree: It’s bedtime.*

*Ben: In a minute.*

*Anne-Maree: No, now.*

*Ben: No.*

*Anne-Maree: Come on. What are you watching?*

*Ben: Daddy Day Care.*

*Anne-Maree: You can watch this anytime, come on.*

*Ben: No I can’t, it’s not mine.*

Ben had a shower and then asked for something to eat. Anne-Maree gave him some watermelon and he came back out to watch the rest of the movie. Anne-Maree told us all that Ben was going to bed so we needed to watch the movie in the other lounge room so that Anne-Maree was outside his bedroom. At 9:50pm Ben went to bed in Anne-Maree’s bed. She shook her head and told Ben that she was not happy that he was sleeping in her bed. She explained that Ben followed her everywhere and the previous night when Michael came over Ben was practically sitting on top of her on the lounge.

Anne-Maree explained that her financial situation limited her a lot. She said that John, her ex-husband, only had to pay her \$6.00 per week to support all the children and explained that she was lucky to have sisters close-by to lend her money. Anne-Maree said that she needed more shifts to help her financially, however, the more shifts she worked, the harder the family would find it, as she was not around. She thought it would be easier when she finished University, however she was glad that her children had seen her work hard to get

her degree. She believed that Ben would play outside more if someone could be out there with him, however she had too many other responsibilities and duties so she could not always find the time to do this.

#### **4.4.1.3 Day Three (Weekend Day)**

Ben woke up at 8:00am on this very hot day (top of 30 degrees). Fifteen minutes later he had a bowl of three Weetbix at the kitchen bench. After finishing breakfast, Ben put on “Peter Pan” and started to watch this, explaining that he borrowed some movies from Anne-Maree’s friend and was getting some more from her. Ben stated that he was going to a friend’s birthday party the next day at a car-racing place in Maple. Ben said that he tried to ring Shane to come over and play, however, he did not answer. Paige watched the end of the movie with Ben and when the movie finished Paige changed the channel to listen to music. Ben said that Anne-Maree had been out all morning, however, no one knew where she was. Anne-Maree had been selling fundraiser chocolates, however, Paige said that they had all been eating them without paying.

At 10:05am Anne-Maree came home from the shops with her sister and asked Ben if he wanted some watermelon and he said yes. Ben put on “Harry Potter 4” in the other lounge room as he explained that he did not want to watch the music channel. He played with Lego while watching the movie. Anne-Maree asked Ben if Shane had rung back and Ben tried ringing him again, however, he was told that Shane was already at another friend’s house. Ben ate his watermelon in front of the movie on the lounge. As soon as Ben finished his watermelon he started playing with his Lego again. He sat the Lego on the lounge next to him so he did not have to reach too far for it.

Ben explained that he was starting basketball in the middle of the year and that he had played football last year but did not like it even though his dad wanted him to play.

*Ben: I’m starting basketball in the middle of this year. I’ve wanted to play for a while. I played footy last year but I didn’t really like it. Dad wanted me to keep playing and some of my friends played which was good but now some of my other friends are playing basketball.*

Anne-Maree explained that she had been going for two walks a day when she could, however, she preferred Ben to ride his bike as he could not keep up when he walked with her.

*Anne-Maree: We’ll probably go for a walk this afternoon. I usually go twice a day.*

*Ben: Can I walk with you?*

*Anne-Maree: Well you can't keep up with me.*

*Ben: Yeah I will.*

*Anne-Maree: Just ride your bike matey.*

*Ben: Oh I will be able to.*

*Anne-Maree: Maybe.*

*Ben: No I'll just ride my bike.*

At 11:00am Ben asked Anne-Maree if she could make him a sandwich, however, she said it was too early to have lunch and Ben then asked for a chocolate. Anne-Maree explained that she had to work that night and might make spaghetti bolognese for the children for dinner and Ben became excited. Ben asked for a chocolate again and Anne-Maree told him he had to share it. He was disappointed that there were no Crunchies left, however, chose a Top Deck chocolate with approximately 36 squares.

*Ben: Can I have a chocolate?*

*Anne-Maree: Yeah but you have to share it with Paige.*

*Ben: Oh no Crunchies.*

*Anne-Maree: Ben give some to Paige.*

*Ben: Okay.*

Ben gave Paige a row of four squares and then ate the rest himself in front of "Harry Potter 4". Paige explained that she wanted to go to the shops and Ben told her to wait for him to go with her. Anne-Maree said that it was probably because Ben wanted to buy some chips from the diner.

Anne-Maree told Ben to put away his chocolate wrapper and clothes. Ben told her that he would in a minute. Anne-Maree kept telling Ben to do it immediately and he finally did so that Anne-Maree would leave him alone. Ben put on board shorts and bounced the basketball outside for two minutes before coming back inside and sitting down to watch the movie and play with the Lego. Ben asked Anne-Maree if she had \$1.50 that he could have as he wanted to buy a packet of chips to collect the footy card from inside. Anne-Maree said yes and explained that all the boys at school were collecting the cards.

*Ben: Do you have \$1.50?*

*Anne-Maree: Yes.*

*Ben: Oh cool.*

*Anne-Maree: What for?*

*Ben: Chips.*

*Anne-Maree: I figured as much. He's always wanting to buy these chips to collect the footy cards inside. All his friends are doing it. He's had more than three packets this week.*

Anne-Maree told Ben that they were going to clean the pool together, however, Ben did not want to. Ben continued to play with his Lego and watch the movie. Anne-Maree explained that they were going to a wedding later in the month and Ben was the only cousin not invited. The bride had said that it was because he was under 12 years of age and there was no children's menu, however, Anne-Maree explained that Ben ate more than her anyway.

*Anne-Maree: Ben is the only cousin not invited because there's no kid's menu. Ben eats more than me anyway.*

*Paige: He eats way more than me too.*

Ben explained that he did not like staying at his aunty's house as he could not do what he wanted and she did not have anything for him to do.

Anne-Maree went to pick up Phoebe, however, Ben did not want to go for a drive and continued playing with his Lego and watching his movie. Ben explained that he enjoyed reading books and that he was reading "Eragon" and also "Harry Potter" at the time. Ben asked me if I watched the movie that had been on television the previous night and explained what movies were on television on the weekend.

*Ben: Did you watch that movie last night?*

*Lauren: No.*

*Ben: I did. It was good. There's lots of movies on this weekend. Like just tonight I want to watch "Matilda" and "Charlie's Angels".*

Paige sat down on the lounge and Ben became frustrated that he could not see the television as well. "I can't see my movie Paige. Move!"

At 12:35pm Anne-Maree arrived home and immediately asked Ben if he wanted a sandwich. Ben said yes straight away. Anne-Maree asked Ben if he wanted chicken meat on his sandwich and Ben said yes. She asked if he wanted two sandwiches, however, Ben told her that he only wanted one. Anne-Maree made Ben a chicken meat sandwich and he ate this on the lounge in front of the movie, which had just finished. Ben told Paige to put on another movie as she was closer, however, she became annoyed and told him to do it. Ben

huffed and put on “Shrek”. He finished his sandwich and asked Anne-Maree for another half a sandwich.

*Ben: Can I have another half?*

*Anne-Maree: Yes sure.*

Anne-Maree made Ben another half a chicken meat sandwich and he again ate this on the lounge.

Anne-Maree asked Ben to help her clean the pool and although Ben was not happy about it he went out to help.

*Anne-Maree: You coming outside to help me clean the pool?*

*Ben: I guess so.*

*Anne-Maree: We can go for a swim after we clean it.*

Ben helped Anne-Maree clean the pool but then came back inside to look at his football cards and finish watching his movie. Ben was very hot, however, he did not go for a swim. Ben explained that he had collected all the football cards from chip packets and had almost 30. Ben explained that all the boys at school collected them too. *“These are all the footy cards I’ve collected from chip packets. I really want Andrew Johns and Danny Buderus.”* Anne-Maree came back inside and Ben was disappointed that she had gone for a swim without him. Ben continued to watch “Shrek” while also playing with his football cards. He then began building houses with his Lego blocks again. Anne-Maree asked Ben if he was keeping himself busy.

*Anne-Maree: You keeping yourself busy mate?*

*Ben: Yeah.*

“Shrek” finished and Ben continued to build things with his Lego blocks.

Anne-Maree looked in the freezer to see what meat John had brought over for the family.

*Anne-Maree: Oh he brought over meat and sausages for us.*

*Ben: Oh yes that’s heaps good.*

Anne-Maree went with her sister to vote in the election.

Jessi told Ben to sit in the other room to play with his Lego, as it was a lot cooler. However, Ben explained that he did not want to as he was busy doing something. Fifteen minutes later Ben explained that he would go into the other lounge room to watch a different movie.

*Paige: What movie are you watching?*

*Ben: “Treasure Planet”.*

*Paige: Oh are you watching that again?*

*Ben: Yeah.*

Ben explained that he felt like going for a walk now since he had cooled down a little bit. *“I feel like going for a walk now because I’m a lot cooler than I was before.”*

At 3:00pm Anne-Maree arrived back from her walk and said that she was going to cook dinner before they went for a walk. Anne-Maree finished cooking the spaghetti bolognese half an hour later, dishing the dinner into bowls. She made it using an onion, mince and a bottle of tomato and basil sauce. Ben’s bowl had the biggest serving. Ben asked if they were having dinner and Anne-Maree said no. Ben stated, *“I want the one with the most meat”* and Anne-Maree explained that she knew which one was his. Ben got his bike out and before leaving explained that he felt like having a sleep. Ben asked Anne-Maree if he could get some chips while they were out and Anne-Maree said yes.

We left for a walk at 3:45pm and Ben rode his bike in front while Anne-Maree and I walked behind him. He stopped at certain points for us to catch up with him and also when he needed to cross the road. He rode the entire way, except he walked his bike up a gradual hill toward the end of the ride. He stopped at the diner to buy a packet of chips with Anne-Maree explaining how bad it was that the Smiths Chip Company put football cards in chip packets. Anne-Maree explained that Ben had had three packets of chips in the last week and remembered the same thing happening last year. Anne-Maree explained that it defeated the purpose of the walk and that he did not stop asking for the chips until he had all the cards.

At 4:25pm we arrived home and Anne-Maree asked Ben if he was going to go for a swim, however, Ben explained that he wanted to go after he had eaten his chips. Ben opened his packet of salt and vinegar chips, pulling out the football card. He sat on the lounge and ate his chips, his face extremely red from the ride. Ben ate all his chips and then got changed for the pool, putting on a rash vest and grabbing a towel. He went in for a swim with Anne-Maree, talking about all his football cards.

Anne-Maree told Ben that he was allowed to heat up his dinner later and Ben seemed excited.

*Anne-Maree: You can heat up your dinner later.*

*Ben: Yay.*

*Anne-Maree: Not until after I leave.*

*Ben: Oh.*

*Anne-Maree: Yeah you have to wait for a bit.*

Anne-Maree explained that she needed to get ready for work and Ben kept saying “not yet” as he wanted to continue swimming with her. At 4:55pm they both got out of the pool and Ben changed into his pyjamas. Ben played with his football cards while Anne-Maree got ready for work. Ben explained that he hated hot days sometimes and began to play with his Lego.

Anne-Maree explained that it had been difficult having children and seeing someone new. She hoped that her children did not drive him away as Anne-Maree said that she knew that Ben did not like it when Michael told him what to do, for example, washing up.

Jessi arrived home and explained she was eating dinner before work and asked which bowl was hers. Ben worried that she would take his dinner with the extra meat.

*Jessi: I'm going to eat before I go to work cause I'm starving.*

*Ben: Me too.*

*Jessi: Which one's mine?*

*Ben: Not my one. Don't take mine.*

*Jessi: Which one's yours?*

*Ben: The one with the most meat. This one.*

*Jessi: Okay don't stress.*

Ben got a drink of water and then began watching a movie. At 5:30pm Ben said that he could not wait any longer for dinner and so he heated it up and ate it in the lounge room while watching a movie. Ben finished his dinner and continually checked the clock to see what time it was as “Matilda” started at 6:30pm. He played with his Lego in his room. At 5:50pm Jessi left for work and Ben continued to play with his Lego and showed me a remote control car he had been given.

Ben got himself a glass of water and ate some extra spaghetti out of one of the other bowls. At 6:30pm Ben watched “Matilda” and talked about it a lot as we watched it. Ben got up to add something to his Easter list and showed me his list which said:

*“What I want for Easter:*

- 1. 1 white bunny*
- 2. 1 milk chocolate bunny*
- 3. 1 milk and white chocolate bunny*



4. *I puppy in my pocket*

5. *I big block of milk chocolate*

Ben explained he has been counting down until Easter.

Ben told me about a Strawberry Corn Flakes advertisement on television, which he said that he wanted to try. At 8:10pm, Ben explained that he was going to get some Weetbix to eat, however, he came out of the kitchen with a piece of bread with peanut butter and said that they did not have any milk.

Ben talked about a number of movies he enjoyed, explaining what each of them was about and asking if I had seen them. He discussed “Eragon”, “Charlotte’s Web”, “Happy Feet” and “Night at the Museum”. “Charlie’s Angels” came on television and Ben got himself a glass of water and watched the movie.

At 9:00pm Anne-Maree arrived home from work. Ben asked Anne-Maree if he could have a wafer finger and he brought one out and ate it while he watched the movie. Anne-Maree ate her spaghetti bolognese in front of the television and explained that she ate it too quickly. Ben said that he was looking forward to the party the next day. *“I can’t wait for tomorrow.”* Ben realised they did have milk and asked Anne-Maree if she could get him a glass of milk, which he drank on the lounge in front of the movie.

Anne-Maree asked Ben where he was sleeping and they had an argument about it.

*Anne-Maree: Where are you sleeping tonight Ben?*

*Ben: Your bed.*

*Anne-Maree: No sleep in your own bed tonight mate.*

*Ben: No yours.*

*Anne-Maree: Come on mate. Be fair.*

*Ben: No I’m sleeping in your bed.*

Ben began to talk about the Playstation 3 and then asked Anne-Maree if she had ever tasted “Heaven” ice cream.

*Ben: Have you tasted Heaven ice cream Mum?*

*Anne-Maree: No.*

*Ben: Oh it’s so yum.*

Ben told Anne-Maree that he wanted to play basketball that year, however, Anne-Maree explained that she would just have to find out how much it cost first. Ben saw an advertisement for Extra chewing gum and explained that he wanted to try that flavour. “Charlie Angels” finished and Ben got his football cards out to look at.

Ben put on “Shrek 2” for Anne-Maree to watch in the other lounge room while she waited for him to go to sleep. Ben slept in Anne-Maree’s room and she explained she becomes exhausted because if Ben sleeps in her room then she has to wait until he goes to sleep. While sitting on the lounge, Anne-Maree explained that she did not have to work the next night. *“I might cook them something nice tomorrow night because I don’t have to work. Maybe a nice chicken schnitzel.”*

#### **4.4.2 Winter**

Ben’s oldest sister, Brooke and her boyfriend had been living with the Blacks until they found another house to live in. Anne-Maree had started working at the Optometrist as a receptionist every Friday as well as working six nights a week and doing full-time University. Anne-Maree had lost even more weight and was currently going through settlement issues with John for the house. Jessi had crashed Anne-Maree’s car a week before and Anne-Maree had been using Brooke’s car until she secured a new one. Ben no longer rode his bike with Anne-Maree in the mornings and Anne-Maree felt that it was more important to deal with his emotional and attachment issues as they had become worse over the past couple of months. Ben looked a lot bigger in winter. He looked as if his height had stayed the same but he had put on a large amount of weight, which was very noticeable in his face and stomach. Ben spent a lot more time with male friends, including Blake and Shane.

##### **4.4.2.1 Day One (Weekday)**

Anne-Maree let Ben sleep until 7:40am because he had had a pretty restless sleep the previous night. Anne-Maree explained that Ben had not been sleeping in her bed for a few months as she put an end to it, however, the last couple of weeks he had been. Anne-Maree thought this was due to the fact that his birthday was coming up and he was very excited. Anne-Maree explained that she had now set a bedtime for Ben as he had been very moody and aggressive lately. Anne-Maree said it had only been for the last week or so but seemed to be working well. Anne-Maree explained that Ben had been lashing out at everyone lately

and kicked Anne-Maree and hit Paige the other night. She said that she might have to see a counsellor about it as Ben did what he wanted when he wanted. Anne-Maree thought that his behaviour may be attention-seeking behaviour, however, both she and Michael had been spending a lot of time with Ben lately.

Anne-Maree explained that Ben had started playing basketball in Wollongong. He trained every Wednesday night and played a match on Thursday afternoon/evening. Michael usually took Ben as Anne-Maree was often working. She also said that he got into the school Oztag [a non-contact game of Australian football] team and was competing the next day.

At 7:40am Anne-Maree woke Ben up. She asked him if he wanted devon [processed meat] on his sandwich to which he replied yes, and then asked him what else he wanted packed for school. He looked in the pantry and asked for some cookies and a cheese pack. Anne-Maree got Ben four double choc chip cookies and a cheese dip pack and made him a devon sandwich.

Ben got himself a bowl of Milo cereal flakes and ate this at the bench while Paige made an English muffin with salsa and cheese and Phoebe heated up leftover spaghetti bolognese and put grated cheese on top. Phoebe then got out a piece of bread and put her spaghetti on it, eating it like a sandwich.

Ben explained that of a school morning he had been going over to Blake's house, which was just around the corner, and getting a lift to school with his mum as Jessi had not been awake to take him to the bus stop.

Ben said that he had Kentucky Fried Chicken (KFC) for dinner the other night and it was very nice. Anne-Maree said that the children would probably have meat pies for dinner. Ben said that he had the day off when the athletics carnival was on as he did not do it. *"I got to have the day off the other day when the athletics carnival was on. I don't really like it and didn't want to do it."*

Anne-Maree explained that the other day Ben wanted to go over to his dad's house so he and Paige went over but then his dad complained to Brooke that there was nothing for the

children to do at his house. Anne-Maree therefore had been reluctant to send the children over there much anymore.

Ben left for Blake's house and arrived at school at 8:45am. He stood around and talked to two boys before the bell rang 15 minutes later. Ben went into class and Mr Barren did not provide any work straight away so the children finished off the artwork they had been doing the previous day. Ben began to colour in a sheet full of shapes. Ben talked to people at his table as they worked.

The Dragons rugby league training squad came to the school and Ben was very excited about this as Anne-Maree's dad used to play for the Dragons. Ben's class went out and played a game of rats and rabbits [a tipping game] and Ben was only able to tip his partner once as his agility was not very advanced. They then played octopus [a tipping game where you have to stay in the spot you were tipped and use your arms to tip other players]. Each time they played this game, Ben was one of the first children to be tipped and therefore was not active as he had to stand with his feet planted. Ben had a turn of being a tipper, however, he found it difficult changing directions.

At 10:00am Ben's class went back to their room and worked on reading cards. The class was very noisy and Ben talked a little but mainly concentrated on his own work. At 10:50am the class was told to pack up and 10 minutes later they were dismissed for recess.

Ben sat in his class line next to a boy and girl. He ate his cheese and biscuits snack first, licking the remaining cheese out of the container with his finger. He then ate his four double chocolate chip cookies. Ben ate quite quickly and then turned to talk to the children around him. When the children were told they could go and play, Ben followed Shane who walked around the COLA. Ben then followed him down the hill to the school field and Ben sat on the field while the other boys played.

At 11:30am Ben's class went to the library. Ben returned his books and borrowed two more Star Wars books. The librarian read the class two books from the Early Childhood Short-Listed books. Matthew talked to Ben a little during this session. After finishing at the library, Ben's class did Mathematics questions from the blackboard and then a page from their Mathematics book. Ben found some of the questions on the board quite challenging.

At lunch, Ben sat in his line with a group of boys and girls from his class and ate his devon sandwich extremely quickly. When he finished his sandwich, he talked to some children around him. Ben asked Tarryn for a chip and she gave him one. When the children were told they could go and play, Ben and his friends played hide and seek. They played in a very small area, which did not involve much running. When the tipper chased Ben he was always tipped, as he was slower than the other children, however, they did not specifically target him because he was slower. Ben and his friends interspersed playing this game with sitting under a tree the entire lunch.

After lunch, Ben's class finished off their Mathematics and then their colouring from the morning. Ben was one of the last people to finish his Mathematics and then went on with his artwork. He talked to people on his table while he did this.

Ben arrived home from school at 3:20pm and said that he wanted to go down to Blake's house to play. Anne-Maree asked Ben if he wanted something for afternoon tea first, however, Ben said that he usually had something at Blake's house.

Ben arrived home from Blake's house at 4:50pm and explained that they shot in his basketball ring outside and then played on his Nintendo Dual Screen [similar to a Gameboy]. He explained that he did not have afternoon tea there and helped himself to a Milo drink. He put on "Beethoven" and drank his Milo in front of it. Anne-Maree explained to Ben that Paige was going to their dad's house and he would drop her back after Ben arrived home from his basketball game.

*Anne-Maree: Dad's coming over when you get home mate to drop off Paige and drop off your dinner too but if you want to eat something before you go you can.*

*Ben: Yeah can I have a pie?*

*Anne-Maree: Yeah, you just organise it yourself because I have to go to work.*

Ben cooked himself two meat pies in the microwave. He put sauce on the pies and then ate them in front of "Beethoven". He ate very quickly, eating the meat out of the pie first and then picking up the pastry and eating it with his hands. After finishing this Ben selected an apple and ate it slowly in front of the movie. Anne-Maree had bought the apples that day from the local shopping centre and said that Ben and Paige could take them to school for recess. "That's good I got those apples cause Ben and Paige can take one for school tomorrow." Anne-Maree again said that she often did not buy fruit. She said that she

bought some nice oranges from the local fruit market the other day and might get some more.

Ben yelled at Jessi when he asked her what time she started work. Anne-Maree explained that Michael talked to his school counsellor who was also the counsellor at Ben's school. Anne-Maree said that Michael thought that she was too lenient with Ben. Anne-Maree said that maybe Ben's behaviour was poor because he wanted to spend more time with her, however, she had to work as much as she had been to support the family. Anne-Maree had given Ben a job sheet with jobs that he needed to do for Anne-Maree and himself each day. If he did this all week then he would be paid \$5.00 but if he did more than he was asked then he may receive more money.

Ben talked about his birthday coming up.

*Ben: Yeah well my birthday's on a Sunday so on the Saturday I'm going to have three friends over, Blake, Shane and Jayden and Mum said we can go to the cinemas and either see "The Simpsons" movie or "Surfs Up". Then they're going to stay over and we're going to have pizza for dinner and stay up late watching movies.*

Ben said that Blake's mum was going to copy several movies for him to keep and that he wanted a Nintendo Dual Screen for his birthday.

Ben got ready for basketball early and waited anxiously to be picked up. He was picked up by his coach at 6:05pm. He was the biggest boy on his team and was very slow when playing. He found it difficult running forward and back in time to either shoot or defend and therefore mainly got stuck running forward and back in the middle of the court. Ben's coach became annoyed with him because he was not there to rebound or defend the other team. One mum said, *"All he needs to do is stand there. He's so big."* Ben's teammates were frustrated with him as he did not do much and they did not pass him the ball. He was only passed the ball once and then threw it to the other team straight away. When he had the ball he took a long time to pass it and ended up passing it to the other team, with one parent yelling out, *"Don't waste it."* Ben became really red and found it difficult to run.

Ben arrived home at 8:10pm and asked Paige where his dinner was. Ben got his meat patties and potato gems out of the fridge. He asked Paige if he could have all the potato gems and Paige said she thought he could. Ben heated up two meat patties and potato gems

and got out two pieces of bread. Ben put one patty on his bread and poured tomato sauce on this and then put the other pattie on the side of his plate with the gems. Ben ate his sandwich with his hands, sitting at the kitchen bench and said that the patty was spicy.

Ben found \$2.00 that his dad had left for him and said that he would probably spend it on lollies. He explained that they sell cheap lollies at the fruit shop near his school.

*Paige: Dad left you some money.*

*Ben: Yay \$2.00. I don't know what I'll spend it on.*

*Phoebe: Probably just lollies.*

*Ben: Yeah probably. They've got cheap lollies at the fruit shop but they don't have packets of lollies. Soft drinks are cheap too.*

Ben explained that he wanted to walk home from school the next day but that Anne-Maree did not let him walk to school. *"She never lets me cause she doesn't think it's safe."*

At 9:05pm Ben saw that his mum had pulled up outside and quickly ran to his room to change into his pyjamas without having a shower as it was past his bedtime. Anne-Maree asked Ben if he had brushed his teeth and had a shower and he said no so she told him to do so. Ben had a shower and then told Anne-Maree that he wanted to read "Harry Potter".

*Ben: Can I still read Potter?*

*Anne-Maree: Yeah for a little while.*

Ben looked in the freezer and saw Splits ice creams that his dad had brought over and got one red one out and ate it. Ben explained that he was sick of all their movies. *"I can't wait til I get more movies off Blake. All of ours are boring."*

At 9:25pm Ben went to bed. Anne-Maree went in to talk to him for five minutes and then he read for another five minutes.

#### **4.4.2.2 Day Two (Weekday)**

Ben got out of bed at 7:15am this morning and immediately stood on a thumb tack. Ben began crying and Anne-Maree helped calm him down. Five minutes later Anne-Maree asked Ben what he wanted for breakfast.

*Anne-Maree: What do you want for breakkie? There's toast or Milo cereal.*

*Ben: Milo cereal. Can I have a small spoon with it?*

Anne-Maree asked Ben if he wanted devon on his sandwich and Ben said yes. Anne-Maree said that she was going to teach him how to cut it so that he could make his own sandwiches in the future.

*Anne-Maree: You know what, I'm going to teach you how to make your own lunch. Teach you how to cut the devon. We had a bit of an altercation yesterday. I had to do an online test for Uni from 7:30 to 8:30 so I told him to organise his own lunch but he was naughty and was saying he couldn't do it.*

Ben told Anne-Maree that he wanted the "Harry Potter 5" game for his birthday but Anne-Maree said that games were expensive. Ben explained that the "Transformers" game was cheaper. Ben told Anne-Maree that Blake's mum was burning DVDs for him. Anne-Maree asked Ben if he wanted meat loaf for tea and he said yes. Paige tried to convince Anne-Maree to get her out of doing sport, however, Anne-Maree said no.

Ben talked about his birthday again and was even more excited now that it was closer, however, he explained that Shane might not be able to come. Ben explained, *"If Shane can't come I was going to invite Adam."* Ben ate his breakfast slowly while looking at DVDs and games in the catalogue and talking to Anne-Maree. Anne-Maree said that it was shopping day the next day and they therefore did not have much food.

Ben changed into his school uniform, which appeared tighter than it did on previous days. When ready, Ben started playing with his handball. Anne-Maree showed Ben how to cut the devon and provided positive encouragement. Anne-Maree had the day off University, however, had to do a lot of University work and housework and then work at night. Phoebe was at the snow for school camp and Anne-Maree said that Jessi had made spaghetti bolognese for everybody for dinner the previous night.

Anne-Maree packed Ben a wafer finger for recess and a devon sandwich for lunch and then asked if he wanted some cookies to go with it, to which he said yes. Anne-Maree told Ben to brush his teeth and after fighting with her about this, Ben finally gave in and brushed them. Anne-Maree said that she needed to make up Ben's contract again, however, Ben was not keen on this at all. Anne-Maree said that Ben was very naughty the previous night. He had come home from Blake's house hot and sweaty and had not eaten afternoon tea. He kept complaining to Jessi that he was hungry, telling her to start making dinner. Anne-Maree told him to make half a sandwich to get by until dinner, however, Ben kept whinging about wanting dinner. Jessi then told him to have a shower before dinner as he smelt after playing at Blake's and then dinner would be ready but Ben refused to do this. Jessi could



not reason with him and called Anne-Maree at work, however, he would not listen to Anne-Maree either.

Anne-Maree and Ben looked at the lollies in the Aldi [supermarket] catalogue and Anne-Maree told Ben that they did not need many lollies for his party.

*Ben: I want those lollies, those, those and those cause they're all really yummy.*

*Anne-Maree: You don't need all those.*

*Ben: Some for the lolly bags to take into the movies and the others to go in the bowls on the table for when we watch the movies.*

*Anne-Maree: We probably only need a couple of pizzas too.*

Anne-Maree walked Ben over to his bus stop and Ben caught the bus to school. Anne-Maree showed me the school newsletter which had a section on healthy eating. Anne-Maree explained that the suggestions of healthy lunches were weird lunches that children would not like. *"I just thought those sandwiches are weird for children and none of my children would eat those. Ben would hate all of that so it's nice to say that children should eat these things but when they don't eat that it's hard."* Anne-Maree explained that she would like them to eat as a family but because she worked so often it was not possible. She said that she tried to encourage the children to eat at the kitchen table but she was often not home to enforce it.

*Anne-Maree: I'd love to eat dinner as a family. It happens on a Sunday night but I work the other six nights. I try to get the children to not eat in front of the TV but it's a bit hard when I don't eat with them.*

Ben arrived at school and stood around talking to Blake and Shane. Ben was very focused in class when they wrote an exposition on "Why Should Children Learn to Swim?" Ben finished early and went on to do silent reading. Ben talked to the boys on his table about his birthday party.

At recess Ben sat with Shane, Blake, Shania, Bree and Tarryn. Ben ate his two double chocolate chip biscuits and his two wafer fingers fairly quickly, talking to friends while he ate. Ben and his friends finished eating, however, they had to wait for the teacher to let them play. The children were told they could play, however, they had to remain undercover as it was raining outside. One teacher explained that Ben had been skipping more often as they had been leaving a crate of skipping ropes out for people to play with. Ben and the

children he was sitting with began to skip. Ben had three turns of skipping in the middle while two people turned the rope for him. The first two times he jumped three times and then the rope became caught. On his third attempt he slipped over and started crying. The teacher on duty went over to see if he was all right and he stopped crying and got up from the ground. Ben turned the rope for the rest of recess.

The bell rang and Mr Barren explained, *"You can't miss Ben."* The class did Mathematics mental on the blackboard and Ben concentrated hard. When Mr Barren asked who received 10 out of 10, Ben raised his hand. The class then began long multiplication in their Mathematics books. Ben worked very well on this even though many children could not understand it. Ben counted on his hand a number of times to solve the Mathematics problems. Mr Barren went through the answers with the class and Ben looked very confused at times. Ben started to copy Blake's work towards the end of the lesson.

The class moved on to reading a piece on Buddhist nuns and answering a number of questions. Ben had trouble with this and asked people at his table for some of the answers. When Ben finished this task he began colouring his artwork. When Ben handed in his artwork Mr Barren said, *"Wow that's great. Very good. Best I've seen."* Ben talked to Shania and Tarryn while he coloured in his artwork. Other students in the class who had finished their work became very distracted, however, Ben enjoyed his art and was very focused. Shane showed Ben his "Harry Potter" book.

Mr Barren explained that they would watch "Round the Twist" in the afternoon in class. He said that if it was not wet they could have gone outside for some games. The lunch bell sounded and Ben sat under the COLA with Shane and Blake and ate his devon sandwich. Ben looked at his "Harry Potter" book while he slowly ate and also talked to his friends. When the boys finished eating they all continued to look at the book. When the children were told they could go and play, Ben, Shane and Blake went up to the library, lay on the floor and began playing chess. At 1:55pm, the librarian told students to leave the library. Ben went and found Shania and Tarryn and tried to skip in the middle while two ropes were being turned. Ben was not very good at this and got stuck first time.

Ben and his class watched two episodes of "Round the Twist" and then were directed to go on with their artwork. Ben caught the bus home and after arriving home Anne-Maree offered him an apple and an orange straight away.

*Anne-Maree: Hi matey. Now do you want an orange and an apple and I'll cut them up for you?*

*Ben: Just an apple.*

*Anne-Maree: Are you sure? You'll get hungry because you've got basketball training.*

*Ben: No just an apple.*

*Anne-Maree: Do you want me to cut it up with the skin off?*

*Ben: Yeah.*

Anne-Maree told Ben that Shane could come to his birthday but had to go home after dinner. The boys were invited to come over at two o'clock with the movie starting at three o'clock. Anne-Maree explained that she would then have time to get ready for work and Michael would watch the children that night. Ben opened a present that was sent from his aunty which was a large t-shirt and a book which Ben thought was too easy for him to read. Ben stood eating his apple, listening to his mum on the phone to Blake's mum. Anne-Maree asked Ben what cake he wanted and he asked for a surprise.

*Anne-Maree: What cake do you want or do you want a surprise?*

*Ben: Um.*

*Anne-Maree: Surprise? I've got something in mind. For Sunday lunch I might just buy a chocolate mud cake and what about for dessert on Sunday?*

*Ben: That chocolate thing.*

*Anne-Maree: The Bavarian one?*

*Ben: Yeah.*

Ben also said that he wanted hamburgers for dinner on his actual birthday.

At 3:35pm Ben got ready for basketball training. He poured a drink of water and threw his basketball up and down. Ben got himself two chocolate choc chip cookies. Anne-Maree asked Ben how his lunch had been and Ben said good but next time he wanted her to cut the devon. Ben went and watched cartoons on television for two minutes before playing a street fighting game on his Playstation. At 4:10pm Ben got himself another cookie.

*Anne-Maree: How many cookies have you had?*

*Ben: Three.*

*Anne-Maree: Ok no more now mate.*

*Paige: And he had four at school.*

Anne-Maree reminded Ben that when he got home from training he had to have dinner and then have a shower and get organised for bed. Anne-Maree told Ben he needed to be in bed by 8:30pm.

At 4:15pm Anne-Maree took Ben to basketball training. At training the boys began to shoot. Ben shot for two minutes and then sat on the ball and did not participate. The boys then had to do runs to different lines on the court and back to the baseline. Ben was last and found it difficult to reach the line, looking very tired and breathless. The next drill involved one person dribbling in to shoot and their partner trying to defend the shot. Ben was not very fast and almost walked when he dribbled the ball in. The team then had to run around the court twice and Ben found this extremely hard. The next drill involved four people passing the ball down the court taking no more than two steps and shooting when they got to the other end. Ben could not keep up with his group and was always lagging behind. They then played the same game but in teams against each other. The boys only passed the ball to Ben if there was no one else to pass to. Ben made a good effort to try to keep up with the boys but then just stood at the defensive end as he was very tired. The team then played a game and Ben hung back as he knew he could not keep up. Ben was frustrated that he could not get his shots in and just hung back in defence. Ben could not get any rebounds as he was too slow to move into position, however, he was the tallest by far. Ben took control of the ball toward the end and eventually landed a basket, the first one all afternoon.

Ben arrived home from basketball at 5:35pm, had three glasses of water and put his dinner in the microwave. He had three large pieces of meatloaf and mashed potato at the kitchen bench. Ben ate all his meatloaf and two mouthfuls of the mashed potato and then said that he did not like it and could not eat anymore. He said he liked potatoes because they tasted like chips but he did not like mashed potato. Anne-Maree rang from work. Jessi told her that Ben was not eating his potato and Anne-Maree told Ben to eat it. Ben ate the rest of his mashed potato and looked in the fridge for something else to eat but did not find anything. Ben said that there was nothing on television, however, he put on “The Simpsons” to watch. One minute later Ben got ice cream out of the freezer and dished up an average-sized bowl for himself, putting strawberry topping on top. Ben sat in front of “The Simpsons” and ate his ice cream. Ben explained that he did not like his mum’s new car as it was a two-door and it was difficult for him to get in and out of. Ben watched “Neighbours” while lying on the lounge and then came out to watch Paige play on the computer. At 7:00pm, Ben started

playing his Nintendo Dual Screen on the lounge and explained that he wanted a different type for his birthday.

*Ben: This is like the DS [Dual Screen] I said I want. It's like this but it's wider and you have a stick for it. I told Mum I want to sell this one because it only costs \$99 and the advanced games that I have work in the other one.*

Ben could hear that "Futurama" was on television in the other lounge room and ran up and sat on the lounge to watch it.

At 7:50pm Ben had a shower and Anne-Maree arrived home from work shortly after this. Ben asked Anne-Maree to cut him an apple but she explained there was none left. Anne-Maree offered an orange.

*Ben: Can you cut me an apple?*

*Anne-Maree: There aren't any. I can give you an orange?*

*Ben: No. I want something to eat but there's nothing to eat.*

*Anne-Maree: There is but you've just had dinner.*

*Ben: Okay I'll have an orange.*

Ben ate half an orange on the lounge in front of the television. Ben and Anne-Maree had a disagreement about what time Ben was allowed to stay up with his friends on his birthday.

*Anne-Maree: For your birthday you can stay up til 12.*

*Ben: No.*

*Anne-Maree: Yes.*

*Ben: No 12:30.*

*Anne-Maree: No when I tell you something you accept it and not want a little bit more.*

At 8:30pm, Anne-Maree told Ben it was bedtime and five minutes later he went to bed but continued to talk to Anne-Maree about his party while she sat on his bed.

Anne-Maree explained that she put a freestanding basketball ring on lay-by and bought a Nintendo Dual Screen for Ben's birthday. She said that the basketball ring was Michael's idea as he could not stand it when Ben watched television all day.

#### **4.4.2.3 Day Three (Weekend Day)**

Ben awoke at 8:00am, however, Anne-Maree said she thought he would have slept for longer as he had had a late night. Ben wanted Milo cereal for breakfast but they did not have any left and therefore had a big bowl of Coco Pops at the bench instead. After

breakfast Ben watched “Harry Potter and the Chamber of Secrets” while also playing the Nintendo he received for his birthday. Ben then started playing with the Tamagotchi he received from a friend for his birthday. Anne-Maree helped Ben reset the Tamagotchi to make it come alive. Anne-Maree and Ben argued when she told him to blow his nose as he kept sniffing, however, Ben refused to.

*Anne-Maree: I think you need a tissue.*

*Ben: Not yet.*

*Anne-Maree: Yeah go and get one.*

*Ben: No.*

*Anne-Maree: Listen, what did I say about doing things when I ask?*

*Ben: No.*

*Anne-Maree: Yes Ben.*

*Ben: I don't want to.*

*Anne-Maree: Come on Ben.*

*Ben: No.*

*Anne-Maree: Go and get a hanky.*

*Ben: No I don't want to.*

*Anne-Maree: It's something on your sticker chart.*

*Ben: No I don't have one yet.*

*Anne-Maree: You will.*

*Ben: No.*

*Anne-Maree: Yes go. One, two, three. What a naughty boy.*

Anne-Maree found empty cheese packets in his room, however, Ben denied eating them. Anne-Maree asked Ben to take out the garbage and he said no but then ended up doing it. At 9:25am Ben changed and bounced the basketball outside and shot on his new basketball hoop. Fifteen minutes later, Ben came back inside and asked Anne-Maree when he was going to his dad's for Father's Day as he was bored. Anne-Maree got him to make up his tick chart, which Anne-Maree helped him with.

*Anne-Maree: Write “do things when Mum tells me to”.*

*Ben: No I'm not writing that.*

*Anne-Maree: Yes, do it.*

*Ben: Do I only get \$5.00?*

*Anne-Maree: We'll see if you can handle it and also if you're good for a week and have no outbursts.*

Ben explained that he wanted to be able to go to bed later than 8:30pm, however, Anne-Maree said no. Phoebe explained that Ben always stayed up late watching movies. Ben disagreed with almost everything that both Anne-Maree and Phoebe said. Anne-Maree explained that it did not matter what she said to Ben, he always tried to push the limit. Ben's jobs on his tick chart were: take the bins and garbage out; take a shower; make my bed; always say please and thank you; feeding dogs (take turns with Paige); be good; pick up dog poo; go to bed at 8:30 and read until 9pm.

Anne-Maree explained that Ben loved basketball and it was not hard at all getting him to go. *"Ben loves his basketball. I haven't had one problem getting him there. He's never once said he didn't want to go. But footy was a whole different ball game, especially with John pressuring him all the time."* Ben went to pick up the dog poo from outside. When Ben came back inside Phoebe asked him if it was cold outside.

*Phoebe: Is it cold?*

*Ben: No.*

*Anne-Maree: Yes.*

*Phoebe: Yeah but Ben has his flubber to keep him warm.*

*Anne-Maree: Go way Phebs. That's mean.*

Anne-Maree said that Jessi was now living and working just outside of Ayers Rock and would probably be away for six months.

Ben looked in the fridge and told Anne-Maree that he wanted something to eat. Anne-Maree gave him the option of a piece of toast or an orange, however Ben wanted pizza.

*Ben: Is there anything to eat?*

*Anne-Maree: You can make some toast.*

*Ben: No.*

*Anne-Maree: An orange?*

*Ben: Can I cook pizza?*

*Anne-Maree: You're having that for tea remember.*

Ben then helped Anne-Maree wrap a book and block of chocolate for his dad for Father's Day and then said he was very hungry. Ben explained that he did not like the chicken schnitzel at the pub last time their dad took them there and Anne-Maree told Ben to get a hamburger, instead, however Ben said he would still get the schnitzel. Ben started making things with Scoobies [plastic, bendable tubes]. Anne-Maree got the children to help her

clean the house for five minutes. Ben played his Nintendo for a couple of minutes before Anne-Maree told Ben to stop playing and make his bed.

Ben sat on Anne-Maree and she told him that he was way too heavy. Ben then continued to play his Nintendo. At 11:30am Ben said that he was starving and Phoebe asked, “*When aren’t you starving?*” Ben told Anne-Maree that they were never able to do anything fun on the weekends and it was always boring. Anne-Maree asked what Ben wanted to do on the weekends and an argument ensued as Anne-Maree explained that he may be able to have a friend over the following weekend if he did all his jobs.

*Ben: So I can’t do anything if I haven’t done my jobs?*

*Anne-Maree: Well, no.*

*Ben: Fine I’m not doing any of it.*

*Anne-Maree: Okay well then you won’t be able to go to basketball.*

*Ben: I don’t even want to go.*

*Anne-Maree: You complain about being bored. Well you can have nothing to do on the weekend.*

*Ben: Fine I’ll just go to Blake’s.*

*Anne-Maree: No you won’t be able to go out at all if you’re naughty.*

*Ben: Well I’ll just tell Blake my mum’s a fat pig.*

Anne-Maree explained that she thought Ben had been misbehaving as she had been working night shifts at the hospital and Ben had not been going to bed until late.

At 11:40am Ben, Phoebe and her boyfriend, Tim and Paige left for lunch with John. Anne-Maree visited her sister. She described how difficult Ben had been and how moody and angry he gets. She said that Ben never did what he was supposed to do and always made life difficult for everyone around him. Anne-Maree’s cousin said that when she was looking after Ben he refused to get out of the car. Anne-Maree hoped that Ben would grow out of it. She said that she did not think Ben would be so disobedient if there was a male in the house.

At 2:30pm Ben and his sisters arrived home from lunch and said they also went to the Father’s Day fete. Ben said he had a nice chicken schnitzel for lunch and Phoebe bought him a Wizz Fizz showbag which had approximately 20 lollies in it. Ben showed me a rubber rat that he won at the fete by putting balls in clowns’ mouths. Ben got his lollies out of the showbag and tried a liquorice fizzer but threw it out as he did not like it. Ben ate



another fizzer lolly while watching “Harry Potter 2”. Ben played with his Tamagotchi and then got another fizzer from his showbag and watched the movie.

Anne-Maree explained that she had to work and would put some pizzas on for Paige and Ben as they had had a big lunch. *“I’ll just put some pizzas on for tea before I go and that will do them cause they’ve had a big lunch”*. Ben ate another two fuzzers from his showbag in front of the movie. He ate the rest of his lollies while watching the movie. Anne-Maree told Ben that his Tamagotchi needed feeding, Ben huffed and got up to feed it. The phone rang and Ben got up from watching his movie and talked to Michael about his basketball and the fete. Anne-Maree left for work at 4:20pm to drop Phoebe to work and then to visit Michael before she started work. Anne-Maree told Ben that I would put their pizzas on but Ben was worried it would end up being too late.

*Anne-Maree: Lauren’s going to make your dinner.*

*Ben: When can we eat?*

*Anne-Maree: When Paige gets home.*

*Ben: Oh that will be ages.*

Ben said that he was bored with the movie as he had seen it too many times and explained that he wanted to get “Harry Potter 5”. Ben seemed very bored and was continually wandering around the house and then sitting down to watch the movie. Ben got his books out of his room and started to read in front of “Harry Potter”. Brooke and Ben came upstairs to wrap their dad’s Father’s Day present and Ben told Brooke that they had a nice lunch with his dad and then they got Mr Whippy ice cream.

*Ben: We had heaps of food with Dad. I had a big schnitzel and chips and a coke at the pub and then before we went to the fete Dad got us Mr Whippy ice cream.*

*Brooke: Oh I love Mr Whippy.*

*Ben: Yeah it was heaps yum.*

At 5:30pm Paige arrived home from the fete. Ben took three ghost drop lollies from Tim’s showbag and explained *“He had heaps anyway.”* Ben explained his vegetable likes and dislikes, *“The only veggies I like is beetroot and broccoli’s okay. Peas are the worst.”* Ben said that he would see what was on television and if there was nothing on then he would watch “Harry Potter” again. Ben ended up watching an Eels versus Broncos rugby league game on television.

At 5:45pm Paige and Ben's dinner was ready which consisted of two pizzas, one hawaiian and the other meatlovers. Ben explained, *"We usually have two pieces of each, so four altogether."* Ben ate his pizza on the lounge while watching the football match. Ben put his feet on the coffee table and licked his fingers and then got himself a drink of water. Ben then changed the channel to "The Simpsons" and he and Paige sat and watched this. Ben said that he was going to watch a movie after "The Simpsons". *"I'm going to watch a movie in the other lounge room when this is over cause I don't want to watch that Top Model show."* Ben ate another two ghost drops and five fuzzers from Tim's showbag. He put on the movie "Deja Vu", stating, *"I haven't seen this movie yet."* Ben ate another two fuzzers and two ghost drop lollies from Tim's showbag in front of the movie. Ben began playing with his toy rat while watching the movie. Ben's Tamagotchi beeped. He huffed, fixed it up and then went back to watching the movie. Ben commented that the movie was weird.

Anne-Maree arrived home from work at 8:10pm and asked how dinner was.

*Anne-Maree: How was the pizza?*

*Ben: Good. Can I have another piece? There's heaps left.*

*Anne-Maree: Yeah I suppose so.*

Anne-Maree told Ben that he needed to be in bed by 8:30pm and therefore needed to have a shower soon. Ben said that he had to finish watching the movie but Anne-Maree responded, *"That's a DVD. You can watch it anytime."* Ben then asked if he could have two pieces of pizza for school the next day and Anne-Maree said yes.

*Ben: Can I take two pieces to school tomorrow?*

*Anne-Maree: Cold?*

*Ben: You can get it heated at the canteen.*

*Anne-Maree: Okay if you want to.*

Ben sat in front of the movie and ate two more pieces of pizza, while Anne-Maree ate Chinese she brought home from work. Anne-Maree explained that when she started to work as a nurse she did not think that their eating habits and diet would change much. When Ben finished his pizza Anne-Maree told Ben to have a shower and that he could watch the rest of his DVD the next day. Anne-Maree explained to Ben that she could watch him play basketball this week as she did not have to work.

When Ben got out of the shower Anne-Maree told him that it was time for him to go to bed. Ben asked Anne-Maree to come into his room and became annoyed when he was not allowed to watch "Dodgeball" on television.

*Anne-Maree: Righty mate. Bedtime.*

*Ben: No.*

*Anne-Maree: Yeah.*

*Ben: Okay well come in.*

*Anne-Maree: Okay.*

*Ben: What movie is this? Oh it's "Dodgeball".*

*Anne-Maree: You've seen it before anyway, come on.*

Anne-Maree went into Ben's room and cleaned out his ears and then Ben said to her, "*Piss off I hate you.*" Anne-Maree laughed but said that he was very naughty. Anne-Maree explained that she did not know if Ben was actually hungry or if he wanted food because it was there. She said, "*In terms of what I can do for the kids I'm not sure. Look at them. Their shapes are all so different. Ben is just very broad. I think he'll grow into his weight a bit more.*"

#### **4.5 A TYPICAL DAY IN THE LIFE OF BENJAMIN BLACK**

7:40am	Eats breakfast (Weetbix or Milo flakes and milk) at the kitchen bench
8:00am	Watches television
8:25am	Catches bus
8:35am	Sits and talks to friends
9:00 – 11:00am	School
11:00am	Sits and eats recess (up to two snacks, for example chocolate chip cookies or a Milo Snack Pack)
11:20am	Plays handball, skipping or a chasing game with friends or sits
11:30 – 1:00pm	Eats one sandwich with Vegemite or jam. Plays tip games, skipping, handball or talks with friends
1:50 – 3:00pm	School
3:10 – 3:20pm	Catches the bus home
3:20 – 3:30pm	Eats a snack (high calorie, energy-dense, for example a sandwich or left over food from fridge)
3:30 – 6:00pm	Afternoon activities (goes to Blake's house and watches movies or rides bike, watches movies, basketball training or basketball game)
6:00 – 6:30pm	Eats dinner (homemade chicken burgers and hot chips) in front of the television
6:30 – 8:30pm	Watches television or movies while snacking throughout on ice blocks, lollies or bigger snacks such as sandwiches or cereal.
8:30 – 9:00pm	Eats a snack (fruit if it is accessible or biscuits) while watching movie
9:00pm	Reads in bed

Number of hours slept: 8

## **4.6 THEMES FOR BENJAMIN BLACK**

### **4.6.1 Dietary Behaviour Factors**

Ben's mother, Anne-Maree, was of a healthy weight, however, she explained to me that she was obese a few years back. Since then she had modified many of her weight-related behaviours in order to lose a significant amount of weight. All of Ben's sisters were older than him, with two out of three being overweight.

Ben's portion size at breakfast was quite suitable, however, Anne-Maree allowed Ben to eat what he wanted and this changed from a highly nutritious cereal in summer to a high-sugar breakfast cereal in winter.

Ben's morning, afternoon and after dinner snacks were high in sugar. Anne-Maree said that Ben would eat fruit if she bought it but she only ever bought it a few times. Anne-Maree always encouraged Ben to have something to eat after school, however, Ben usually prepared this for himself. His portion sizes at school were suitable in summer, however, in winter they were far too big, based on the serving sizes outlined in the Australian Guide to Health Eating (Australian Government Department of Health and Ageing, 1998). On the whole, however, his portion sizes were far too big.

Due to Anne-Maree's work commitments, she was often not there to monitor his food intake. Even when she was home she often let Ben eat whatever he wanted anyway. After snacking all afternoon and early evening, Ben was always allowed something to eat when Anne-Maree got home from work, as she was unaware of what he had eaten during her absence. Ben had access to many high-sugar and energy-dense foods to snack on and was able to control his own food intake, based on the serving sizes and number of servings outlined in the Australian Guide to Healthy Eating (Australian Government Department of Health and Ageing, 1998). His older sisters, who were supposed to be role models, were always snacking of an evening too. Ben's sisters had a love for food and were always talking about and eating high-sugar or energy-dense food. Ben often did not have a lot to do in the afternoon and evening and eating seemed to fill in the time for him.

Lunches during the week and on the weekend were moderately healthy in summer, however, in winter his lunches were quite energy-dense. His portion sizes were appropriate at most lunches. Dinner was often energy-dense and portion sizes were far too big. Because Anne-Maree worked most nights, dinners were often take-away or frozen meals. On

occasions Anne-Maree would prepare dinner in the morning and other nights Jessi would cook. Ben did not like many vegetables and most of the time the only vegetable that was included was mashed potato. On the odd occasion when Anne-Maree was given vegetables by friends, she requested that Ben eat them but was not home to enforce this. Ben only liked a couple of vegetables and would often refuse to eat the other vegetables.

Even though the Blacks had a new kitchen table, Ben ate all his meals and snacks, except breakfast, in front of the television and, again, Anne-Maree was not home to see this. Ben ate every meal and snack extremely fast and when eating in front of the television, he did not concentrate on his food at all.

Anne-Maree provided Ben with choices for all meals and this often led to unhealthy food being eaten for breakfast, lunch and snacks. This was especially due to the fact that most of the food Anne-Maree was able to offer was unhealthy anyway. Anne-Maree did not set boundaries around food intake and Ben requested food frequently. Anne-Maree was not home to restrict what Ben ate, however, even when she was home she often let Ben eat what he wanted. Ben, therefore, seemed to eat a lot and often ate when he was bored or when watching television or movies.

Ben's sisters were not good role models as they ate a great deal of unhealthy foods and Anne-Maree was on a very strict diet. Anne-Maree was a caring mother and wanted to make her children happy. She, therefore, often let Ben do what he wanted and eat what he wanted as long as he was happy.

Ben watched a lot of television and as a result he often saw advertisements for unhealthy treats that he wanted to try. He also persuaded Anne-Maree to buy him chips in order to collect the football card inside.

Ben was used to preparing all his meals and helping himself to food as Anne-Maree had full-time University several days a week, worked on Fridays and worked six nights a week. Socio-economic status considerably restricted what Anne-Maree could afford to buy, however, she had money to buy a range of unhealthy snacks and treats but felt that she could not afford fruit and vegetables.

All the children at Maple ate fairly unhealthy food and this was the environment Ben was surrounded by at school. Maple School did not encourage healthy eating as there was no scheduled “fruit break”, which would have helped to increase Ben’s intake of fruit and vegetables. Even though he did not particularly like these types of foods, he was influenced by his peers. The school canteen aimed to abide by the NSW Healthy School Canteen Strategy. Although a wide range of green foods was available, a moderate number of amber and red foods were also available daily. Due to limited money, Ben was only allowed to order his lunch on his birthday anyway.

#### **4.6.2 Physical Activity Factors**

Ben was not confident in his athletic abilities, however, he was confident when it came to basketball. Ben did pretend he was sick so he could get out of doing gymnastics and had the day off when it was the athletics carnival. In summer, Ben walked with Anne-Maree of a morning, however, in winter he did not as he had more pressing emotional and psychological issues, in particular attachment and insecurity issues which took priority.

Ben found physical activity difficult, which limited his involvement and participation. He became puffed, red and sweaty easily and found locomotor skills difficult to perform. He could not bend his knees very well and this put pressure on his ability to run. Even though he did find activities such as running in basketball challenging, he was still excited each week to play and train.

Basketball was of high intensity, however, Ben often could not keep up and started to walk and not fully participate in the play. He played with his friends even though all of these friends were extremely fit and he often became frustrated with his lack of fitness and mobility. His teammates were not very supportive of Ben’s efforts at times and became annoyed with him when he could not keep up with play. At times, Ben would give up in activities, as he was too tired to continue and would become lazy. His participation in non-organised activities at home was limited as he was either not involved at all or would participate in less than half an hour on a particular day.

Anne-Maree was a good role model as she had lost a great deal of weight over the past year and walked at least once a day. She did not often encourage Ben to participate in physical activity unless it was something he wanted to do. Anne-Maree tried to make Ben happy, especially since he had been emotional and therefore if Ben did not want to participate in

something Anne-Maree did not try to encourage him to be involved. Once Ben said that he wanted to play basketball, Anne-Maree saved up so that she could pay for him to play. On the other hand, when Ben wanted to walk with her instead of riding his bike, Anne-Maree did not encourage this as she thought he would not be able to keep up with her.

Ben had a moderately good relationship with his sisters and, at times, they would spoil him and become overprotective as he was the youngest and the only boy in the family. Ben and Paige spent the most time together as she was the closest in age, a bit of a tomboy, and they therefore shared some interests. Ben's sisters would interact and talk to Ben when they had time and felt like it but otherwise they would not go out of their way to start a conversation with him. Ben did get frustrated with his sisters at times. Ben's second eldest sister, Jessi, acted as a mother-figure when Anne-Maree was not home and Ben did not like this as she often tried to tell him what to do. He did not play with his sisters as he had different interests to them and they were quite inactive themselves. Ben would often not participate in physical activity unless someone else was outside with him, however, Anne-Maree had so many other responsibilities that this did not happen on many occasions.

The Blacks lived in a busy area in Dapto, which is a low to middle socio-economic status, working class community. Even though it was a 10-minute walk to school, Anne-Maree did not let Ben walk as she feared it was unsafe. Ben seemed to want to walk to school so that he could stop at the fruit shop and buy lollies and soft drink. Even when Anne-Maree had days off University, she still made Ben catch the bus and did not walk him to school herself. Anne-Maree allowed Ben to ride his bike with friends around the area. Ben's backyard was quite small, however, he had a pool to swim in and in winter Ben was given a basketball ring for his birthday. At school there was plenty of space to play in, including a handball area, a football field to play on and two sets of play equipment. Ben only used the handball and play equipment areas.

At school, Mr Barren did not regularly take his class out for physical education as he thought there were too many other things to get done in class. Ben's class, however, did not appear to do much class work, leaving plenty of time for physical activity. Mr Barren said that Ben was always enthusiastic when they did do physical education. When involved in specific tagging activities, Ben was always tagged first and therefore had to sit to the side until the game was over. A lot of the children appeared to target Ben as they knew he was



slower than them and this meant that even though he participated in physical activity he was inactive for most of the time.

Ben was usually involved in physical activity at lunch and recess, however, the time available was inadequate. He spent a short time playing handball, however, this was of low-intensity and when participating in skipping, he spent the majority of the time turning the rope for his friends. When participating in moderate-to-high intensity activities, Ben often played for less time than his peers before he needed to sit down.

In summer Ben wanted to participate in basketball but because of limited finances, Anne-Maree could not afford this. In winter, however, Anne-Maree had taken on an extra day's work and was therefore able to afford to pay for Ben to play basketball with his school friends.

Anne-Maree could not often watch Ben's basketball games as she worked most nights and could not be involved in activity with Ben as she was too busy with work, University classes, University assignments and study, household duties and caring for all the children. Anne-Maree's boyfriend, Michael often took Ben to his basketball games and they started to bond more in winter than they had previously in summer.

#### **4.6.3 Sedentary Behaviour Factors**

Ben spent most of his leisure time participating in screen-related activities. He spent far too much time watching movies and television and also spent some time playing the computer and his new Tamagotchi and Nintendo Dual Screen. Ben watched many movies and often these were not suitable for someone of his age. He did read age-suitable fiction and non-fiction books quite regularly.

Ben spent a huge amount of time watching movies on week days (approximately five hours) and weekends (approximately nine hours), based on Australian recommendations for time spent in small screen recreation (Australian Government Department of Health and Ageing, 2004). He had a large number of movies to watch that his mum bought for him and that he borrowed from friends. He often watched the same movie several times back-to-back. Ben was always up late watching movies, as he would not go to bed until Anne-Maree got home at night. In summer he did not have a set bedtime and would go to bed very late and be extremely tired the next day, however, in winter Anne-Maree established an 8:30pm

bedtime. Even in winter Ben had a broken sleep pattern as he often slept in Anne-Maree's bed or got up in the middle of the night to sleep in his mum's bed.

Screen-related activities were something he enjoyed doing and were also easy for him to do by himself. He did have friends who lived nearby that he could play with, however, even when he spent time with them, they often spent the majority of their time watching movies. Ben did not have anyone to spend time with in other activities as his sisters had different interests to him and were often busy with their own social lives.

Anne-Maree and his sisters were aware that he watched a lot of movies and television but Anne-Maree did not restrict the amount of time he spent in sedentary activities. When Anne-Maree went to work it was easier for her if Ben spent time in sedentary activities, as she knew he was safe and happy. On the weekend, Anne-Maree did try to get Ben out of the house on a few occasions even though he often wanted to continue his screen-related activity and Anne-Maree usually let him do so.

Anne-Maree was extremely busy with housework, full-time University and work at night and therefore did not encourage him or participate with him in any other activity and also was unable to take him places.

#### **4.6.4 Personal and Social Factors**

Ben was often a dominating, impatient and ill-tempered boy who lashed out at times at his family members and relatives. This seemed to occur more regularly in winter. Ben was happy when he was doing what he wanted to do and things were going his way, however, once something annoyed him he became very angry. He also became irritated when he was told to do something he did not want to do. When around his friends at school or at basketball, however, Ben acted differently and was a happy, friendly, patient, calm child.

Ben's behaviour at home had become quite difficult and he was lashing out at Anne-Maree and his sisters on a regular basis. Dealing with Ben's emotional and psychological state seemed to take priority over all of his other physical behaviours.

Anne-Maree and Ben had a moderately good relationship and Anne-Maree would do anything for Ben even though she had limited time and money. This also meant that Anne-Maree was not assertive and set no boundaries or rules around dietary patterns and time

spent in small screen recreation. Anne-Maree did not see Ben as much as she would have liked during the week, as she was far too busy. Anne-Maree struggled to manage everything and worried that the reason Ben had emotional issues was that he was not getting enough attention. Ben did not have a male role model in his life. He did not get along well with his dad as he was always criticising Ben and wanted him to be a fit, athletic, football player, which he was not. Ben had developed a stronger relationship with Michael but he, again, hated it when Michael took on a parental role and told Ben what to do.

Although Ben's behaviour was good at school, he often did not listen to instructions at home. Ben and Anne-Maree fought when she told Ben what to do, which prompted him to lash out at her and his sisters. Ben often ignored Anne-Maree's requests and could be very stubborn and strong-willed when he wanted to be. Ben and Anne-Maree developed a tick chart to monitor his behaviour and responsibilities and Anne-Maree tried to enforce this to the best of her ability.

Ben was confident when it came to peer acceptance as he had some close friends and was liked by his peers. He was also confident in his school work and behaviour. His physical appearance self-esteem was quite low and Ben appeared to worry about his height more than his weight.

Ben found some Mathematics tasks challenging and would often worry about his cognitive ability in school. Ben was very good at reading and art and was often asked by his peers to assist with their pieces. He was very focused in class and concentrated well even though his class environment was noisy and his peers were usually distracted themselves. He worked at a moderate pace and when he did finish work early he went straight onto another task. Mr Barren did not have a strong relationship with any of the children in his class, including Ben. He did not provide much positive feedback to the students and therefore Ben had to be internally motivated in school. On many occasions the class was not set any work and even though most of the class would sit and talk, Ben went on with some other work he had not yet finished.

#### **4.7 THE DAY-TO-DAY LIFE OF CAMERON GRAY**

Cameron Gray was a short 12-year-old boy with blonde hair and brown eyes. He was in Year 6 at Ashton Public School. He lived with his mum, Kellie; his dad, Jamie; and his two sisters, Georgia and Erin, who were aged nine and six, respectively. Both Kellie and Jamie were not very active, with Kellie being quite slim but Jamie being slightly overweight. Kellie smoked quite a lot and was often going outside to have a cigarette. Erin was extremely thin and Georgia was slightly overweight. They lived in a quiet street behind Ashton Public School, with a number of young families living close-by, including several of Cameron's good friends. Cameron's best friends included Bryce, Ben and Travis who were all quite slim and active, however, Bryce would be classed as overweight. His parents decided to live in this location so that Cameron would have friends to play with. Jamie worked for a plastic-making company and often adopted a managerial role in this company. At times, however, Jamie was short-staffed and therefore had to work night shifts. Kellie worked Monday, Tuesday, Thursday and Saturday as a receptionist at a local real estate. In order to build their large house, Kellie had to go back to work. Cameron's house was very big, however, they had a very small backyard. They lived directly across the road from a large grassed area (public reserve). The Grays owned one large television in the lounge room and two other average-sized televisions. They also had two computers and one Playstation. The Grays came from a middle to high socio-economic status, however, they had a large mortgage to pay.

Ashton Public School had approximately 500 students and a large grassed playing area with several concrete areas to play in. Cameron's teacher was Paul Yellen who took a number of the school's sporting teams. He was away for the first term as he was acting Assistant Principal and Cameron therefore had Caitlin Liberty who was a casual teacher at the school. Most of Cameron's peers were slim and active.

##### **4.7.1 Summer**

###### **4.7.1.1 Day One (Weekday)**

Cameron got up at 7:40am and dressed in his room. He came downstairs and got himself a tall glass and straw and poured himself a glass of peach and mango Ski D'lite yoghurt. He took his breakfast into the lounge room and drank it quickly in front of the large plasma, where he watched cartoons. Jamie explained that Cameron was quite lazy and thought his weight status could have been genetic as he did not eat chocolate or anything like that. Cameron watched television for approximately 20 minutes and then Kellie told him to get

his homework. He completed an English summary at the kitchen table and then Jamie asked if he knew his spelling words, to which he said yes.

The rest of the Grays had their breakfast. Kellie had Coco Pops [chocolate cereal], Georgia had two pieces of bread with butter, Erin had Weetbix and Jamie had two pieces of toast with butter and ham. Kellie explained that she was the only one who ate an unhealthy breakfast.

*Kellie: I tried all those healthy cereals for about six months and all of a sudden I got these huge pains in my stomach and I thought oh I'm coming down with a bug and I didn't eat breakfast for a couple of days and then I was fine and then I ate them again and I got the same stuff. Those pains.*

Jamie and Kellie assisted Cameron with his spelling words. After doing his homework for 10 minutes Cameron put away his homework and lay on the lounge to continue watching cartoons.

Kellie explained what she packed the children for school. Cameron had three pieces of white bread with BBQ sauce and butter, one apple, one packet of air popped popcorn, one cheese and biscuit dip packet, one small chocolate and a large bottle of orange cordial. Kellie said that the chocolate was a treat because Kellie's mum gave it to her and they had not had one the previous night.

At 8:20am Cameron's friend rang him and he talked for two minutes before Jamie told him to hang up the phone as they would see each other at school. Ben asked Cameron to go to the driving range with him after school one day the following week and Cameron said yes and then they talked about a computer game.

Cameron normally walked to school with Bryce and Bryce's mum, Jenny, however, that day Cameron and I walked together. It took less than five minutes to walk to school. After arriving at school, Cameron sat on a seat outside his classroom and waited for Ben and Bryce to arrive. The bell rang at 8:55am and Cameron put his bag down inside his classroom and tried to find a book to read for silent reading. Mr Yellen explained that Cameron's behaviour had been a little better that year and he was more settled. He explained that Cameron was still very lazy and did not like doing the work, especially reading and writing. During silent reading Cameron continued to fidget and talk to Bryce who sat next to him. Cameron's class was studying the Gold Rush and Mrs Liberty had set

up the classroom and routines as if they were back in the Gold Rush times. Mrs Liberty asked the class a number of questions including “Who has found gold yet?” and “Who is sick of eating damper?”, however, Cameron did not participate even when everybody else in the class did. Cameron played with his calculator while Mrs Liberty was talking. Mrs Liberty asked the class to get out their spelling books for a spelling test. Mrs Liberty and Mr Richardson, the Year 6 teacher next door, were friendly and played jokes on each other often, which Cameron liked to watch. The class had a spelling test and even though the children were asked to put their books on Mrs Liberty’s desk, Cameron just sat there.

Mrs Liberty asked the class to read “The Cricket Story” to themselves, however, Cameron swang on his chair and then kept looking around the classroom and talking. Mrs Liberty told Cameron to start working, however, Cameron listened to Bryce read and did not read the story himself. Cameron started reading for a minute and then turned around to talk to people on the table behind him. Mrs Liberty called out “*licence*” which meant that children had to hold up their licence before the countdown ended. Mrs Liberty told Cameron and Bryce that they could go and dig for gold and they went over to the gold digging section of the classroom and chose a small container to search for gold specks. Mrs Liberty asked the class to put up their hand if they thought they were mature enough to handle jokes between Mr Richardson’s class and their class. Cameron was the only child to not put up his hand and Mrs Liberty asked Cameron, “*Can you not be mature?*” and Cameron said yes. When marking homework Cameron took a long time to get organised and Mrs Liberty became angry twice with Bryce and Cameron for talking and touching other people’s work. Cameron continued to talk and got into trouble again. Cameron got upset with Bryce for marking a question on his homework incorrect when it was actually correct and Mrs Liberty said, “*Do not interrupt my class again Cameron.*” Cameron asked Mrs Liberty about an answer to one of the questions and argued with Mrs Liberty as he was adamant that he was right. Cameron again was the last person to put his homework and spelling on Mrs Liberty’s desk.

Cameron was reprimanded for playing with his gold while Mrs Liberty was talking and then had his gold taken from him as she could tell that he was distracted. Cameron then started playing with his pens instead, pulling apart his pens and beginning to blow in them. The class was told to do some writing on the life of Aboriginals in the gold rush period, however, Bryce and Cameron played with their gold. Cameron was told he was not allowed to dig for gold on Monday as he was playing with Bryce’s gold. Mrs Liberty told the class,

*“The person who can write the most true things can have five pounds”* and Cameron seemed motivated for a minute but then began talking to Bryce again. Cameron remained distracted throughout this task also and Mrs Liberty took the gold from Cameron and Bryce, saying, *“I’m very disappointed in you two.”* Cameron continued to fiddle with things and distracted Bryce.

The recess bell rang and Cameron ate his apple near the classroom door while talking to Ben and Bryce. Cameron threw his half-eaten apple in the bin and then sat with Bryce, Ben and another friend outside the classroom. Cameron tried to swap his cheese and biscuit pack for Ben’s cupcake, however, Ben did not want to swap. Cameron then ate his sandwich, throwing out the crusts and then ate his cheese and biscuits, licking the remaining cheese from the container. Cameron then ate his chocolate and drank some of his cordial. He ate quickly and then played handball for five minutes before sitting and talking to his friends.

Cameron was one of the last people to line up for assembly, during which he tapped his legs, punched himself and fidgeted. Cameron found it difficult to get up off the floor after assembly. He finished off his Tutankhamen [famous Egyptian] artwork and then started working on his colony picture. Cameron started playing with the dirt in the gold digging corner and Mrs Liberty said, *“Cameron, I think you’re wasting time. That’s not your job. I’d rather see you working on your hut.”* Cameron continued to play with the dirt and then started painting his colony. One of Cameron’s peers asked him to help get the lunch orders from the canteen and they started running towards the canteen. Cameron then became breathless and started walking again. After returning, Cameron and Bryce started to fight and Mrs Liberty said, *“Stop that Cameron and Bryce. It’s dangerous.”* Cameron looked at what everybody was eating for lunch and Cameron and Bryce were the only children not eating anything. Cameron went outside to play and mostly stood around and talked with friends. He chased one boy who stole his hat, however, he became very hot and puffed. Most of Cameron’s friends ganged up on him, stealing his drink bottle from him.

The bell rang and Cameron went straight to the classroom to set up his part of the tabloid for the younger students in the school. Cameron scored for soccer dribbling and at the end of each round he had to run into the middle and provide his score to the teacher. Cameron was always the last child to reach the middle and looked very uncomfortable running as his shorts began to ride up. Cameron was constantly pulling his shirt down throughout the day.

Cameron walked home from school with Kellie, Erin and Georgia and he immediately said, *"I bags the computer first."* As soon as he entered the house he went to the computer to play a game.

*Cameron: This is my computer.*

*Lauren: Are you playing a game?*

*Cameron: Yeah.*

*Lauren: What type of game is it?*

*Cameron: It's like a pacman type thing but you can talk to each other.*

Cameron was on the computer for 40 minutes and then came out and asked Kellie for something to eat.

*Cameron: Can I have something to eat?*

*Kellie: What do you feel like? An ice block or a jelly cup?*

*Cameron: No something yummy.*

Cameron started to look in the pantry and Kellie explained, *"I don't think you'll find anything yummy in there."* Cameron got out four slices of bread to make a toasted sandwich, however, Kellie said that Cameron was not allowed to have two sandwiches as dinner would be ready in two hours. Cameron complained that two hours was a long time away, however, he ended up making one toasted sandwich with butter and Parmesan cheese. While his sandwich was toasting, Cameron watched cartoons on television and then ate his sandwich in front of the cartoons. After half an hour of watching cartoons, Cameron explained that he was still hungry. Cameron went into the kitchen and opened a box of chocolates, however, Kellie told him that he did not need any. Cameron asked if they were having leftovers for dinner.

*Cameron: Oh yum. Can we have leftovers tonight Mum?*

*Kellie: No.*

*Cameron: Why? I've already got my stuff picked out.*

*Kellie: Why?*

*Cameron: I've already got mine picked out. Here.*

*Kellie: No we're not.*

Jamie arrived home from work and Cameron went back to play the computer. Kellie explained that Cameron was not playing soccer that year as his team was getting beaten every week and Cameron had to play goalkeeper each week. Cameron was doing karate with Bryce. Twenty minutes later Cameron came back and watched cartoons. Kellie said



that she worried about how much activity Cameron did as he became red and sweaty really easily.

*Kellie: He was so hot and red after sport. And he gets really puffed and sweaty too. Yeah I'm very concerned about that. I don't think he should be doing that every day. That's what worries me. Yeah and I'm afraid of letting him do a lot sometimes too, especially in summer.*

Half an hour later Cameron went back on the computer. After playing for another 40 minutes Cameron started hitting golf balls outside on the field and then played with children in his street. Half an hour later, at 6:30pm, Cameron came inside, just as dinner was ready.

The Grays were having chicken with the skin on, garden salad, pasta salad and hot chips, which Jamie picked up from the shops. Before eating his dinner Cameron stole chips from Georgia's plate and then from the leftover pile of chips. Cameron was not served much salad as he did not particularly like it. Kellie and Jamie said that he was a bit of a carnivore as he really loved meat. Cameron drank cordial with his dinner.

*Cameron: I'll eat anything.*

*Kellie: No you won't. No tomato, no lettuce. He won't eat lettuce.*

Kellie explained that they had take-away one or two times a week and a normal dinner for them is some sort of meat, mashed potato and three or four different types of vegetables. Jamie said that he thought Cameron ate too many carbohydrates and maybe his metabolism was slower also.

After dinner Cameron played outside again with the same children. Kellie said that Cameron played outside a bit but she and Jamie did not. Cameron hit some golf balls around and then kicked the soccer ball around in a circle. He played from 7:00pm until 8:15pm, when he was told to come inside. Cameron came inside and used the computer and then had a bath. Ben rang to see if they could have a sleep over at Cameron's house at the weekend, however, Jamie said maybe the following weekend as he did not feel like having to look after more children that weekend. Kellie said that Cameron was aware of his weight problem as he often said, *"I'm hungry Mum but I shouldn't eat anything, should I?"*

Kellie offered Cameron some ice cream.

*Kellie: Cameron, are you having some ice cream?*

*Cameron: Yes please.*

*Kellie: Cameron!*

*Cameron: Yeah.*

*Kellie: Come and get it.*

*Cameron: Yum yum yum yum yum yum yum yum yum yum yum yum yum. Ice cream. Ice cream.*

*Georgia: I want more.*

*Cameron: She's got more than me.*

*Kellie: No she doesn't.*

Cameron ate a fairly big bowl of vanilla ice cream in front of the television. Cameron complained that he wanted to watch the James Bond movie. “‘Die Another Day’. That’s a pretty good movie. I watched it.” Jamie told him to watch it on another television.

*Jamie: Well go and watch something else. There’s four other TVs in the house. Pick one upstairs so at least you get the exercise walking up.*

*Cameron: But I want to watch the big one.*

*Jamie: Well you’re not.*

Cameron went to the other downstairs television to watch a James Bond movie, which was on television. Half an hour later Cameron got himself a glass of light milk and a strawberry artificial colouring straw and drank this while Jamie watched the “OC” on television. Jamie then told Cameron to go to bed and read. Cameron went to bed and read “Eragon” for half an hour before turning out his light.

When Cameron went to bed, Kellie and Jamie explained that Cameron was obsessed with food. Kellie said that her mum used to catch Cameron stealing raw sugar from the sugar bowl and eating it. Jamie explained that even when Cameron was not hungry and there was McDonalds or a big cake in front of him, he had to have it all.

#### **4.7.1.2 Day Two (Weekday)**

Cameron got up at 7:40am again, dressed and watched cartoons with Georgia on the television. Kellie explained that Jamie was still at work and had left for work at 3 o’clock the previous afternoon. Kellie asked Cameron and Georgia if they wanted breakfast and Georgia said that she wanted a butter sandwich. Cameron said that he wanted yoghurt but if there was not any then he wanted to have toast. Kellie poured Cameron a large glass of vanilla yoghurt and put a straw in it for him. He drank it in front of the cartoons, slurping the remains. Cameron had a test to get into a selective high school the next day and had

been trying to prepare for it. Erin had Weetbix for breakfast and even though Georgia had already had her breakfast she asked for some Weetbix and Kellie got this for her.

Kellie packed Cameron's lunch consisting of three slices of bread with peanut butter, a packet of chips, a fun size Kit Kat [chocolate bar], a piece of fruit and a bottle of cordial. The cartoons finished at 8:30am and Cameron got up to put on his shoes and walked with Kellie, Georgia, Erin, Jenny, Bryce and Bryce's sister, Brianna. Cameron and Bryce began walking the normal way to school but Kellie told them to walk the other way so that their shoes did not get wet. Cameron did not want to walk that way as it meant walking up a steeper hill. Bryce and Cameron walked very slowly and Kellie kept telling them to walk faster or they'd be late, however, they continued to dawdle. They played with their toy guns which they had brought to act out the Eureka Stockade in class. When they arrived at school they continued to play with their guns until the bell rang.

Cameron's behaviour was similar to day one. In class, they started rehearsing a play on dogs, however, Mrs Liberty was annoyed at Cameron for not paying attention. Cameron sat down on the concrete while the rest of his group stood to rehearse. Cameron pretended to be a dog catching a ball, however, his peers ignored him. Cameron had a small part to play and when he read it out he followed the page with his finger. Cameron threw away Bryce's magazine before they re-entered the classroom.

Cameron had minus five pounds and in order to provide Cameron with the chance to be even, Mrs Liberty said, "*Cameron you can go around and collect the gold buckets and I'll give you five pounds.*" When she asked the class if they thought that was a fair amount, the class said that it was too much and Mrs Liberty therefore gave him three pounds. The class was told to write sentences with a spelling word in each sentence. Cameron and Bryce were off task and were talking the entire time. The class then went on with letter writing but Cameron and Bryce played with their guns instead. Cameron worked for minute intervals before becoming distracted and off-task. Cameron took out his letter to show Mrs Liberty and she said, "*That's only four lines. Go back and do more. Yours is about half the length of the others.*" Cameron went back to his desk and continued to be distracted. Cameron was told that he got three spelling words wrong and therefore had to pay three pounds.

Cameron was told they were allowed to dig and he pushed some people out of the way before finding four pieces of gold in one container. He showed his peers and they did not

seem impressed at this. Bryce and Cameron began playing with the dirt containers and Mrs Liberty said, *“Cameron and Bryce, that’s not your job.”* They began playing with their guns again and Mrs Liberty became angry at them for doing so. The class then conducted an auction where students had brought in lollies, chocolates, and stationery for people to bid on. Cameron was annoyed that he could not bid on the chocolates as he did not have enough money and leaned over to the desk behind him to look at the chocolates.

At recess, Cameron sat by himself and said to himself, *“I’m not going to eat this Kit Kat, I’m going to put it up for auction.”* He put the Kit Kat down for five seconds and then picked it up and started to unwrap and eat it. Two of Cameron’s friends then sat down next to him while Cameron started eating his chips. He played with his gun while he was eating. After finishing his chips, Cameron started eating his peanut butter sandwiches and had a drink of his cordial. Most of Cameron’s friends stood around and played with their guns, however, Cameron and Bryce remained seated and ate. The bell rang for the end of recess just as Cameron finished eating his sandwich.

Cameron’s class then attended music for an hour with another teacher. Cameron’s Principal, Dennis Long, explained to me that Cameron’s parents were adamant that they did everything right and blamed the teachers for Cameron’s poor behaviour. He said that Cameron used to be very bright in Kindergarten but stopped trying as he felt he did not need to put in any effort anymore. He explained that Cameron did not try in sport or physical education as he was lazy and even though he was taking the selective high school test, he would not get in as his school ranking was not high enough.

Mrs Liberty stated that Cameron always stuck with the same group of friends and they did not associate with anyone else. None of his peers tried to associate with them as they were immature and therefore had different interests compared to other students their age.

Cameron and Bryce had their guns confiscated for playing with them in class. The children worked on a Mathematics page on area. Cameron was the only student still finishing his Mathematics page when they started the auction again. Mrs Liberty approached Cameron and talked to him about his writing. *“You need to write a lot more. You’re not writing in the lines, you’re writing way too big and very unneat. It’s carelessness. It’s not because you can’t write, you’re just being lazy.”* Cameron’s concentration improved in Mathematics, however, instead of working through the Mathematics page himself, he looked up the

answers in the back of the textbook. Cameron had his Mathematics checked and then helped Bryce with his Mathematics work. Cameron began to read his book for silent reading.

The bell rang for lunch and the children were told to get their food from their bag and eat it at their desk. Cameron did not eat anything for lunch, however, Bryce ate a banana. The class had an auction while they ate their lunch and Cameron asked a boy behind him if he wanted to put their money together to bid for something. The boy said no as Cameron only had eight pounds to contribute. Cameron went outside to play and Bryce, Ben and he began pushing each other around. They did this for a long time and Cameron began to get quite aggressive. Ben and Bryce ran up the hill near the handball area and Cameron walked slowly behind them. They continued to fight up there for another 10 minutes until a teacher reprimanded the boys and made them sit outside the staffroom for the remainder of lunchtime. Ten minutes later the bell rang for the end of lunch and the teacher on duty talked to the boys about their behaviour and then they went back to class.

At 2:30pm Cameron's class had the Eureka Stockade. Kellie and Jenny arrived at the school early and waited outside the classroom so that they could see the battle. Cameron and Bryce used their guns to pretend to kill people.

After the bell rang for the end of school, Cameron asked Kellie if Bryce could come over straight after school and Kellie said yes. We all walked home together and as soon as Cameron walked in the door, he announced, "*Bryce and I are on the computer.*" Cameron poured Bryce, Erin and himself a glass of chocolate milk and went to put more Milo in it, however, Kellie said, "*No it's already chocolatey enough.*" Cameron drank his milk in one go and then went to play the computer. Bryce followed when he had finished his milk. Cameron and Bryce began to play the computer at 3:15pm, while Kellie helped Erin clean her Bratz doll. Kellie explained that Jamie went back to work at three o'clock and was doing night shift.

Cameron went over to the fridge and opened it. Kellie questioned what he was doing. Cameron then went to the pantry and got himself a packet of chips, which he took back to eat in front of the computer. Ten minutes later Bryce asked if he could have a packet of chips and Kellie agreed. Kellie asked Cameron if they were going to go and play outside but Cameron answered, "*There's nothing special to do outside.*" Kellie said that she always

had difficulty deciding what to cook at night and did not know what she would make that night.

Kellie told the boys to stop playing the computer so she could walk Bryce home and pick up Georgia. When Bryce left, Cameron started practising his Mathematics for a selective high school test. Half an hour later, Cameron said that he did not want to do the English part and he went back to the computer while Kellie cooked dinner.

Kellie explained that Cameron had karate from 6pm until 8:15pm on Tuesday nights. She said that on Monday night they had nachos for dinner and on Tuesday they had chicken in a packet pasta meal as Cameron had karate. She explained that they were having chicken schnitzel and vegetables but the children would probably whinge about having vegetables. She said that Cameron's favourite dinner was lasagne.

Kellie gave the girls a bath while Cameron continued to play on the computer. Cameron then watched "The Simpsons" on television and told Kellie about the computer game he was playing.

*Cameron: The opal gold that's on the game. You have to uncover them and then you have to cut one. There was a person and I had to shoot two arrows at him and guess what happened? Well I shot one arrow and it hit him and then I shot another arrow and it hit him too. And the opal came out of the guy and he died and I took the prize.*

Cameron asked Kellie how long until dinner was ready.

Kellie served Cameron a large piece of schnitzel, mashed potato and a very small spoonful of mixed vegetables. Cameron asked Kellie if she made the schnitzel but Kellie said that she bought it from Coles and it was a bit fatty. Kellie told Cameron that he could have more if he ate all his meat and vegetables. Cameron ate his dinner fairly slowly and added extra gravy to his meal. Kellie told Cameron that he had eaten a lot.

*Kellie: Have you had enough Cameron, you've eaten a fair amount mate?*

*Cameron: One more bite.*

Kellie told Cameron that after he had a bath, he needed to do more work and told him not to go back on the computer.

*Kellie: No more computer tonight.*

*Cameron: What?*

*Kellie: What do you mean "what"?*

*Cameron: I'm right in the middle of something.*

*Kellie: No you've been on it since three.*

*Cameron: No I haven't.*

*Kellie: You have.*

*Cameron: I haven't. I've been watching Bryce. I watched Bryce for two hours.*

Cameron had a bath but then went back to the computer. After playing for half an hour, Kellie told Cameron to get off the computer a number of times as he needed to start his English work. He finally did so but became really frustrated with his work and ended up getting distracted and walking around the kitchen. Kellie became annoyed at Cameron as he would not do what she said, however, Cameron still refused to do his work and got very angry. Kellie and I tried to help Cameron with a question, however, he did not listen at all and began drawing pictures of God with an arrow through his head. Cameron asked Kellie that if he did his work could he watch his television show and when Kellie said no, Cameron got extremely upset.

*Cameron: Mum, if I do more work then can I watch "Heroes"?*

*Kellie: No I'll have to tape that.*

*Cameron: What? No the tapes aren't long enough.*

*Kellie: They are.*

*Cameron: No they're not. Want to watch Heroes.*

Kellie told him he must have writer's block. Cameron started looking through the fridge and pulled out a plate of leftover chicken, however, Kellie told him he was not allowed anything to eat and to go to bed.

Cameron started to poke Kellie and she started laughing. Kellie told Cameron to go to bed, however, Cameron said that he was the boss when Jamie was not home. *"I'm the man of the house and Dad gets to go to bed when he wants. Dad gets to stay up to all hours of the night."* He went upstairs and was so angry that he threw his pillow at Georgia and knocked her over. Kellie kept saying, *"Cameron into bed please"* and at 9:10pm he finally went to bed. Five minutes later Georgia went downstairs and told Kellie that Cameron kept banging on her wall. Kellie explained that Cameron told her that he felt like everyone kept picking on him as he was told his writing was messy and that he played rough that day. She said that he just worked himself up.

#### **4.7.1.3 Day Three (Weekend Day)**

Cameron got up at 9:30am and watched television upstairs before coming downstairs half an hour later to have some breakfast. Kellie asked Cameron what he was having for breakfast.

*Kellie: What are you making?*

*Cameron: A gourmet breakfast.*

*Kellie: No you're not. We've got lots of eggs and Cameron and Jamie love making these gourmet breakfasts.*

*Cameron: There's not enough yoghurt.*

*Kellie: What do you want to make then?*

*Cameron: A toasted sandwich.*

*Kellie: What are we having on the toasted sandwich?*

*Cameron: A cheese and mayo toasted sandwich.*

*Kellie: Well you make it. Do we have bread? We'd be lucky to even have bread. I haven't been shopping. We're out of bread. Looks like Mummy is going to the shops. Just have cereal or something.*

*Cameron: I don't like cereal. I can ride to the shops and get bread.*

He rode over to the corner shop to get bread and the paper for Kellie. Erin and Georgia had dry Coco Pops and Milo for breakfast. Cameron arrived back from the shops 10 minutes later and his face was red and sweaty. Cameron asked Kellie to make his breakfast but she said no. He squeezed a large amount of mayonnaise over two pieces of bread and then put cheese on top and placed it in the sandwich press. Erin wanted some cheese but Cameron kept telling her no. Kellie cut Cameron three pieces of cheese even though he wanted four. Cameron sat on the lounge and watched television while he ate his sandwich. Cameron licked his plate and continued watching television. Cameron asked Kellie if they could have a chicken caesar salad for dinner. Kellie said that he got angry the previous night because he had too much chicken and Cameron explained, *"No but this has lettuce, cheese, bacon, croutons and other yummy stuff."*

Kellie did some cleaning around the house while Jamie played the Playstation upstairs. Jamie began to make bacon and eggs for breakfast and Cameron asked for an egg, however, Jamie said no. Jamie became frustrated with Cameron hanging around and said, *"No go away. I don't want you here. Go and find something else to do."* Cameron went outside and had a swing on the swing set for two minutes and then went back into the kitchen and told Jamie, *"Doing stuff is boring."* Jamie looked at the television guide and said that there were



a lot of sports to watch. *“What’s on the idiot box today kids? There’s motor racing on nearly all afternoon, that’s fantastic. And then there’s rugby league on from four o’clock. The Rabbitohs are playing the Eels.”* Cameron went and played a game on the computer called Neopets, which has games, emails and a section to design pets. Kellie explained that she had a meeting with Paul Yellen, Cameron’s teacher regarding his future.

*Kellie: Dennis Long came into mine and Paul’s meeting at the end and said to Cameron “I don’t think that you couldn’t do it but I don’t think you’ll be the dux of the high school but in saying that, we need kids like you to be the people to create the technology and you and your mates are exactly the type of people that we need to do this. You’re not going to have the best marks in everything but you can make a difference.”*

At 12:30pm Kellie made Erin and Georgia their lunch and asked Cameron what he wanted.

*Kellie: Do you want some lunch yet or are you busy?*

*Cameron: I’m hungry.*

*Kellie: Well what would you like?*

*Cameron: I don’t know yet.*

The girls had three folded-over slices of bread with butter on it and Kellie had two sandwiches with butter, Vegemite and cheese in the sandwich press. Kellie said that Cameron had a golf lesson on Friday with one of his friends and he really enjoyed it. Kellie said she would not mind Cameron starting to play golf. Kellie discussed the fact that food has become more expensive and there were not as many facilities for children to use. Kellie started writing a shopping list.

At 1:10pm, Cameron left the computer and looked in the freezer. Kellie offered Cameron chicken nuggets for lunch but he found party pies instead. Cameron was disappointed there were only three left in the box, however, Kellie said, *“That will do you. You had a toasted sandwich for breakfast.”* While his pies cooked Cameron started to punch Kellie as a joke. Kellie told him to stop but then he started teasing Georgia as a joke. Erin hit Cameron, who started hitting her back. Erin then started crying.

Cameron sat at the bench and ate his pie with barbeque sauce. He got milk out of the fridge, however, Kellie told him not to have milk as there was not much left. Cameron had a drink of cordial. Cameron slurped all the meat out of the pie and then ate the pastry. Jamie stopped playing the Playstation and came downstairs and asked Cameron for a pie,

however, he said no. Cameron licked his plate clean and then went back to play the computer again.

Kellie said that Cameron was getting a monster Beanie Bear [soft bear toy] and an egg for Easter. She said she did not give them too much chocolate as it ended up all over the floor. She believed that Cameron and his friends would have social problems next year as they were different to other children and just did whatever they felt like doing. *"They're going to get flogged at high school. Him and his mates, you know, they're into Beanie Bears. They play with Beanie Bears for goodness sake."* Jamie said that Cameron and his friends were gay.

Kellie did the grocery shopping and Jamie went back to playing the Playstation. At 3:15pm Kellie got back from the shops with her mum. Cameron and Jamie were still playing the computer and Playstation, respectively. *"Jamie's upstairs playing the Playstation. They're as bad as each other. Cameron will have square eyes from the computer."* Erin and Georgia had another half a sandwich each and Jamie ate a late lunch. At 3:40pm Kellie told Cameron to find something else to do, however, Cameron did not move from the computer. Five minutes later Cameron came out and made himself a hot Milo and made coffee for Kellie, his Grandma and myself. Cameron finished drinking his Milo in under 10 seconds and got a chocolate biscuit dip that Kellie had just bought and ate it on the lounge. Kellie told him that they were bought for school.

At 4:05pm Cameron helped Georgia on the computer and then played on the other computer himself. Jamie began watching the football on his big plasma. Jamie said that he thought Cameron would be a good football player but Kellie was very protective and did not want him to get hurt. They also worried about Cameron heating up and Jamie explained that he would probably have to coach them for Cameron to have a go, however, he said he was willing to do that. Jamie said that he used to play football for 16 years. When Jamie asked Cameron whether he wanted to play, he said that he did not know.

At 6:15pm Erin asked to play on the computer and Kellie told Cameron to get off so that Erin could play, however Cameron would not comply. He finally did so and looked in the microwave to see what was for dinner. Five minutes later Erin and Georgia got off the computer and Cameron started playing again for five minutes.

Cameron watched Kellie put some vegetables in a pot and complained about the vegetables.

*Cameron: Oh yuk. Don't put those in there. I don't want broccoli or corn. What's that?*

*Kellie: Cabbage.*

*Cameron: Yuk. Is that going in too?*

*Kellie: Yep. It's going in the sauce and you won't even notice it's there.*

When dinner was ready, Cameron asked for more potato on his plate and Kellie put another big scoop on his plate. Kellie put butter on each person's mashed potato and explained that she knew how bad it was but she had done it since she was a child.

*Kellie: I know it's bad putting butter on this but it's a habit and it's so yum.*

*Jamie: Yeah she's got me.*

*Kellie: It's my dad. It's his fault. But I don't cook with salt.*

Cameron's dinner consisted of strips of beef in a red sauce, a few big spoonfuls of mashed potato, a small tablespoon of mixed vegetables (broccoli, cauliflower, cabbage, peas and corn) and a glass of cordial. Cameron ate his meat first and then stirred all his vegetables into the mashed potato. Kellie commented on how fast Cameron ate.

*Kellie: You ate quickly.*

*Cameron: I was hungry.*

*Kellie: Well you shouldn't be now, that's for sure.*

*Cameron: I was until I had that last gulp of my drink.*

Cameron went straight back onto the computer and half an hour later Erin offered Cameron some ice cream and he said yes. Jamie gave Cameron a big bowl of Neapolitan ice cream and he sat on the lounge in his underpants to eat it. Kellie told Cameron to put some clothes on and Cameron said, "I'm fat" and nothing else was said. Cameron licked the bowl and then played the Playstation upstairs. At 8:20pm Cameron got himself a small digestion yoghurt and drank it. Kellie then told Cameron he had to go to bed and he did so.

#### **4.7.2 Winter**

Kellie had become a salesperson at her real estate and therefore had to work more hours, including Monday, Tuesday, Wednesday, Friday and Saturday. Cameron had his regular teacher, Mr Yellen, again and no longer sat next to Bryce in class. Ashton Public School was putting in new playgroup equipment for children to play on and had introduced a fruit

break five minutes before recess. Cameron did not get into the selective high school for the following year, however, Jamie and Kellie had decided to send Cameron to a new boys' high school where many of his friends were going. Cameron's school shirt was very tight and it looked as if he was carrying more weight compared to my previous visit. The Grays were putting a pool in their backyard, which would hopefully be ready for summer. Cameron was also going to start football the following year.

#### **4.7.2.1 Day One (Weekday)**

Cameron got up at 8:00am, which was later than his rising time in summer. He got himself a bowl of Coco Pops with light milk and ate in front of the cartoons on the smaller television with Erin and Georgia. Cameron explained that he recently saw "Harry Potter: Order of the Phoenix". Kellie asked Cameron if he had finished his book report and he said yes. Cameron, Erin and Georgia walked to school with Brianna and Bryce. Bryce and Cameron walked extremely slowly. Cameron explained that at lunchtime when it was not raining they played a game called 44 where a person counted to 44 and then has to try to catch people before they reached the basketball pole. Mr Yellen explained that the class was supposed to have sport, however, if it rained or was too cold then they would not.

Cameron's class began with silent reading, and Cameron concentrated well on the sixth "Harry Potter" book. The class then marked their homework and worked on their spelling words. The class sat on the floor for their play practise and Cameron was the last child to be seated on the floor. Cameron talked to a friend on the floor and fidgeted a lot. Cameron did not listen to the play or his teacher's instructions and talked while Mr Yellen was talking. After practising the play, the class was told to finish their new report, however, Cameron went on his computer. Mr Yellen commented that even though Cameron had not finished his work he had taken himself into the computer room. Mr Yellen told him to come back in to finish his work and although Cameron came back into the classroom he did not do his work, instead swinging on his chair, talking to some of his peers and then playing with his pen. Cameron finally started his work for a minute and then started talking again and typing on his calculator. Cameron talked to a girl on his table. She ignored him and continued doing her work.

The bell rang for fruit break, however, only three people took out fruit to eat. Mr Yellen told Cameron, "*Cameron that is not a fair effort and if you don't make an effort then you will stay in at lunch and make me stay in.*" Nevertheless, Cameron still did not start his

work. The recess bell rang and Cameron met his friends out on the basketball court. Cameron ate his chips and then ate his three pieces of bread with peanut butter. Cameron ate his food while he played 44 with five of his friends. Cameron was caught once as he was not fast enough and his friends seemed to target him as he was the slowest. Cameron ate while he ran and got quite puffed.

Mr Yellen explained that Cameron did not put in any effort and even though he had ability, other children were starting to catch up with him because he would not try. He should have been in the top Mathematics class but he was not because he did not put in effort. Mr Yellen said that he put in effort when he wanted to and if he liked what they were doing.

Assembly took place after recess and immediately after this Cameron's class began their Mathematics work. Again, Cameron became distracted and called out to Bryce across the room about a computer game. Mr Yellen became frustrated with Cameron: *"Cameron where is your writing? You've finished your Maths so start on your writing. I'm really starting to lose patience with you."* Cameron became more focused when he was told that he would have to stay in for lunch if he had not finished his writing. Cameron showed Mr Yellen his work and he said, *"Isn't it amazing what you can do when you're told you are going to stay in?"*

The bell rang for lunch and Cameron talked about computer games with his friends. As in summer, Cameron had eaten all his lunch at recess and therefore did not have any food left. Everyone else was eating their lunch except for Cameron. Cameron asked a boy in his class for a bit of pasta from his lunch order and this boy allowed Cameron to have a few pieces. Cameron then went outside with four other boys and bounced the basketball for a minute. One boy said to Cameron, *"I'll race you to the pole"* and they ran to the pole, however, Cameron was far behind his friend. Cameron pushed some of the other boys and got into trouble from the teacher on duty. He was told to stand over on the hill and wrote his name in the behaviour book. Cameron's friends stood with him for a couple of minutes but then they ran away. Cameron ran to follow his friends and played 44 again, however, Cameron became tired and ran on and off with his friends.

When the bell rang Cameron went down to the field where the Australian Football League (AFL) was being held. Mr Yellen said that children were able to volunteer to be involved in

an AFL training program and Cameron was very keen. Cameron played in a forward position, however, he only ran when the ball came near him. Cameron scored two goals.

As soon as Cameron arrived home after school, he made himself a cheese roll with butter and drank a little yoghurt. He ate very quickly at the bench and then watched cartoons on the plasma television. Georgia and Jamie started playing together and then Cameron and Erin became involved. Cameron then went and lay on the lounge in front of the cartoons with Erin and Georgia. Fifteen minutes later Cameron went over to the pantry and Kellie asked Cameron what he was looking for. Cameron ate an apple very slowly in front of the television and told Georgia to drink her Milo otherwise he would drink it. At 4:00pm Cameron went on the computer. An hour later Georgia called Cameron as his favourite television show was on and Cameron lay on the carpet watching the show.

Kellie started cooking sweet and sour chicken with vegetables and she and Jamie discussed what was in the freezer that they could use the following few nights. They said on Saturday they would have chicken legs with seasoning and chips; on Sunday, pies; and vegetables and a baked dinner on Monday. Cameron asked what was for dinner and then asked what they were doing the next night as he wanted to invite a friend over to stay. Jamie bathed Erin and Georgia while Kellie cooked dinner. Cameron watched "The Simpsons" on the smaller television downstairs. After his show ended Cameron went to play on the computer until dinner was ready at 7:00pm.

Cameron was served a bowl of sweet and sour chicken and vegetables with rice and a glass of cordial. Cameron ate all of his food but did not particularly like the vegetables. Jamie and Kellie made Erin and Georgia eat all of their dinner and said that they would not get dessert otherwise.

Cameron had a shower and then went back on the computer to play a game until 7:40pm, when he lay down with Kellie to watch "Better Homes and Gardens". Cameron commented on the time that had elapsed since dinner.

*Cameron: What time is it now?*

*Kellie: 7:45pm.*

*Cameron: So it's been half an hour since dinner?*

*Kellie: Meaning what?*

*Cameron: Time for dessert. I'll get mine.*

*Kellie: No you're not having dessert.*

*Cameron: Why, I didn't have a treat?*

*Kellie: No you had an apple.*

*Cameron: I ate all my dinner.*

*Kellie: You've just had dinner. You couldn't possibly be hungry.*

*Cameron: Well I am.*

*Kellie: I don't know that you really are.*

Cameron stole Georgia's Beanie Bears and started throwing them at her. Georgia commented that Cameron was always mean to her.

*Georgia: Lauren can you tell Cameron to be nice for once?*

*Cameron: You deserve it.*

*Georgia: Leave me alone.*

*Cameron: You deserve what you get.*

*Georgia: Cameron!*

*Cameron: You deserved it.*

Cameron chose "Star Wars 2" to watch with his sisters. The movie finished at 9:10pm and Cameron looked in the freezer and asked Jamie for dessert.

*Cameron: Can I have dessert?*

*Jamie: What?*

*Cameron: Ice cream and milk. A milkshake without the mixer?*

*Jamie: Yeah okay.*

*Cameron: Yum, yum, yum, yum.*

Cameron made himself a very big cup of ice cream with a little bit of milk and went into the other lounge room to watch television while he ate it. Kellie said that she thought that they had set bad habits.

*Kellie: We might be to blame for some of their habits. They're allowed dessert every night whereas I didn't have dessert, chocolate, biscuits, nothing. They've got it pretty good. If they have ice cream a few nights in a row I'll say you can have fruit, but not in winter. Your body craves nice things. I think in winter your body wants the extra warmth, extra protection from the cold.*

She explained that Cameron would eat more than her and still not feel full.

Georgia, Erin and Cameron began fighting when Cameron knocked over their cubby. At 10:00pm Cameron went to bed and read in his room.

#### **4.7.2.2 Day Two (Weekend Day)**

Cameron got up at 9:50am, which was later than the weekend days in summer. Jamie said that it was such a nice day that they would have to get out and do something, especially since they watched movies the whole previous day as Kellie was working and Jamie was sick. Kellie was working again. Cameron got out the pancake mix and started to shake this while Jamie explained they usually had late breakfasts on the weekend and often had lazy mornings on Sundays. Jamie cooked pancakes while Cameron helped him. Cameron got out the toppings for the pancakes, including butter, maple syrup, sugar and lemon. Cameron and Georgia began to fight in the kitchen before Jamie told them to sit at the bench as breakfast was ready. Cameron was given a small pancake, which he ate quickly with butter and maple syrup. He was given another one, however, he complained that Georgia had been given a bigger one than him.

*Cameron: Georgia got a bigger one than me.*

*Jamie: Get over it. You'll probably have more than her.*

*Cameron: Exactly.*

Cameron started singing but Jamie told him not to. Cameron ate four more pancakes before Jamie said that he could not have anymore. Cameron explained that he could eat a lot more.

*Jamie: That's your last one mate. That's all you get.*

*Cameron: OOOHHH why?*

*Jamie: You've had enough. You've had about six or seven pancakes. You can't have 45. How many did you have?*

*Cameron: Six.*

*Georgia: You had more than me. I could fit in 45.*

*Cameron: I could fit in more than that. I could fit in about 65.*

Cameron asked Jamie to cook him some for recess the following day, however, Jamie said no. Cameron said that he was really hungry still.

*Cameron: I'm hungry. I'm dying of hunger pains.*

*Jamie: I'll tell you what. You're not going to die real soon.*

After breakfast, Georgia, Erin, Cameron and Brianna played upstairs on the Playstation. They started to fight and Jamie told them to come downstairs and had words with them



about fighting. Cameron then played the Playstation by himself, putting on a CD to listen to while he played.

Jamie cooked himself bacon and eggs and said that he always ate that at the weekend. Jamie said that he and Kellie had eaten the same thing for 20 years and they did not have to watch what they ate. He said that maybe in seven years he might have to watch what he ate, however, he was not too worried yet. Jamie said that he had to watch what Cameron ate as he loved food too much. *"He's good on the tooth. He doesn't know when to stop eating."* Jamie, however, still believed that Cameron's problem had to do with genetics.

Cameron asked Jamie to go upstairs to help him with a part on the motor racing game he was playing. Jamie helped him but then told him he should go for a ride. *"You should go outside. It's a nice day mate. You were inside all day yesterday."* Cameron continued playing but Jamie said, *"Okay well you've got 10 minutes here and then outside."*

At 11:45am Cameron came downstairs and pretended to fight Jamie with a sword and then sat down with Jamie while he watched the football highlights. Jamie told Cameron to go out for a ride, *"Go out and do something, ride your bike. You're annoying."* Cameron said that it was boring riding his bike. Cameron and Jamie kept fighting and then Cameron looked in the fridge for a minute before Jamie told him to get out of the fridge. Cameron got a drink of cordial from the fridge and started annoying Jamie while he was watching television.

At 12pm Jamie told the children to get their bikes ready to go for a ride, however, Cameron wandered around the house. Jamie made sandwiches for Erin and Georgia for lunch and asked Cameron what he wanted but Cameron said that he did not know yet.

*Jamie: What do you want?*

*Cameron: Nothing yet.*

*Jamie: Well I want to go up the road so it's either now or in an hour.*

*Cameron: In an hour's time then.*

Cameron's friend, Jarred, rang up and asked Cameron to ride up to his house to play and Jamie said that he was allowed. Jamie asked Cameron if he wanted a sandwich made before he went as he was often not fed there, however, Cameron said no. Cameron rode to Jarred's, which took three minutes. Jamie said that he used to ride eight kilometres every day to get

to his friend's house and his children did not even want to ride up the road. Jamie said that he did not want Cameron to be "*cooped up inside all day.*"

When we picked up Cameron, he and Jarred were inside playing with swords in the lounge room. Cameron told me that they played the Gameboy for a while and then rode to the shops and bought lollies. At Jarred's, Jamie got all the children to go outside and ride their bikes for a little while. Cameron rode a skateboard for three minutes and then got a football and started passing it to Jamie. Then Jarred, Ben (Jarred's brother), Alix (Jarred's sister), Jack (Cameron's friend) and Erin all started playing too. Cameron caught quite a few big kicks but then started to take his eye off the ball and dropped quite a few. Jarred, Cameron and Jack all started pushing each other around and at one point Jamie called Cameron a "fat boy".

*Jamie: Come on fat boy.*

*Ben: Why'd you call him a fat boy?*

*Jamie: Oh, he'll be right.*

Jarred and Jack got excited when they tackled Cameron and started chanting, "*I got Cameron down. I got Cameron down.*" In reference to his kicking, Cameron explained, "*I'm really good at it.*" Cameron ran for the ball often and as we left Cameron's face was red and very sweaty.

Kellie arrived home from work at five o'clock and we arrived home shortly thereafter. When we arrived home, Cameron went straight to the fridge and drank a yoghurt. Cameron then had a shower and asked what was for dinner.

*Cameron: What's for dinner?*

*Jamie: Pie and chips but we're not having it yet.*

Cameron started playing on the computer and explained that his friend was bringing a computer game, called "Sims", to school for him to borrow.

Cameron was served his dinner, which consisted of a meat pie with BBQ sauce, vegetables including corn, peas and carrot, mashed potato and a glass of cordial. The family ate at the dinner table, as usual, with the television on in the background. Jamie told everyone to eat their vegetables first and it took a long time for Cameron to eat all his vegetables as he said that he did not like them. Cameron mashed his vegetables into his potato and ate one quarter of these before eating the meat out of his pie. Jamie told Cameron to eat the rest of

his vegetables and he did so before eating the pastry of his pie. Normally Cameron was the first to finish his dinner, however, that night he was the last.

After finishing his dinner, Cameron went straight on the computer. Forty minutes later he asked Kellie for some chewing gum and Jamie got each of the children some chewing gum, explaining that it was weird that was what they wanted for dessert. Cameron sat on the lounge, hugging Kellie while watching “60 Minutes”. Kellie said to Cameron, “*Go look at the time big bloke.*” He tried to get Georgia’s Gameboy from her so that he could play Sims Pets but Georgia would not let him. Kellie sent the children to bed so that she could watch television. All the children had a drink of cordial before bed and Cameron read in bed before turning the light off at 9:00pm.

#### **4.7.2.3 Day Three (Weekday)**

Cameron got up at 7:50am and changed before getting himself a bowl of Milo cereal and eating this on the lounge in front of Channel 10 cartoons. Jamie had already left for work before Cameron arose. Kellie packed Cameron’s lunch consisting of: an apple; a packet of tomato salsa flavoured Snakatas; sour cream and chive chips; three pieces of bread with cheese and mayonnaise; and a bottle of cordial. Kellie told Cameron to pack his library book, however, Cameron said that he would in the ad break. Cameron started playing with the stress ball Kellie bought him.

Cameron, Georgia, Erin, Jarred and I walked to school. Cameron and Jarred walked very slowly. When Cameron arrived at school he went in and showed his casual teacher, Mr Wallace, his stress ball. Cameron talked to Mr Wallace until the bell rang for the start of school. Cameron said he usually did not like school but did this week because of Mr Wallace. Mr Yellen was coaching a football team for the week. Cameron started reading “Harry Potter” for silent reading and concentrated extremely well. The class had to come up with a table name for the day and Cameron talked to two girls across from his table about this. The class then went on with spelling and Cameron was supposed to hand out the spelling books but just got his own book and all his peers yelled at him and called him lazy. The children completed their spelling test and Cameron slumped down in his chair and then started to swing on it.

After marking spelling, the class was told to stand in a circle. Cameron was the last child to move. The class played a game where children had to name places starting with the letter

“A” and Cameron was the second person and said “Atlanta”. Mr Wallace said, *“You could have chosen something easier at the start.”* Cameron ended up getting out when there were 10 people left and he said “Kiama Point” for a place starting with “K”. When children were told to go back to their seat, Cameron was the last child again.

The class went on with creative writing in which Mr Wallace read half a story from “Undone” by Paul Jennings and the children had to finish writing the story. Cameron started drawing in his book and was not paying attention. Cameron appeared not to be listening and then started talking to the boy behind him. Bryce then moved to the seat next to Cameron and they started talking. Mr Wallace asked Cameron what he was doing and one of his peers told Mr Wallace that Cameron has been drawing. Mr Wallace told Cameron not to draw, however, he continued to do so. Children were told to get their workbooks and Cameron was the last person to move. He finally moved after everyone was ready to start. Everyone had started but Cameron looked around the room. Cameron started working but then came out to sharpen his pencil. Cameron turned around and talked to the boy behind him. The class was told that they could go on with their artwork when they finished their writing and Cameron ended up being the first child to finish.

Mr Wallace explained that he had to keep Cameron in at lunchtime the previous day as everyone was asked to bring their Mathematics work to him and when Cameron did not do so Mr Wallace asked if he had finished. Cameron said yes even though he had not. When Mr Wallace asked why he did not do it, Cameron said that he did not want to. Mr Wallace said that Cameron was lazy.

The fruit bell rang and children were told to pack up everything and began to count down, however, Cameron continued working on his artwork. Children began to play “Simon Says” and Cameron started to pack up quickly. When children were told to go out to recess, Cameron stayed inside talking to Mr Wallace. Cameron ate his Snakatas and then his cheese and chives chips while playing with the stress ball in the classroom. Cameron walked outside the classroom and ate his sandwiches on his way outside. Cameron found Bryce outside and they stood around playing with his stress ball.

Cameron was very unsettled in assembly and distracted children around him. The students were asked in assembly who had not been on the play equipment yet and Cameron was the only person to raise his hand. Children did some more of their art after assembly and then

went out to play sport. First they played rats and rabbits and Cameron and Dylan chose each other as pairs. Each time Cameron had to chase Dylan, he did not catch him and Dylan would tease him. Cameron did not try to catch Dylan most of the time, however, Dylan would tip Cameron every time. Cameron made excuses that it was because Dylan was running down a hill. They then played a numbers game where children were directed to skip around until Mr Wallace blew his whistle and called a number. The children then had to form groups of that many people and the remaining children had to sit out. Cameron lasted a long time in this game. The last game was dodgeball where children stood around in a circle and had to try and hit the people in the middle with the ball. When Cameron got a turn in the middle he was hit almost straight away.

At lunch, Cameron ate the remaining two slices of his cheese and mayonnaise sandwich at his desk, which was the first time I had seen him eat some lunch at school. Cameron and some other boys in his class played with his stress ball while he ate his sandwich. Cameron went out to the basketball courts with some of the boys from his class and stood around playing with his stress ball. The boys then played 44, however, Cameron walked to and from the basketball pole.

After lunch, Cameron continued working on his artwork. Mr Wallace explained that Year 6 normally did sport on a Friday afternoon together, however, they were not doing that anymore and each class now did their own sport. Cameron was supposed to finish off his artwork then go on with atlas work followed by building things from blocks. Despite this, he went straight onto building things with blocks. Children were then told to pack things away and Cameron was last again. The class was told to each pick up 15 pieces of paper, however, Cameron picked up one big piece and broke it into 15 smaller pieces.

Cameron told me that he had the best desk in the classroom as it had a shelf underneath which meant that he did not have to get up to get his books. The class then played Murder where Mr Wallace chose a child secretly to be a murderer and they had to kill people by winking.

Cameron walked home and said he was hungry and thirsty. Cameron made himself a Milo with two teaspoons of Milo and two teaspoons of sugar. He tasted the Milo and said it was too weak and tasted horrible. Cameron put two more teaspoons into the cup. Kellie tipped out some of his drink as it was too full. Cameron said he was going to get three cookies.

*Cameron: I'm getting three cookies to dip into my Milo since you tipped some out.*

*Kellie: I don't think you need three cookies.*

*Cameron: You tipped out my stuff.*

*Kellie: Well that's all you're having this afternoon.*

*Cameron: You tipped out my stuff so I get three cookies*

Cameron ate his cookies and drank his Milo at the table. Cameron said that Kellie poured out the Milo flavour so Cameron put two more heaped teaspoons in his cup. Cameron then watched "Huey's Cooking" and talked about the food on the show. Cameron complained that Kellie never bought him anything that he liked.

*Cameron: Why don't you buy me anything?*

*Kellie: Cause you don't like anything.*

*Cameron: Yeah I like heaps of things. I can take you to the shops and show you what I like.*

Erin gave Cameron a coke lollipop and Cameron ate it in front of the television.

Cameron asked Kellie if he could go to Travis' house so they could go to the park and Kellie told him to be home in an hour. Cameron rode his skateboard up but returned five minutes later as Travis was not home. Cameron then tried to ring Travis but there was no answer so he started playing on the computer. Cameron and Georgia began to yell at each other and Kellie said, "*Gosh they get mad at each other.*" Cameron then went and lay on Kellie while she watched television and she told him he was heavy: "*Get off me. You're too heavy. You're not my little boy anymore.*" Kellie said that she was exhausted and could not be bothered to move. Cameron then started acting like a seal on the floor and laughed and puffed a lot. Kellie told Cameron, "*Go and find something to do.*" Cameron then covered himself and did the seal movements. Cameron said that he must have lost weight by doing these movements.

*Cameron: I think I just lost a few kilograms.*

*Kellie: I don't think so.*

*Cameron: I think maybe some kilojoules.*

*Kellie: I doubt you worked off an eighth of one of those cookies.*

Kellie said that Cameron was acting immaturity, "*It's a bit hard to believe you're going to high school next year. Very sad.*"

At 5:00pm Jamie arrived home from work and Cameron told Jamie to go and play with him.

*Cameron: I made an executive decision that you're going to play with me.*

*Jamie: Oh is that right? An executive decision right?*

*Cameron: Yep.*

Jamie went outside and threw a football shuttle around to Cameron, Erin and Georgia. Cameron was annoyed that Erin and Georgia were playing too. Half an hour later Cameron threw the ball to Georgia and accidentally hit her in the head. Georgia started crying and got angry with Cameron who was laughing. Cameron pretended to throw the football at Georgia again but she got angry with him. Cameron got a drink of cordial, which he drank extremely quickly. Cameron said that Georgia was a headache.

Cameron lay on the lounge in front of "The Brady Bunch". At 6:00pm Cameron changed the channel to "Hook, Line and Sinker". Cameron and I passed the football in the advertisement breaks of the television shows. Cameron dived for the ball and puffed. Cameron asked Kellie if he had to sit at the table for dinner and she said yes. Georgia stole the football from Cameron and then Cameron fought Erin and Georgia for the ball.

At 6:30pm dinner was ready which included: chicken from Woolworths with skin on; mashed potato; frozen vegetables including carrot, cauliflower, peas, corn and cabbage; and a glass of cordial. Cameron ate his chicken quickly but his vegetables very slowly. Jamie, Kellie and Cameron discussed plurals and singulars of different words while eating.

After dinner Cameron watched "Neighbours" with Georgia and Erin. He explained that he was waiting for "Futurama" to come on. Cameron and Georgia started physically fighting and Jamie told them to settle down. The children watched "Futurama" on the smaller television downstairs and Kellie told Jamie that they should not be watching it as it was very age inappropriate. Cameron and Jamie argued as Cameron wanted to keep watching it.

*Jamie: Time to change that over, it's not appropriate.*

*Cameron: Why? It is.*

*Jamie: No the things it's talking about is not appropriate.*

*Cameron: Oh I always watch it.*

*Jamie: No well I'm telling you it's a crap show.*

*Cameron: No it's not.*

*Jamie: It's totally inappropriate. They have a scene with two hookers in the bath tub where the guy is trying to "score".*

Cameron had a bath and Kellie said that the children had not had ice cream in a few nights and could therefore have it that night. Cameron said he wanted dessert and Jamie offered him something on top of his ice cream. Cameron put Milo and a broken cookie on top and then looked in the pantry for something else. Cameron ate his ice cream in front of “Better Homes and Gardens” on the lounge next to Kellie. Cameron ate very slowly and got himself a small yoghurt to eat. Georgia asked for an apple and then Cameron also got one from the kitchen and Kellie said, *“You can’t still be hungry.”* Kellie peeled the skin off Cameron’s apple and he ate it in front of “Better Homes and Gardens”. Cameron started dancing and making strange noises with his mouth and Kellie got frustrated with him. *“What’s wrong with you tonight? You’re acting crazy. That’s enough now Cameron. You’re acting very silly.”*

Kellie went outside to have a cigarette and when she returned she commented to Cameron, *“You’re driving me nuts tonight.”* Cameron continued to annoy Kellie and did forward and backward rolls. Kellie told Cameron to go to bed but Jamie said that it was a Friday night so they could stay up for longer. Cameron said that he wanted to watch the movie with Kellie anyway. Kellie said that they were not allowed anything else to eat. *“They’re not having anything else to eat tonight. Not that they won’t try.”* Cameron moved the pillows off the lounge and when Kellie told him to put them back he ignored her.

*Kellie: Put the pillows back.*

*Kellie: Do as you’re told.*

*Kellie: It doesn’t look like you’re doing as you’re told.*

At 9:10pm Kellie told the children to go to bed but Cameron tried to protest.

*Kellie: All righty, bed.*

*Cameron: No.*

*Kellie: Let’s go.*

*Cameron: I like this show.*

*Kellie: I am the mum. You are the child.*

Cameron poured himself a drink of milk and drank this quickly before reading “Harry Potter” in bed.



#### **4.8 A TYPICAL DAY IN THE LIFE OF CAMERON GRAY**

7:40am	Watches television (cartoons)
7:50am	Eats breakfast (a glass of yoghurt or Coco Pops) in front of the television
8:20am	Gets ready for school
8:30am	Walks to school
8:40am	Sits and talks with friends
9:00 – 11:00am	School
11:00am	Sits and eats his recess and part of his lunch on a seat outside (up to three snacks, for example chocolate, chips or popcorn and dip snacks and half of his sauce or mayonnaise and cheese sandwich)
11:30 – 1:00pm	School
1:00 – 1:50pm	Sits at his desk and either does not eat any lunch or eats one sandwich (sauce or mayonnaise and cheese). He drinks his cordial and then plays outside with his friends
1:50 – 3:00pm	School
3:00 – 3:10pm	Walks home
3:10 – 5:00pm	Eats an afternoon snack consisting of either chocolate chip cookies, chips or chocolate milk and either plays the computer or watches television
5:00 – 6:30pm	Continues watching television, playing the computer or plays with Jamie outside
6:30 – 7:00pm	Eats dinner at the table (chicken schnitzel, hot mashed potato, a spoonful of vegetables and cordial)
7:00 – 7:40pm	Plays on the computer
7:40 – 8:00pm	Has bath
8:00 – 8:30pm	Watches television and eats dessert (ice cream with Milo sprinkled on top)
8:30pm	Has a drink (cordial or milk) and digestive yoghurt and reads in bed

Number of hours slept: 10

## **4.9 THEMES FOR CAMERON GRAY**

### **4.9.1 Dietary Behaviour Factors**

Cameron's dad, Jamie, was obese himself, however, his mum, Kellie, was very slim. Cameron's youngest sister, Erin, was very slight whereas Georgia was also overweight.

Cameron's breakfast each day was inappropriate, consisting of either high-sugar or energy-dense food choices. Cameron said that he did not like many cereals. His portion size was also far too large at breakfast. Kellie mainly let Cameron get himself breakfast and when she got him his breakfast she prepared whatever he asked for. Jamie and Kellie did not set good examples when it came to breakfast, with Kellie eating a high-sugar cereal every morning and Jamie having an energy-dense breakfast. Jamie had eaten bacon and eggs at the weekend for the last 20 years and Cameron either made himself a hot breakfast or Jamie would cook the children a hot breakfast. On the whole, both Kellie and Jamie's dietary patterns were quite poor, with them both eating energy-dense or high-sugar foods often. Cameron's younger sisters had a similar diet to Cameron, however, they often chose high-sugar foods over high-fat.

Cameron's lunch during the week was not very healthy and he often ate all his food at recess leaving him no food to eat at lunchtime. He was not able to exercise self-control when it came to food. His portion sizes were suitable, however, he was given one and a half sandwiches, which was slightly above the recommended serving size. Cameron's weekend lunches were sometimes hot meals that were energy-dense.

Cameron's snacks during the day were usually high-sugar or energy-dense, with his after dinner snacks usually also high in sugar. Cameron and his two sisters had always been allowed an after dinner snack and although Kellie recognised that this was probably something that was contributing to Cameron's weight status, this did not change. At times, Jamie and Kellie even dished up a bowl of ice cream for Cameron before asking him if he wanted dessert. When he was given a piece of fruit as one of his snack items he either only ate half or did not eat the fruit. Cameron's snack sizes were far too large. Cameron had access to a range of unhealthy snacks as Kellie continued to buy these for the children and he often helped himself to food without asking.

Cameron's dinners were sometimes healthy, however, his portion size was the same as Jamie's. Cameron's parents often instructed him to eat his vegetables first, which he would

do to please them. Jamie was adamant that it was not what Cameron ate that was causing his weight problems as he felt that he ate quite well. This attitude meant that what Cameron ate was supported by his parents, however, Jamie was not often home to see what Cameron ate in the afternoon. Jamie and Kellie did not often restrict what Cameron ate and let him eat what he wanted and when he wanted it. When Kellie did try to restrict Cameron's intake of high-sugar and energy-dense foods, Cameron often ignored her and ate what he wanted anyway.

Kellie and Jamie provided Cameron with choices for breakfast everyday, snacks and lunch on the weekend and an after dinner snack and Cameron always chose unhealthy foods. Kellie often told the children that they had to wait half an hour after dinner before they had dessert. Jamie and Kellie did not often try to limit what Cameron ate, however, when they did Cameron often ignored their requests. Kellie and Jamie seemed to think that they were doing everything right for Cameron in terms of food and thought that his weight status must have been related to his metabolism.

Cameron ate his breakfast each day and some of his snacks in front of the television and was given cordial on every occasion, including in his school drink bottle. Cameron consumed all his meals, snacks and drinks particularly fast, only eating his vegetables slowly as he did not like these. This meant that he did not have time to let his food digest as he ate. He often licked his plate after meals also and was quite obsessed with food even when he was not hungry.

Kellie usually prepared the children's lunches of a morning and cooked dinner at night as she got home early from work in the afternoon to look after the children. She had a large amount of time to prepare meals, which may explain why they usually ate reasonably nutritious dinners. They ordered take-away meals at least once a week, usually on a Friday and this was often Chinese take-away. They were from a high socio-economic class, however, they had spent a lot of money on their house and therefore were wary of their expenditure.

In the school environment, fruit and vegetable intake was encouraged by a scheduled "fruit break" into the morning learning session. Cameron, however, often did not eat any fruit at this time, even if he did have fruit in his lunch box. Ashton Public School aimed to adhere to the guidelines set out by the NSW Healthy School Canteen Strategy, however, although

there was a wide range of green foods available, there was also a moderate number of amber and red foods available daily. Cameron did not often order his lunch, as Kellie knew it was healthier if she packed it herself.

#### **4.9.2 Physical Activity Factors**

Cameron was confident in his athletic ability, however, he was fairly stubborn and would only participate in physical activity that he enjoyed. If Cameron was not skilled at a game or activity then he would not participate unless he really had to. Cameron was particularly co-ordinated and was therefore good at non-locomotor skills but not locomotor skills such as running and skipping. He was confident when it came to performing non-locomotor skills and perhaps this was why he enjoyed activities such as karate and golf.

Cameron's weight had become a problem for him when it came to physical activity and this often made him less motivated to participate. He often got tired quickly when doing physical activity, in particular running, and could not keep up with his friends who were all quite active and fit. Cameron appeared to enjoy physically wrestling with his friends as he was a lot stronger than most of his friends, however, he often got into trouble from teachers for doing this. It was often easier for him to be sedentary and, at home, he enjoyed playing on the computer or the Playstation or watching television as they were easy for him to do.

Cameron got along moderately well with his parents and spent time joking with them. As Kellie and Jamie both worked full-time there was often not a huge amount of time to spend together. Jamie often got home from work late which limited the time Cameron could spend with him and Kellie often gave priority to Erin and Georgia as well as household duties. On the weekend, Jamie often needed time to unwind and relax and Kellie had a number of other things to get done. This meant that Cameron was often left to entertain himself while his parents were busy. Jamie often wished that Cameron was not so lazy when it came to his school work and physical activity and felt as if he did not have a lot in common with his son.

Cameron did not have a strong relationship with Erin and Georgia and did not enjoy participating in activities with them because of the differences in age, gender and interests. Cameron frequently enjoyed teasing his sisters in order to get a reaction from them. They fought regularly and both Kellie and Jamie often had to set them to do different activities to

avoid further fights. Often Cameron did not know his own strength and would physically hurt Georgia when they fought.

Cameron was not an extremely social child and only associated with a group of five friends from his school who were all quite close. These boys were very different from the other children and their peers often did not associate with them. In class, Cameron's peers became frustrated with his maturity level and stubbornness and often tried to ignore him when he tried to talk to them.

There were often people playing in the neighbourhood, however, Cameron would only play if his friends or Dad were playing. The non-organised activities he participated in at home were not highly active and mostly involved hitting golf balls or kicking the football. Cameron enjoyed playing with his dad, however, most of the time games and activities had to include Erin and Georgia. These games therefore had to be simplified in order for the girls to play. Cameron became frustrated with this quite often and would try to leave his sisters out.

Cameron was not very active on weekends as he would only participate if he had someone to play with outdoors and Jamie only did this with Cameron on the odd occasion during the weekend. Kellie never went out to participate with Cameron and he did not enjoy playing with Georgia and Erin as they had different interests and abilities. Even when Cameron went to friends' houses to play, he was only active for a very small proportion of the time and often spent more time in sedentary activities.

Both Jamie and Kellie recognised that Cameron had a weight problem and frequently spent a great deal of time in sedentary activities, however, they were not always willing to go out of their way to help him. Jamie and Kellie were not good role models. Kellie was not active and smoked regularly and, even though Jamie had played soccer for 20 years, he was no longer very active. He played with Cameron at times but this did not occur often. Both Jamie and Kellie rarely encouraged Cameron to be active. Kellie and Jamie would often tell Cameron to go outside and do something active, however, he would usually ignore them if it meant that he had to participate by himself. Cameron was always keen to play outside with Jamie but Jamie was not always keen to do so. Jamie wanted Cameron to start football this year and he thought that Cameron would be good at it, however, Kellie was not keen on

this idea. She often worried about Cameron doing too much activity as she thought he got puffed and hot easily and there may have been something wrong with him.

The Grays did not have a big backyard, however, there was a large reserve across the road. They built their house there so they would have a large playing area and would also be close to some of Cameron's best friends so he would have people with whom to play. When Cameron hit golf balls on the reserve across the road, crows often stole his balls, which made it difficult to participate. Cameron walked to school each day, however, this was a five-minute walk and he often found walking up the hill quite difficult.

The school also had a large grassed-area to play on, a basketball court, handball squares and new play equipment. School sport occurred once a week at Cameron's school and this was mostly of low to moderate intensity, however, at times it involved bouts of moderate to vigorous intensity. A lot of the time, it involved waiting for a turn or waiting for the ball to come to Cameron as he did not often actively chase the ball during games and activities.

Cameron was not active at recess and would spend the whole break either eating or talking to friends. When Cameron did do activity at lunch it involved a few bursts of energy followed by a very long period of sedentary activity. The amount of time available to be active was limited as all students had to eat their lunch in class for a certain period of time before going outside to play.

Because the Grays were from a high socio-economic background, Cameron was able to participate in karate once a week and sometimes play golf with one of his friends. Both of these activities, however, were of low-intensity.

#### **4.9.3 Sedentary Behaviour Factors**

Cameron spent far too much time in sedentary activities, in particular, screen-related activities. On a weekday, approximately 5 hours and on the weekend up to 10 hours were spent in small screen recreation. Whenever he was not busy with other activities, Cameron often spent a great deal of time on the computer, watching television or on the Playstation. On many occasions, Cameron would only take a break from playing the computer because he was hungry. Cameron regularly watched movies and documentaries that were suitable

for older children and read both fiction and non-fiction books on a regular basis, some of which were advanced in content for his age.

The Grays had a number of televisions, computers and a Playstation, providing Cameron with many options to be inactive. Cameron needed someone to play outside and be active with, however, Jamie was usually home late and Kellie did not encourage him as she was either too tired, not interested in physical activity, busy with household jobs or busy with Georgia and Erin. Cameron did not enjoy playing with Erin and Georgia as they had vastly different interests. Cameron did have friends that lived close-by, however, on the odd occasion that he did spend time with his friends, they were involved in computer games or the Playstation, as opposed to forms of physical activity. Kellie never encouraged Cameron to go to friends' houses and did not often encourage him to be active. When Cameron complained of being bored Kellie would tell him to find something to do and would not provide suggestions or engage with him.

Both Jamie and Kellie did not set boundaries or restrict computer and television time and even when they would tell Cameron to cease playing on the computer, he either got off for five minutes and then got back on or ignored them entirely. It was easy for Jamie and Kellie if Cameron was happy and quiet as they often had other things they had to do or were keen to relax after a day at work. Kellie and Jamie were not positive role models when it came to participation in sedentary activity. They watched television of an evening/night and Cameron either watched the television with them or chose another television to watch a different show or movie. Jamie often played the Playstation to relax after work or on the weekend and this is an activity that helped them bond as Cameron often asked his dad to help him to complete parts of Playstation games. Cameron had a fairly strict bedtime of 8:30pm, which was enforced during the week, however, at the weekend he was allowed to stay up for an extra hour.

Cameron often looked up to his father as a role model and enjoyed participating in physical activity with Jamie. Jamie usually did not get home until after it was dark of a weeknight and was therefore not home to encourage him or participate with him in any other activity.

#### **4.9.4 Personal and Social Factors**

Cameron was a confident and strong-willed child and was happy to do what he wanted, not finding the need to follow his peers. Cameron was, however, a fairly selfish and stubborn child at times and did not display much empathy for other people.

Cameron was not confident when it came to his physical appearance. He often worried about being bigger than the other children. Cameron appeared confident in his scholastic abilities. Cameron was confident in his behaviour at both school and home and believed he was accepted well amongst his peers. Cameron's behaviour at both home and school, however, was quite poor. He frequently did not listen to instructions except when Jamie told him to do something.

At home, Cameron was often involved in adult conversations with his parents and regularly discussed current issues and events with them. Cameron was quite an intelligent boy, however, he did not put in a great deal of effort and believed that he was naturally smarter than the other children. His teachers believed that the gap between him and the other children was closing because he was not applying himself in class. Cameron was also not motivated in school and usually did not complete the tasks unless he had an interest in them. If there were consequences or rewards he appeared to work harder, however, he was not intrinsically motivated and did not try to please his teachers or parents.

Cameron became distracted in class regularly and often distracted others around him. Some of his peers became frustrated with this but his close friends enjoyed talking to Cameron. He found it hard to concentrate for long periods of time. He tried everything to get out of completing his work and was frequently in trouble from his teachers for not having a positive attitude towards his work. His concentration improved slightly from summer to winter, which may have been due to the fact that he had his regular teacher back or that he was no longer sitting next to Bryce.

All of Cameron's teachers had become frustrated with Cameron in regards to his poor attitude and work ethic, which often jeopardised his relationship with them. Cameron appeared to have a better relationship with his male teachers, however, did not develop a strong connection with any of his teachers and due to his egocentric nature, this did not seem to concern him at all.



#### **4.10 THE DAY-TO-DAY LIFE OF DAVID WHITE**

David was a kind-natured child, with dark skin; black, thick hair, which had been shaved; and a solid build. David White was 12 years of age and in Year 6 at Willow Public School. David was the biggest boy in his school and his teacher, Mr Cane was a very energetic man who had a good rapport with all children in his class. The school consisted of only 200 students and there was only one Year 6 class. All the other students in Year 6 were slim and quite active. The school had a large grass field to play on and a smaller concrete area for students to utilise for handball. It was about a five-minute walk to Willow Public School and to the fruit shop from their house. The area was fairly traffic-dense. They lived in a small townhouse in a complex of about 27 townhouses that was owned by housing commission. There was a very small grass area to play on, however, most of the people in the complex were old and did not like David playing with his tennis ball. He could play handball against the garage. David's mother, Sue, was from a very low socio-economic background and found it difficult to pay for anything. David had a television, Playstation and computer in his room and there was also a television downstairs. David's main friends were Aiden and Jarred with whom he had been friends with since Kindergarten. Jarred was extremely thin and active and Aiden was slightly overweight but also quite fit.

David lived with his mum, Sue, and only saw his dad during some holidays as he lived in Queensland. His father was South American and built similarly to David and his brother, Nathan. Nathan was 19 years old and moved out in December 2006. Sue and David explained that they have had to adjust to the situation as Nathan was very loud. David said that they never used to get along anyway as there was a large age gap. Sue smoked and did not work and they were therefore very financially restricted. She was on the pension but used to clean motels and received cash in hand so that she was able to still get her pension. She used to have to take her sons into work with her in the holidays and would often work seven days straight. She said that she could not legally leave David by himself until he was 14 years of age and now that Nathan had moved out there was no one to mind David. Sue was not overweight at all but smoked and did not eat breakfast. She used to be overweight and body conscious, which limited what she was willing to do with David.

#### **4.10.1 Summer**

##### **4.10.1.1 Day One (Weekend Day)**

David woke up at 6:30am and watched television while lying in his bed. An hour later he went downstairs and watched cartoons on television. David explained that he only ate breakfast sometimes during the week and on the weekend he did not normally feel like it. When he did have breakfast he would usually have toast or cereal. David said that on a school day he just watched television in the morning and usually came downstairs at 7:30am and left for school at 8:00am, however, on the weekend he may have breakfast around nine o'clock. David said that on the weekend he just watched television or played the Playstation and sometimes he would watch DVDs. He said that he did not often have a friend over but if he did then he usually did those activities with his friend. David said that he had two friends that lived close-by but he had never walked to their houses before.

*David: Yeah my friends live close, Jack and Aiden. Aiden is the one coming over today. But they do live pretty close. Jack lives down that path and Aiden lives just around there.*

*Lauren: Can you walk there?*

*David: No not really. I never have.*

David said that there used to be a boy who lived in the complex and they used to play together but then he moved away. David said they were going on school camp at the end of the year and he could choose between Canberra and camping and he chose Canberra as there would be a television there.

At 9:00am Sue asked David if he was hungry and he said that he was a little bit. Sue said that she had to go and get bread. David watched cartoons while Sue walked to the shops to get bread. Sue did not own a car and David explained that they usually either walked or caught buses most places. When Sue returned she said she would have to go to the shops later to get some carrots for their spaghetti bolognese that night. Sue said that dinners for them usually consisted of meat or sausages and vegetables and potatoes. Sometimes Sue would cook a baked dinner. When Sue opened the fridge it was almost bare, containing only mince, milk, red cordial, jam and condiments. David made himself three pieces of toast with butter and a large glass of red cordial. He ate on the lounge in front of the cartoons. Sue went outside to have a cigarette. David said that they usually had McDonalds for dinner when Sue received a big pay through the pension as she was usually paid more every odd week.

When David finished his toast he went outside and bounced his tennis ball on the concrete in front of their unit and talked to Sue while she smoked. Sue said now that Nathan had moved out she had a bit more money and they could do a few more things than they used to, for example, they went to see “Night at the Museum” recently. David said they had a big lunch at KFC beforehand so they did not have to have popcorn at the movies. David said that the only take-away they ever bought was McDonalds.

*David: Yeah but we had a really big lunch at KFC. That really filled me up so we didn't have to get popcorn and that.*

*Sue: Yeah we hadn't been there for like a year or something.*

*David: Yeah we don't have KFC that often hey?*

*Sue: We don't get much take-away at all.*

*David: The only take-away we get is Maccas.*

David explained that whenever they went shopping he would ask for McDonalds. *“And I only normally ask for Maccas when we have to go shopping for stuff. And I'll say ‘Mum can I have Maccas?’ ‘cause normally I have it for dinner sometimes.”*

Sue explained that Nathan was a very big boy when he was young, however, now he was 6-feet. David discussed his friend, Jackson. *“Yeah Jackson's so thin he just looks like a pole when he's standing there like that. He just looks like a pole because he's so thin and straight.”* Sue put some clean towels at the bottom of their stairs and said, *“I'm not taking the towels upstairs until I need to go up there cause I hate walking up and down those stairs.”*

At 10:00am David's friend Aiden came over to play. He brought his bike with him as well as his Playstation 2 controller. David and Aiden went straight upstairs to play the Playstation. David said that if he did not have a friend over, it would be a very long day for Lauren as he did not do much on weekends except for watch television. Sue's brother came over and they went down to the fruit shop, leaving David and Aiden home by themselves. David and Aiden started playing handball together outside. Sue arrived back half an hour later with four bags of fruit and vegetables.

At 11:00am David and Aiden came inside and David had a drink of red cordial while Aiden had a drink of water. They went straight back outside to play handball again for a couple of minutes before telling Sue that they were going for a bike ride. Sue said that she only just started letting David go for a ride and would only ever let him ride down the road as she

thought there were a lot more “weirdos” around these days. Sue said that David did not normally wear a helmet but she told him to that day as Aiden was wearing one. David said that he had not ridden his bike for a long time: *“I haven’t used my bike in AGES. I haven’t ridden my bike since like years.”*

Sue said that David was teased a bit about his weight at school. She said that David started guitar lessons once a fortnight and really enjoyed that. She told me that David wanted to start playing football as all his friends were playing but she did not have the money to pay the sports costs. She explained that David had never been able to play a weekend sport because even when she was making more money she was working at the weekend and could not take him anywhere. Sue said that she thought she should start letting David out more but she worried until he came home.

After half an hour David and Aiden arrived back from their ride and had a drink of red cordial. David brought a pile of DVDs downstairs and Aiden chose to watch “Pirates of the Caribbean 2”. David asked Sue if she bought any tomatoes and she said yes. David saw flat bread in the fridge and said, *“Yes. I’m going to make a twister but I’m going to toast it. Can you help me Mum?”* They asked Aiden if he wanted anything to eat but he said no. David explained what he wanted on his wrap.

*David: I’ll have lettuce, tomato and mayonnaise. And tuna, if we’ve got any.*

*Sue: Ohhhh I don’t know if we’ve got any.*

*David: Oh if we don’t it doesn’t matter. Tomato, lettuce and mayonnaise.*

Sue helped David make his lunch and he sat down on the lounge in front of the movie with two large tortilla wraps consisting of tomato, lettuce and a lot of mayonnaise. At the same time Sue ate two Vegemite sandwiches. When David finished these he asked Aiden if he wanted a Zooper Dooper ice block and Aiden said yes so they ate these in front of the movie also. After finishing his ice block, David fetched a kiwi fruit from the fruit bowl and ate it on the lounge.

At 12:25pm David asked Aiden if he wanted to play handball and Aiden said yes. They played outside while the movie continued to play inside. They played for five minutes before coming inside and playing the Playstation. David played some of his favourite songs on his stereo while they played. Forty minutes later the boys jumped on the trampoline at the back of the house. David then became annoyed that he had left his shoes upstairs as he did not want to have to get them. They then played handball for a few minutes before

playing on the swings, which were inside the housing commission complex. When the boys came inside Sue made sure Aiden did not want anything to eat and he still did not. David took a banana and ate it while they watched the end of “Pirates of the Caribbean 2”. David asked Aiden if he wanted another ice block and Aiden said no. David got himself another ice block and ate it while watching the movie. David continuously used the coffee table in front of him to pull himself up from the lounge. The movie finished at two o’clock and the boys then went upstairs to play the Playstation. After 45 minutes the boys went back outside to play handball.

Sue started cooking spaghetti bolognese in which she added eggplant, carrot, celery, onion, mince, tomatoes and kidney beans. She explained that sometimes she would cook apricot chicken, “bangers and mash”, steak and vegetables and soup in winter. She explained that when they had meat and vegetables she always made potato and pumpkin mash. Sue said that David liked tuna but she would only buy it when it was 99 cents. Sue explained that she and David used to go for a walk after dinner but David started to complain that he had too much energy at night when he had to go to bed so they stopped. Sue said that she had been thinking of moving to Queensland to be closer to Nathan, however, she did not think they could afford it. Sue said that David needed a better computer for school but she was really struggling for money. She went on to say that she needed to get a job on the side but she really could not leave David alone as there were a few weird people in the complex. She said that it was a constant struggle for her, affording food and providing David with an education. She explained that her family did not live close-by.

At 3:25pm the boys came back, had a drink of water and then went to play the Playstation upstairs. At 4:00pm David asked what time tea would be ready and Sue said it would be about an hour. David asked for some peanuts and Sue gave him permission to open them. They began to watch “Back to the Future” and Sue explained that David loved the movie and could watch it over and over again.

*David: It’s my favourite movie now. It’s heaps good.*

*Sue: We have number two and three that we taped off the TV years ago and they have been watched so many times that they are just worn out. I got this one pretty cheap and have started buying a few more DVDs that he loves. He’ll probably watch it today and tomorrow.*

*David: Yeah I probably will too.*

David ate the peanuts while watching the movie and then rose to get himself a drink of cordial and Aiden a drink of water. Sue told David to put away the peanuts, however, he continued to eat them in front of the movie.

*Sue: Put the peanuts away cause I know what you're like and you'll eat the whole packet.*

*David: Well why didn't you get two packets? One for me and one for you?*

*Sue: They came with Chrisco [a food hamper company].*

After five minutes, Sue grabbed the peanuts off David and put them away and said, "We'll be having dinner soon." At 4:30pm David asked if dinner was in half an hour and they talked about it.

*David: So it's half an hour til dinner?*

*Sue: Yeah I've just got to cook the pasta.*

*David: What are we having?*

*Sue: Spaghetti bol.*

*David: Next time can we have meatballs with it?*

*Sue: Yeah I just need to get different meat.*

*David: Why, is the Chrisco meat too fatty?*

*Sue: Yeah.*

*David: If it's too fatty for meatballs wouldn't it be too fatty for the bolognese?*

*Sue: No because I fry it and then drain the fat.*

David asked Aiden if he wanted to play handball and Aiden said yes. Aiden's mum arrived while the boys were outside playing. When the boys came inside they collapsed on the lounge. As soon as Aiden left, David asked if they could have dinner.

*David: Can we have dinner now?*

*Sue: Oh David, I have to cook the pasta.*

*David: Well hurry up.*

*Sue: You can't be starving mate. You've been eating all day.*

*David: Not all day.*

*Sue: Well a good part of it.*

David continued to watch "Back to the Future" and continuously asked Sue how long until dinner.

At 5:20pm Sue said that dinner was ready and asked him to eat at the dinner table. David was served a very big bowl of spaghetti and got a popper from the Chrisco pack in the

garage. He then asked what the pudding was out there. Sue said that they started getting Crisco as it lasted about six months and you received some things you would not normally buy. David ate his tea at the table while still watching the movie. After finishing his dinner, he got a handful of grapes and sat back on the lounge to watch the movie. He then had a bath and watched the end of “Back to the Future” and then put on the news. At 6:00pm “The Simpsons” came on but David said he wanted to watch it in bed and Sue said that she thought he would be tired after having Aiden over. David said that he usually watched television in bed before he went to sleep.

#### **4.10.1.2 Day Two (Weekday)**

David rose and dressed at 7:10am and came downstairs to watch Channel 10 cartoons. Sue asked David if he wanted porridge for breakfast but he said not until 7:30am. Sue said that he went through phases and would eat it for a couple of weeks and then would not eat it at all. David said that he did not play any sports but would like to play football for the Butchers, for whom Aiden plays, however, he might have to wait until next year.

David’s porridge was made with milk and brown sugar. He ate it on the lounge in front of the television. Sue explained that she usually packed him a sandwich for lunch, a packet of chips for recess and fruit for fruit break, however, lately he had been having fruit for recess instead of chips. He would usually have a Vegemite sandwich or cheese and tomato. Sometimes Sue bought devon and he would have that. Sue said that she used to buy snacks for recess such as cheese dips and muesli bars but she did not anymore as it was too expensive.

*Sue: The last couple of days he’s been having a Vegemite sandwich for lunch and a piece of fruit for fruit break and the last couple of days he’s had fruit for recess but I’ll give him chips today.*

*David: Yeah cause I’m starting to get bored.*

*Sue: Yeah for recess it’s usually fruit or..*

*David: Chips.*

*Sue: For lunch sometimes I buy devon or ham or something like that or make cheese and tomato.*

Sue said that David was to have a sausage sandwich for lunch. David said that he had not had a curry egg sandwich for a long time but then realised that he was not allowed to take eggs to school. Sue said that she did not really think outside the square when it came to school lunches and it was good when David went shopping with her as it gave her ideas but

she also spent a lot more. Sue explained that they usually had McDonalds for lunch before they did their shopping as Sue did not like to shop on an empty stomach.

*David: Almost every time when we went to the shops around lunchtime and I would say Mum can I have Maccas and half the time we would have Maccas. Yeah and sometimes when we're leaving she'll go we'll go to Maccas before we go shopping.*

*Sue: I think sometimes it's better to have something to eat before we go shopping so we aren't hungry. Cause I know if I go when I'm hungry, the extra stuff I pick up is unbelievable.*

David walked to school each morning by himself and said it took approximately 10 minutes. David packed Natural Confectionary lollies to give to his peer support group that day. David did not brush his teeth before leaving for school. He accidentally broke the zipper on his bag before leaving for school and Sue was annoyed as it would mean she would have to spend more money. Sue explained that she received money from a fund for underprivileged children in January and July and David also received a Christmas present from them. Last year he received a school bag, a football, a "Harry Potter" book and some soldiers.

David left for school at 8:00am and said that he liked playing handball of a morning. When David arrived at school he sat on a metal seat by himself and when the play bell rang he played handball with some friends. The teachers explained that David never used to play handball and still would not do sport at lunch but that he was a little more active. The teachers believed that he comes to school with too much food, with one teacher explaining that when they had a pizza day he ordered four pieces of pizza when other children only ordered one or two.

David sat next to Aiden and compared lollies. Mr Cane called David "Blacky" all the time due to his last name being "White". David did not become involved in discussions but listened intently to Mr Cane as he discussed what they had to do in peer support. Mr Cane asked David to read something aloud to the class and his reading was not very fluent. Mr Cane said that David was a bright child who played handball a little bit and would willingly participate in all physical education classes. Mr Cane explained that the lollies were distracting him and David showed him the Natural Confectionary lollies he brought. Mr Cane said, *"It's good you got the healthy ones."* David's class had a water dispenser in the



classroom where children had their own cup and were allowed to get up whenever they chose to have a drink.

At 10:00am the class had a fruit break. David brought his two kiwi fruits back to the desk. The three students who did not bring fruit had to put their names on the board. The class started talking about what they ate for breakfast. The class then watched a movie called “Iron Giant” as they were looking at atomic bombs.

The bell rang for recess and David quickly ate his sausage sandwich and his packet of chips. Once he had finished he ran to his bag to get his tennis ball and waited for his friends to finish. David then played handball with Aiden and one other boy. When the end of recess bell sounded David’s class waited in line, however, David and some other boys began to wrestle. They all wanted to fight David as he was the biggest.

The class talked about “Iron Giant” and had to classify the main characters. David started his work straight away. Mr Cane told me that their class did aerobics every Tuesday and Thursday for half an hour and David appeared to really enjoy it. The class then had scripture for half an hour and after that they went on with working on their character analysis. David started talking to Aiden and Mr Cane told them, *“This isn’t a communal effort boys.”* Mr Cane pointed out that David had spelt “analysis” incorrectly and David seemed annoyed he had made this mistake.

At lunch, David sat with a group of 10 Year 6 boys and did not have any food left to eat. He ran back to his bag and opened up his packet of lollies, took a handful out and ran back to sit with his friends. He ate his lollies relatively quickly while everyone else ate their sandwiches. When the play bell rang most of the boys went to play soccer, however, the remaining four boys played handball. When David ran side-to-side to retrieve the ball he often got out as he was not quick enough. As he played his t-shirt started to creep up and he continually pulled this down to cover his bottom. When the half-time bell rang David set up the assembly stage with another boy and then went back to playing handball. Mr Cane said that all the teachers and students liked David and, as far as he knew, David had not been subject to any bullying.

Assembly took place after lunch and then all students went straight on with their peer support groups. David began by discussing the rules with his group and developing some of

their own. David used blu-tac to display their rules up on the back wall. Some boys in his group threw a pen around and the classroom teacher asked David who was being naughty. David responded, *“Those two just keep talking.”* David then described the cup game to his group, explaining that they had to stack cups but all the people in the group had to touch each cup as it was stacked. Peer support finished and David gave each child a lolly even though there were quite a few left over.

David walked home and when he arrived, Sue was asleep on the lounge out the front of their townhouse. David sat on the lounge with Sue and said that he thought he had had a growth spurt as most of his pyjamas and jumpers were getting too small. David said that he felt like having a sleep and Sue explained that she used to make David run around the complex and David said that he used to run until she could not see him and then would walk the remainder of the way. David lay down on the lounge and said that he could not do a class assignment as his Internet and computer did not work. Sue said that she had already talked to the teachers regarding that and David had to do some of his work at school instead.

*Sue: Yeah but all I’m going to do is do the same thing I did last time and say we don’t have a computer and they’re going to turn around and say exactly the same thing they said last time that there are computers down at the school to use. You have to get off your backside and do it at lunchtime.”*

David asked Sue if she had bought any tuna and then got excited as he wanted to make a tuna salad.

*David: Do we have any tuna? Did you buy any?*

*Sue: Yes.*

*David: Good I’m going to make a tuna salad.*

*Sue: Don’t make a tuna salad now.*

*David: Why?*

*Sue: Because you’ll be having dinner after your lesson. Have a piece of fruit.*

*David: Too bad. It’s still healthy and anyway I’d be having a piece of fruit because a tomato is a fruit. Because the seeds are in the inside and everything with seeds in the inside is classified as a fruit. So pumpkin is a fruit too.*

David went inside and made himself a tuna salad and then sat on the lounge next to his mum with it. Sue became annoyed and told him that the salad was his dinner now, however, she was happy that David was fine to have leftovers tonight.

*Sue: Enjoy your tuna salad because that's your tea.*

*David: Nah, cause you're making my tea.*

*Sue: Well why don't you have that and then have a bit of eggplant slice and a bit of corn.*

*David: Yeah that's dinner for me.*

*Sue: Oh yeah, you happy with that? Cool.*

*David: Oh I should've asked for that now.*

*Sue: I thought you weren't happy with that the other night as it was too cheesy.*

*David: No I thought it was nice.*

Sue said she made it by covering the eggplant in breadcrumbs and frying these and then stacking it with tomato paste and Mozzarella cheese. While eating, David asked his mum if she still had to cook the corn for dinner and Sue said yes but instead of peas and carrots they might have broccoli. David discussed how many fruit and vegetables he had had that day and knew that he should have two serves of fruit and five serves of vegetables per day. Sue said that even though fruit and vegetables were healthy he could still put weight on.

*David: Today I've had three pieces of fruit but tomato is also a fruit and I've had two in my salad.*

*Sue: Did you put in two tomatoes?*

*David: Yeah, they're only small.*

*Sue: Even though you eat healthy food, you can still put weight on.*

*David: I know.*

Sue said that they usually have something easy for dinner on a Wednesday night as it was the day before she was paid.

David practised his guitar for 10 minutes and Sue became frustrated with him as he was not being serious when he practised. David said that he wanted Sue to watch him have his lesson that afternoon, however, Sue said she did not want to and explained, *"I don't want to be around you 24 hours a day."* Sue asked David to run up to the letterbox and get the Advertiser [community newspaper]. He did this and then started playing handball against the garage. He asked his mum to play handball against him, however, Sue said she was not feeling well. David played handball until his guitar instructor arrived. They started the lesson and Sue gave both David and the instructor a large glass of red cordial. David put out their bins and started bouncing the tennis ball again for a couple of minutes before sitting down on the lounge with Sue again. Sue and David talked about his guitar lesson and Sue

said that he really needed to practise every day for about 15 minutes, however, David said that he was not willing to give up television or the Playstation to practise his guitar.

*Sue: Like you only need to practise for 15 minutes a day. It's not hard.*

*David: 15 minutes is a long time.*

*Sue: Well it could be just 15 minutes less of TV or the Playstation.*

*David: Playstation is my importance. It's entertainment for me.*

*Sue: Yeah well I'm not buying you any more games. Not for a long while mate.*

Sue explained that she was going to put on the vegetables and feed David's stomach.

*Sue: Yeah I'll go in and put the corn on so I can feed your doughnut.*

*David: It's not a doughnut. Look at your doughnut then.*

*Sue: Yeah it's soft like a doughnut like mine.*

*David: Yeah I better start losing some weight.*

Sue got up and started to organise their dinner and David said that he could fall asleep but also told his mum to heat up the eggplant slice.

David said that he wished there were other children around as it often got boring. He explained that he did not have any family close-by. He said that another boy used to live in the complex and that was good but he then moved. David said that when his brother was living with them he did not spend much time with him as there was a nine-year age gap. David said he had a few friends who lived around the area but would still need someone to drive him to their house. David said that the old people who live in their complex did not like noisy games such as bouncing a basketball, however, handball was fairly quiet. He said that if he could make noise then he would do more things. David explained that he could not really run as there was not much grass and he became bored of riding his bike around the complex.

*David: Yeah but there's not much to really do because there's not much grass. So you can't really play running games. I can ride but the only place I can really ride is around there and it's a bit boring. Can't really ride nowhere else. It's just people out there these days because Mum used to go everywhere and walk everywhere and now she says you can't do that but you used to be able to.*

At 5:50pm David went inside to see if "The Simpsons" was on but sat on the lounge and watched television anyway. Fifteen minutes later David pulled himself off the lounge again to get his dinner. He rested his dinner on his lap while he watched "The Simpsons". He ate

his eggplant slice topped with a thick layer of cheese, fresh corn on the cob and frozen cauliflower, carrots and peas. Sue sat with David in front of the television and ate her dinner also. David told his mum that he could have curried egg for breakfast, as he was not allowed to have it for lunch. Sue said that if he did then he had to make sure he brushed his teeth but David said that he did not think that he had to anyway. David said that he liked the corn and asked for more eggplant slice.

*David: Can I have more of that eggplant stuff?*

*Sue: Yeah you can have a little bit.*

*David: Well you should dish it up because I'll probably get heaps of it. I'll wait til you finish.*

*Sue: I'm just thinking, you can have a piece of fruit cause this afternoon when I told you to have fruit you made a tuna salad.*

*David: I had fruit. Tomato is a fruit.*

*Sue: No.*

*David: You said have fruit so I did.*

*Sue: You can have an orange or there are peaches in the fridge.*

*David: Do we have cream?*

*Sue: No.*

*David: Ok, I'll have peaches.*

Sue said that she often went to Bingo on Thursday night as it was free and you could win trays of food. After David finished his peaches he crawled up the stairs to have a bath and explained that he was tired. At seven o'clock, after his bath, David played with Nathan's Gameboy while sitting on the lounge in front of the television. After 20 minutes he played with it while lying down on the lounge. After David had been playing for 50 minutes Sue said that she did not think that Nathan would like him playing with it and David went upstairs to bed. As he walked up the stairs he said, "*My legs are hurting.*" David watched television in bed for 30 minutes before going to sleep.

#### **4.10.1.3 Day Three (Weekday)**

David got up at 7:30am, dressed and then poured himself a glass of cordial. David asked Sue if he could have rockmelon again for fruit break.

*David: Today for fruit break can I have rockmelon?*

*Sue: Yeah I was going to do that anyway.*

*David: That was nice last time.*

Sue asked David if he wanted Salada biscuits again for lunch but David said no. David pulled on the coffee table to get up. Sue began to tell me that she chose their townhouse as it had an L-shaped backyard, which was bigger than all the other backyards.

*Sue: And also with the backyard it's bigger and we've got the L-shape. Yeah like we've got over there with the clothesline but then we have this bit over here too. I couldn't have done without it, having two young boys growing up.*

Sue said that because they lived on a busy road, they often heard intoxicated people walking home on a Saturday night and had even had people throw glass bottles through their windows. Sue packed David a big container of cut up rockmelon, an apple, a cheese and lettuce sandwich on white bread and a bottle of cordial. David put his lunchbox in his bag but accidentally dropped it and broke it. Sue was annoyed as she would have to buy him a new one and said, *"It's always something."*

David left to walk to school and when he arrived he sat by himself for five minutes before Aiden arrived and they started playing handball. David had a drink of cordial before entering the classroom. Mr Cane started to joke with the class but David and Aiden started talking to each other. The class started reading a book together but David and Aiden remained distracted. David put up his hand to volunteer to read aloud but was not chosen. He did, however, answer a number of questions relating to the book. David and Aiden fiddled with objects under their desk while Mr Cane talked. Mr Cane asked David to read, however, he had to stop as he was not reading with the punctuation. David was not a very fluent reader.

At 10:00am the class had their fruit break and David moved Aiden's chair to the other side of the classroom while he was outside, as a joke. David ate his container of rockmelon very quickly and finished first out of the entire class, even though he had the most food. Mr Cane explained that for cross country they had to do six laps which equated to almost three kilometres. David said, *"Far out, that's heaps far."* Mr Cane walked his class through the cross country course and explained that they could then come down to the school and practise in their own time. The children were then organised for aerobics with a number of children getting changed. David was at the front of the line and the instructor told David to tie up his shoelaces before they started. The warm-up involved moving their arms. They did routines for a number of different songs, however, David could not get his leg up very high when doing high knees. The teacher said that those people who brought clothes to change into were sensible, however, David did not and ended up getting extremely hot and sweaty.

David's movements became a lot slower towards the end. Aerobics went for five songs with a teacher instructing the children out the front. Mr Cane told me that they did aerobics twice a week and he was supposed to take the children out for an hour of physical education but he said that this often did not happen as there were too many other things on. He said that when he instructed the aerobics he made the children work harder than the regular instructor as she did not want to get too sweaty, as there were no showers at the school.

At recess, David got his sandwich and tennis ball from his bag and ate with four friends. David ate his sandwich very quickly and then had to wait for his friends to finish eating. The teacher on duty forgot to tell the boys when they were able to play so the boys got up and played handball for five minutes before the end of recess bell rang. The boys moved their game closer to the classroom so they were able to play until the teacher came. The boys lined up and started punching David as a joke and then ran away. David chased them for a couple of steps but then gave up as he knew he would not be able to catch them. David made popping noises with his mouth in front of his peers.

The class then had Mathematics and completed multiplication and division questions on the board. Mr Cane asked certain children to come to the front and show how they worked out the problem on the board. Aiden explained one to the class and then David had to explain 1000-246. After David finished explaining how he completed the problem, Mr Cane said, *"That's the best explanation I have heard from a student EVER in subtraction."* Mr Cane shook David's hand and said to me, *"That was a very good explanation, like higher order thinking. He is quite smart."*

The class then went to the computer room to do work on energy for their science unit. Those who had finished typing were allowed to play energy-related games and David did this. The bell rang for lunch and David got his handball and green apple out of his bag. David ate half of his apple very slowly and then threw the rest in the bin. The children were told they could play and 10 boys went to play soccer so David followed them to the field. All the boys ran around and chased the ball but David mainly just stood there and would only kick the ball if it came to him. David either walked around the field with his hands on his hips or just stood there. After two minutes David was tired, puffed and sweaty. He was slumped over. He became goalie but still did not touch the ball. At 1:25pm, David, Aiden and one other boy started to play handball. When the ball went past him he told another boy to go and get it. When this happened again David yelled for another girl to throw it back

and Aiden said, “*Just get it yourself David.*” So David huffed and walked over to pick up the ball. When this happened for the third time he got a girl to throw it again. He then played handball with a soccer ball but when it rolled away he stopped playing the game.

The class finished their Science lesson and then started a comprehension test. When Mr Cane told the children to put their pens down, a boy said, “*David did another question when you said pens down.*” The class then marked each other’s work.

David walked home and got a drink of cordial immediately and sat outside with Sue. David was excited that Sue was working at the canteen the next week and he would be able to eat canteen food.

*David: I’ll remind you because I get food that day. Hot food. For recess and lunch.*

*I can get a packet of chips too. Don’t pack me chips that day.*

*Sue: You must be dreaming about chips because you keep talking about them.*

*David: Yeah I know. I’m craving them. I want chips and I want Maccas.*

David told me that he normally sat outside with Sue when he arrived home from school. David told Sue that he wanted cheese on his sandwich instead of Vegemite. He said that he liked the dance aerobics they did at school on Tuesday better than the Thursday session. He said that he did not want to take a shirt to get changed into and that was why he did not put in much effort when it was hot. He said that he had already received an aerobics reward. David started talking about an experiment that he saw on “Mythbusters”.

David went inside and ate a piece of bread without Sue seeing. David told me that he only played soccer at lunchtime to warm up.

*David: I only play soccer when it’s a cold day so I can warm up. I wanted to play handball but no one was. But they keep playing soccer and I get bored of that. In the mornings and at recess we play handball cause you’re not allowed to take out balls. Cause there’s not enough time to play.*

He said that the boys usually played soccer in summer and winter, cricket in summer and touch football in spring. David said that he had tired of soccer and liked handball. David played handball against the garage door. David went in and got a drink of cordial and then asked if he could have some rockmelon. He ate another big container of rockmelon and talked about how many serves of fruit and vegetables he had had that day.

*Sue: You’ve had plenty of fruit today.*



*David: How many veggies am I going to have in chow mein?*

*Sue: Three. Carrot, celery and cabbage.*

*David: Put more in. What other veggies could you put in?*

*Sue: It doesn't taste nice with too many more.*

*David: I would have had three pieces of fruit and three veggies. That's how many you're supposed to have. I usually have more than that anyway. Not with fruit but with veggies.*

David said that he used to have to eat rockmelon with sugar on top and used to lick it all off but now he did not have to.

David played with his football and tried to get Sue to play but she said she was sick. David reminded Sue that she owed him \$50.00. David said that he would use it to buy Playstation games or start martial arts or football but then realised he would not be able to get to the football games so he settled for Playstation games. David started naming the Playstation games he wanted. David then started to make paper aeroplanes and went outside to throw them. David tried to get Sue to throw paper aeroplanes with him and she did a couple of times from her seat. David then accidentally threw the aeroplane on the roof.

At 4:20pm David asked when dinner would be ready and then went inside to watch cartoons on television. David said that he was currently reading "Harry Potter 2" and would then read the rest. He explained that he had numbers two, three and four on DVD and then got up to look at his DVDs. David said that he was going to get a DVD to watch until "The Simpsons" was on. He chose "Back to the Future" but then said that he would watch it later. Sue continued to smoke a lot. David asked again how long it was until dinner.

At 5:30pm David went into the kitchen and got his dinner, which was a large bowl of chow mein. David sat with his dinner on his lap and ate it while he watched television. Sue ate with David in the lounge room. The chow mein was made with carrot, celery, cabbage, mince, seasoning and rice. Sue said that she saw on the news that soft drinks may be better for you than fruit juices. After finishing dinner, David asked if he could have some chocolate pudding and Sue said yes.

*David: Mum can I have some pudding?*

*Sue: Yeah if you want.*

*David: I wonder if there's any sauce left.*

David sat back on the lounge and ate his big bowl of pudding very quickly.

*David: It's nice cold hey?*

*Sue: Yeah.*

*David: It's not as filling.*

*Sue: Yeah it probably makes it not so sweet.*

David told Sue to tell him when "The Simpsons" was on as he was going to play handball outside. Three minutes later David came back inside and looked at the CDs. David went to have a bath and Sue told him to wash his hair. Sue said that David was really starting to enjoy music and listened to it a lot. David sang to the music while in the bath.

David came back downstairs. He saw an advertisement for "Pirates of the Caribbean 3" and said that they had to get that movie. "*Pirates of the Caribbean 3'. We better get that on DVD. It looks scarier than the others. Oh 'Armageddon' is really good. Mum I reckon it would be heaps more scary than the other two. I reckon it looks scarier.*" Sue watched on the news how much sugar was in fruit juice and said that maybe David should not be eating ice blocks. David said, however, that there would not be that much sugar in an ice block. David said that Sue might need to buy more cordial but Sue said he could take water to school.

*Sue: There's not too much by the time I fill up your drink bottles. If you drink it all before then, then you'll have to take water.*

*David: No not water.*

*Sue: What, you've had water before.*

*David: I need a bigger drink bottle because I always run out of it.*

*Sue: There's plenty of cordial so I might have to get you another one and I'll put water in that one.*

David watched "20 to 1" and talked about the Guns N' Roses songs that he liked. "*That was my favourite song. I also like 'Knocking on Heaven's Door'.*" David started acting immaturely in the show and laughed at people dying on "20 to 1". David started to get out photo albums and Sue told him to put it away and David put them away and went upstairs to bed. Sue said that it must have been the chocolate pudding that gave him so much energy. Sue said she had made the pudding the previous night and it was from the Chrisco pack.

#### **4.10.2 Winter**

David appeared to have put on weight since my last visit and his shirt was extremely tight around his stomach. He found it very difficult to move. He had started playing football.

##### **4.10.2.1 Day One (Weekday)**

David rose at 7:25am and dressed. He explained that he was now playing football and had played three games. David made himself three pieces of white toast with a thick layer of butter and a glass of red cordial. He ate this while he watched the motor racing, disappointed that his cartoons were not on. David said that the previous night he had eaten three pieces of pizza and a couple of pieces of garlic bread. *“How much pizza is left because I only had three pieces? I had homemade pizzas at Aiden’s the night before.”* Sue changed the channel to “Sunrise” and David ate his breakfast on the lounge while watching this. Sue said that she had watched David play football on the weekend and then he stayed the night at Aiden’s house. *“We went to the footy on Saturday and they got flogged. Then he went to his friend’s place for the night.”* David said that he had football training that afternoon and on Wednesday afternoon. He explained that his coach drove him to training and the matches otherwise he could not get there. David said that his coach was strict and made him do extra work before training as he was new to the team. David started late in the season due to financial difficulties and not being able to get to matches. David walked upstairs, pulling on the rail to help himself up. He told me about a series of books he had been reading. *“This is the book I’m reading. This is the fifth book. So I’m going to finish this series and then I’m going to read ‘Harry Potter 2’ and ‘Harry Potter 3’.”* David said he was getting bored of “Harry Potter” as he had seen all the movies and therefore knew what happened.

Sue packed David a Vegemite sandwich for lunch, an apple for fruit break, a bag of chips for recess and a bottle of cordial. Sue said that she thought children were bored these days as there was so much technology but not enough big backyards for people to run around in. Sue said that she had her brother staying with them for the past month but she did not enjoy it as she had to cook different foods than she normally did. David explained that he wanted an MP3 player and a bike for Christmas. He said that he did not often play handball at school anymore and instead he and his friends played bull rush when the Principal was on duty. David said that he had not been playing at home either. Sue said that David was scared to tackle in football but was becoming more confident. Sue then said that she just felt like going back to bed.

At 8:03am David left to walk to school and Mr Cane said that David had been going very well academically. When David arrived at school he stood around with his other friends and talked. When the play bell rang, the children asked the Principal if they were allowed to play bull rush but the Principal said it was too wet to play so the boys stood around and talked for the remainder of the break. Mr Cane said that they were starting sport that week and the children could choose between AFL and soccer. David chose AFL.

The class had a spelling test and David concentrated well. David found it hard to move. He was now sitting next to Ben instead of Aiden and seemed to have a higher level of concentration. The children had to mark each other's spelling and David concentrated hard for this. At times, David spoke to Ben, however overall he seemed focused on the task.

At 10:10am Mr Cane said "fruito" and all the children got their fruit for fruit break. David ate a green apple at his desk very quickly and Mr Cane commented on how quickly David finished his apple.

David worked quietly while he waited for Mr Cane to start marking their homework. David slouched over quite a bit when he walked. The children began work in their Mathematics textbook and David started working immediately. Mr Cane then used flashcards and gave the children a chance to look at the problem quickly and give an answer. Only David and one other student correctly answered their question straight away.

At recess David ate his chips and sandwich with a group of Year 6 boys. David ate quickly and chatted to the other boys while he waited for them to finish their recess snack. David ate a lot more food than the others but finished before them. The boys then got up and started to run over to the field, however, David struggled to run.

The children finished off their Mathematics work and then went to the library. David, Aiden and one other boy played "tip" on the floor of the library and David then talked to another boy next to him while the teacher was talking. When getting up off the floor, David found it extremely difficult. David was the last person to get a seat at a desk and therefore had to sit on a table with three girls. David continued to make sure that he was doing the correct thing. A boy got up from his table and tipped David and David then pretended to ask the teacher something and tipped the boy back. The boy kept tipping David back until David was told to sit down by the librarian. David tried to talk to the girls on his table but they did

not enter into a conversation with him. David was confused as to what a resolution and a coda were but once this was explained he worked well. David ended up being the first to finish and was told to get a book to read, however, he started to play tip with his friends. David looked on the library catalogue for a book and borrowed it.

At lunch, David sat with his friends while they ate, even though he had no food to eat. The canteen was not open for him to buy food. David played with his friend's football while they ate. Once they were allowed to play David and his friends took the football over to the football field and Jack and David started kicking the football over the goal posts to each other. David's kicks were fairly inaccurate and he could not catch any of Jack's kicks. When David had to retrieve the ball he did not run like the other boys and simply walked over to pick up the ball. He played this for 15 minutes and then his friends started to play tip. They tipped David first and then David was unable to catch them. He started walking and then snuck up behind a boy and tipped him but then walked away from the game.

David and a Year 6 girl were asked to put the letters up on the school sign. They worked well together. When returning to class, they read "Two Weeks with the Queen". David answered a number of questions Mr Cane asked about the book.

David walked home and arrived home at 3:05pm, puffing. David asked for some pizza and Sue said yes straight away.

*David: Can I have some pizza Mum?*

*Sue: Yeah.*

*David: And some garlic bread. Did you eat all the supreme?*

*Sue: Yeah.*

David asked what was for dinner and Sue said a bacon and egg pie. David heated up his pizza and then went upstairs to get changed into his football clothes, puffing on his way up. David told Sue about the book he borrowed from the library and then complained about a show being on television at the wrong time. "*Why is this on? 'According to Jim' is always on.*" David ate two pieces of pizza, four pieces of garlic bread and a cheese pot. David opened the cheese sauce and licked it with his finger. David ate extremely fast and Sue told him to eat slower. "*Don't just guth it down too quick or you'll get cramps when you get out there. I'm sick of telling you.*" David ate on the lounge in front of the television, dipping his pizza and garlic bread into the cheese sauce and then eating it. David then scraped the

remaining sauce out of the pot with his finger and licked it. David ate the cheese sauce even though he did not like it.

*Sue: I thought you didn't like that stuff.*

*David: I thought I may as well eat it cause it won't get eaten otherwise.*

David discussed how he ate pizza. *"Sometimes when I eat pizza like this, all the topping comes off because it's stuck to the cheese."* When he finished his food he licked his fingers thoroughly.

At 3:20pm, David went upstairs to play the Playstation for 25 minutes. He asked Sue if he could have a lemon and honey drink when he got home and Sue said yes. David said that he hoped his coach would be late picking him up so that he did not have to do extra training. David watched "My Wife and Kids" with Sue and then asked Sue if honey was healthy, to which Sue answered yes. David changed the channel but Sue said that she wanted to watch "Scope". Sue said that she let David play football as the team needed more players and when she said she did not have a car they offered to pick up and drop David off each week.

*Sue: Yeah it got to the point where they really needed players and I said that I can't because I don't have a car and the furthest they've had to go is Helensburgh but yeah they pick us up and drop us off and do the same thing for David with training.*

At 4:15pm David was picked up for football training by his coach, Jordan. Sue explained that she enjoyed doing jigsaw puzzles and David often helped her. *"I like doing it in winter cause it's so cold. David helps out too."* David arrived home from training at 5:50pm and said he was tired. David got himself a drink of Coke and said that in training they did lots of sprints, passing drills, sit ups and had a game of touch at the end.

*David: Well when I got there we did our warm up. Then we did like a forward run where I have to get the ball and run down and then get up and then you kick the ball to the other person up there and then there's another one where I run up there and pass the ball out the back. Then we had to run up to the 10 touch line and then run back. We had to do that 10 times and then after that we had to sit on the ground and take it in turns and do 10 sit-ups each and then we had to get up and then do another 10. Then we did races. Up to the 10 and back and then up to the 20 and back and then we passed the ball around. And then we played touch for a bit.*

David said that his coach treated them like they were professionals and when you dropped the ball or did something wrong he teased you. *"He really embarrasses you because I dropped the ball today and he says oh what a crap catch and everyone looks at you."* Sue

said that that was not going to help David's confidence and David agreed. David asked when dinner would be ready and asked what Sue had made. Sue said she made egg and bacon pie, frozen vegetables and garlic bread and David said that he did not want any garlic bread.

Sue said that "The Simpsons" movie had come out on Thursday and David said that he really wanted to see it. David watched the end of "Deal or No Deal" and then changed the channel to "The Simpsons". David got excited that "South Park" was on that night and he lay on the lounge while watching television with Sue. David found it hard to get up from the lounge and said that his legs were very sore. David got himself a drink of cordial and drank this in front of the television. David lay back on the lounge and started to make noises with his hands.

At 6:20pm dinner was ready and Sue tried to make David eat garlic bread even though he said he did not want it.

*Sue: Here's some garlic bread.*

*David: No thanks.*

*Sue: I'll give you some because you'll eat it.*

*David: No I don't want it.*

David gave the garlic bread back to Sue and they ate their dinner in front of the television, as usual. David had a quarter of the pie made with eggs, bacon, mushrooms, cheese and frozen peas, corn and carrot. David ate all his vegetables first and then ate his pie. David licked his knife, fork and plate after finishing. David pulled himself up from the lounge using the coffee table. Sue explained that she had started a vegetable patch. "I've got a veggie patch out there. I can grow capsicum, tomatoes and a few other things too." David then asked if there was any ice cream and Sue said no. David ate an apple in front of the television and then asked for a lemon and honey drink with extra honey, which Sue made for him. David drank this in front of "Big Brother". David complained that he could not taste the honey and only the lemon. David said that he and Aiden stayed up until midnight playing the Playstation on Saturday night. David went upstairs and had a bath while Sue partially packed David's lunch for the next day, consisting of two mandarins and a packet of chips.

David came downstairs and did some drawings of Digmons and Pokemons in front of "Big Brother". David asked for dessert and Sue said that he already had an apple to eat. David

said that “South Park” was on in half an hour and tried to convince Sue to watch it with him but Sue wanted to watch a different show.

*David: “South Park” is on in half an hour hey Mum?*

*Sue: I’m not going to watch that.*

*David: Yeah it’s heaps funny. Come on Mum.*

*Sue: No.*

*David: Why not?*

*Sue: cause I want to watch something else.*

*David: What do you want to watch instead of “South Park”?*

*Sue: “SVU”.*

*David: How long does that go for?*

*Sue: An hour.*

*David: You’ll only miss half an hour.*

*Sue: But you need to watch the first half to understand it.*

*David: Nah “South Park”.*

*Sue: Do you want to watch it down here?*

*David: Yeah “South Park”. Can we?*

*Sue: You should be going to bed.*

*David: Nah.*

*Sue: Yeah you need your beauty sleep.*

*David: Nah. So can we?*

*Sue: Yeah I guess so.*

*David: Yay.*

David started singing a song from “South Park” and Sue told him he needed to start winding down but then began to laugh at him. David asked for dessert but Sue said he had already had it.

*David: Mum what can I have for dessert?*

*Sue: You’ve had dessert.*

*David: Was that dessert?*

*Sue: Yes.*

*David: Oh really?*

David talked about the new “Harry Potter” book and said he had found out what happened in the end. Sue did not let David change the channel to “South Park” until “Big Brother” had finished and David got very frustrated. David laughed throughout his show. When the show finished, David got up and struggled walking up the stairs to go to bed.



#### **4.10.2.2 Day Two (Weekend Day)**

At 8:30am David got up and went outside to see Sue. David said that he was soundly beaten in football the day before and was tackled pretty badly. Sue said that she went to watch him play and then they went shopping in Woonona where they also had lunch at McDonalds. David looked to see what was on television and then decided to put on the movie “A Man Called Horse”. “‘A Man Called Horse’. It’s a pretty old movie. We bought number two but it doesn’t work. It just started skipping.” Sue said that David had wanted to watch that movie the previous night, however, they ended up watching “Back to the Future”. David started talking about their dessert from the previous night.

*David: Did you eat all the chocolate last night?*

*Sue: No.*

*David: What did we have for dessert last night?*

*Sue: Nothing.*

*David: I thought we did.*

*Sue: Just almonds.*

*David: Oh that’s right. The almonds were nice.*

David asked Sue to make him a cup of tea, which he drank in front of the movie. David lay on the lounge and watched the movie with Sue.

At 9:30am David asked Sue if she could make him some toasted sandwiches.

*David: Can you make toasted sangas?*

*Sue: Yeah.*

*David: I just need your help to cut the cheese and tomato cause sometimes when I cut cheese it comes out like this thick. And my tomato isn’t very good.*

David got out the bread for Sue, however, Sue organised the rest. David commented on how filling the pizza had been the previous night. David knew exactly what happened in the movie. At 10:00am Sue gave David his two toasted cheese and tomato sandwiches on white bread, which he ate slowly in front of the movie. Sue told David to put some socks on but David said that he could not be bothered to go back upstairs. David finished his breakfast and found it hard to get off the lounge to put away his plate. He said to Sue that he should have had Nesquik [chocolate] cereal.

*David: Hey Mum? You know what I should have had? That Milo cereal stuff. The Nesquik cereal. I can’t have it now, can I?*

*Sue: No you just had breakfast.*

At 10:10am, David asked Sue what they were having for dinner and Sue said spaghetti bolognese. David looked through the DVDs and asked Sue which one she wanted to watch next.

At 10:40am the movie finished and David put on “The Holy Grail” and told Sue that he wanted to get the second and third sequels to “A Man Called Horse”. David laid on the lounge and put a blanket on himself. At 11:30am David got up and got himself an ice block to eat in front of the movie. Sue said that she needed to go to the fruit shop later and they might go for a walk down there. At 11:45am David went upstairs and changed out of his pyjamas. David asked if he could ride to the fruit shop and Sue said yes. Sue told me that Willow Public School gave each family a healthy eating brochure that she had not read yet. She explained that it told you what was in each vegetable and she liked the idea of cutting up potato, sweet potato and parsnip to make chips.

David turned off the DVD as he said he was getting bored with it. As in summer, David said that at weekends he generally sat around the house as there was not much to do and his friends were not close.

*David: My weekends are generally the same. I don't really do much. I just sit around cause there's not much to do. Plus my friends live far away. One lives a street away from the fruit shop and the other one lives a bit of the way up the pass and I don't want to walk there cause it's too far.*

At 12:00pm Sue and I walked to the fruit shop while David rode. David asked Sue if there were still ice creams at the fruit shop because he either wanted an ice cream or a chocolate because it was cheap.

*David: Do they still have ice creams there?*

*Sue: I don't know. Why?*

*David: Cause I want one.*

*Sue: You had one yesterday.*

*David: Yeah I either want that or a chocolate cause I know they have Picnics, Mars Bars, Freddo Frogs and heaps of other things.*

It took David two minutes to ride to the fruit shop and he helped Sue get vegetables, pasta, pumpkin, walnuts and fresh fruit. David asked Sue if he could have a Maxibon ice cream and Sue said yes. David ate this in front of the fruit shop and then rode back home.

As soon as we arrived back home David asked Sue if he could have a Nashi pear and Sue said yes. David said that it was good going to the fruit shop as it meant they got out of the house for a little while. David then wanted to try a passionfruit and got Sue to show him which one was ripe. He said that the only thing he did not like about Nashi pears was the sour part in the middle. Sue ate a banana and said that the other day when she bought almonds she had to tell David not to eat them straight away. David then asked for another passionfruit but Sue said that it was not ripe enough yet. Sue said that they used to dunk rhubarb in sugar and David asked Sue to buy some rhubarb so they could do the same thing. Sue said that they did not get much from the fruit shop for \$30.00 but said it would last them for a little while.

David put on the television and he and Sue sat in front of it. David asked if he could put on a movie and Sue said yes. David got out the movies and let his mum help him choose. They had 50 DVDs and David said that he did not get an allowance but wanted to have money to buy DVDs and Playstation games. David said that they watched “Sister Act 2” the previous day. David chose “Harry Potter and the Goblet of Fire” or “Without a Paddle” and Sue chose “Without a Paddle”. David explained that he would watch the other one later on. Sue said they had been having take-away a little bit lately but would not be anymore.

*David: What did we have for tea last night? Oh yeah, pizza.*

*Sue: I hope you enjoyed it cause we’re going back to no take-away after that. We sort of had the last couple of weeks two nights of take-away a week. It was probably because we hadn’t had it in three months.*

David asked for some Fantaes [chocolate-covered caramels] to eat and Sue said yes. David got a jar of Fantaes and rested them on his lap while he watched the movie. The movie kept skipping and so David went to pick another movie. Sue really wanted to watch “The Colour Purple” but David did not want to. Sue ended up getting upset with David.

*David: What do you want to watch?*

*Sue: “The Colour Purple”.*

*David: No.*

*Sue: Yes.*

*David: No, later.*

*Sue: No.*

*David: Yeah we’ll watch one movie and then you can watch that and I’ll watch a different one upstairs.*

*Sue: You're the kid you know?*

*David: Yeah but I'm just saying.*

*Sue: Yeah you're not acting that way.*

*David: What do you want to watch, "Narnia" or "Forrest Gump"?*

*Sue: You're trying to give me choices when you shouldn't.*

David put on the movie for Sue and he took some other movies upstairs to watch. David ate five Fanta's and then got four more from the jar to take upstairs with him. Sue ate leftover pizza for lunch and David did not have any lunch.

At 4:00pm David came downstairs and told Sue "Ghostbusters" was on television. After Sue's movie finished, David changed the channel to "Ghostbusters". At 4:15pm David asked Sue when dinner would be ready and Sue said not long.

*David: When is dinner ready?*

*Sue: Not long. It's only quarter past four. Are you hungry cause you can smell it?*

*David: Yeah.*

David asked for some almonds and Sue said yes but that was all he was allowed to eat until tea. David ate these from a bowl in front of the television. Sue said that he had had too many nuts as you should only really have a handful.

*David: I'm chewing nine on this side and nine on this side.*

*Sue: You shouldn't even have that many. You're only supposed to have a handful.*

Sue said that she hoped it would be a warm spring as it made you want to get out and do more. David said that he did not like doing too much physical activity in summer as it got too hot. David explained that he did not particularly like beaches or pools and simply enjoyed paddling. David said that Sue never used to take him to the beach and Sue explained that was when she was fat but would take him in summer since she had lost weight. Sue explained that David's guitar teacher had been away for four weeks and wanted to make sure David kept practising, as he was very skilled.

Sue told David that she thought his stomach had shrunk and David agreed but said that he had not lost any weight as he was always weighing himself.

*Sue: Your stomach has shrunk because you haven't been eating as much.*

*David: Yeah I know. My belly's shrunk but I haven't lost any weight.*

*Sue: Oh I don't know. Everyone at footy yesterday was saying that they thought you had. I think you've grown a bit too.*

David said that he loved vegetables and explained that he watched “Hercules” upstairs. At 4:45pm David asked Sue when she would put on the pasta and she said soon. Sue asked David if he was hungry and he said yes. David then asked Sue to put on the pasta and Sue huffed but did so. David changed the channel on the television to “According to Jim” and said that they watched a lot of movies. At 5:10pm David asked Sue if she had put the pasta on yet.

*David: Have you put the noodles on yet?*

*Sue: No I’m waiting for the water to boil first.*

*David: It should be boiled by now.*

*Sue: It hasn’t been that long.*

*David: It’s been ages. It’s boiling now.*

At 5:15pm Sue and David had dinner. David had a very big plate of spaghetti bolognese, which was made with mince and vegetables. They ate in front of the television, with David resting his plate on his lap. Sue said that David should not be hungry after that meal. David put a large amount of Parmesan cheese on his pasta and when he ate it he twirled a large amount of pasta on his fork and dangled it above his head to eat it. David ate most of his pasta first and then his mince and picked up a lot of his pasta with his fingers. Sue talked to David about “Big Brother” and then David started talking about the movies they needed to buy. David finished his dinner quite quickly. Sue said that she put a lot of vegetables in the sauce as it was a good way to disguise the vegetables. Sue said that now that Nathan was not living with them she was able to experiment with foods, for example, she had bought chickpeas and wanted to try cooking polenta.

David had a bath straight after dinner. He asked for some chocolate but Sue said no and he then asked for some ice cream and Sue said yes. David changed the channel to “The Simpsons” and dished himself up a big bowl of chocolate and vanilla ice cream. He ate this in front of “The Simpsons”. David explained that he liked the new “The Simpsons” episodes and enjoyed eating Sustain for breakfast but only sometimes. After he finished his ice cream he put his bowl in the sink and got himself an ice block. He lay on the lounge with a blanket on top of him while he ate his ice block. David, again, found it hard to get up from the lounge. He then watched “Big Brother” while still lying on the lounge. David starting making noises with his mouth. Sue and David talked about what they would buy if they had a lot of money and David said that he would buy Playstation games and a new computer, which had the Internet. *“I would buy Playstation games all the way. Then we’d*

*need to get a new computer and the Internet for my education.” David started to play with some magnets while watching television. David then went and stuck some of his Digimon drawings in his room. After this he watched the rest of “Big Brother” in his room. At 9:00pm David turned off his light and went to sleep.*

#### **4.10.2.3 Day Three (Weekday)**

David got up at 7:20am and put on television to watch cartoons. He prepared a big bowl of Milo cereal and sat the bowl of cereal on the table to allow the cereal to mix in with the milk. David then started eating his cereal with a little spoon on the lounge in front of the cartoons. Sue told me that she was on canteen duty and told David to write out his lunch order. David finished his cereal and drank the milk out of the bowl. David started filling out his lunch order and Sue asked him what he was ordering.

*David: I was going to get four party pies and four chicken strips.*

*Sue: That’s probably a bit much.*

*David: I think that would equal a chicken burger. But then the four chicken strips would be \$2.00 just for that.*

David ended up ordering a packet of honey soy chips, four pikelets and banana milk for recess and a chicken burger and red cordial for lunch. David said that even though he did not order much from the canteen it still cost a lot. *“I haven’t ordered much. It’s only five things but it still costs a lot. It’s like \$6.10.”* David packed a large mandarin for fruit break.

David left for school at 7:55am and did not want to walk with his mum to school, even though she had to go in for canteen. Sue thought that David had become embarrassed by different things and wanted to be more independent.

David said that he had football training the previous day but they did not do as much as they normally did. David stood around talking to two friends before school. Mr Cane said that the children were supposed to have aerobics but were not as they had Basic Skills Testing taking place. David’s class started with Mathematics work in their textbook, focusing on discounts. David found this difficult and sought help from Mr Cane, however, he ended up being one of the first children finished and started reading his book while he waited for the other children to finish their Mathematics. David got most of his Mathematics questions right, whereas many of the other children did not.

At 10:00am the children were told to take out their fruit for fruit break. David got his mandarin out of his bag and showed the other children how big it was. David's knees hit the table under his desk and the chair was too small. David got one question wrong and could not work out why. Mr Cane then did flash card additions and David got two out of three correct.

When the bell rang for recess David pushed past people to leave first, whereas normally he was very polite. He went straight to the canteen and picked up his milk, pikelets and chips and sat down with his friends. David ate his chips and pikelets very quickly while talking to his friends. David had a lot more food than his friends, however, he finished eating well before them. Once his friends had finished they went over to the field and started talking. The boys pretended to fight and they picked on David a lot more as he was the biggest child and therefore the best competition.

When the children arrived back to class they started on their narrative writing in which they had to write a story with an introduction, complication, resolution and coda. David lined up to show Mr Cane his story. Mr Cane said that David had been a lot quieter at the start of the year than he was now. The class then went to computers.

At lunch, David half ran and half hobbled to the canteen. He then sat with his friends to eat his chicken burger and drink his red mineral water. David ate his burger very quickly and when all the boys had finished their lunch they went to play touch football. Alternatively, David went to the canteen and bought a Milo ice cream and a pizza round. He went over to the touch football game and stood around, eating his food while he walked to follow where the play was. All of David's friends were playing touch, however, they did not talk to him.

When David finished his food, he continued to walk to follow the ball. He jogged at one stage to try to tip someone but the person simply ran around David. No one passed David the ball and when he ran he barely lifted his feet. The bell rang to indicate the end of lunch and David's class went to the computer lab and finished their work there. They then finished off their narrative back in the classroom.

David walked home from school and went straight to the fridge to get out a passionfruit. David and Sue talked about the canteen. Sue explained a new initiative the school had to

promote fruit and vegetables was by offering corn on the cob. David asked if they put butter on the corn. He asked if he could make pikelets.

*David: Do we have the ingredients to make pikelets?*

*Sue: I think so.*

*David: Cool.*

*Sue: You're not making them today. You've had enough junk.*

*David: I can make them.*

*Sue: No.*

*David: Yeah.*

*Sue: No.*

*David: Yeah.*

*Sue: We'll see.*

David said that they were having rissoles for dinner and asked how many they would each have.

*David: How many rissoles do we get each?*

*Sue: Two.*

*David: How come there's six there?*

*Sue: I want to freeze some.*

Sue asked David what he did at lunch and David said that he had played touch at lunch and wrestling at recess. *"I played touch and walked around and at recess we played this wrestling game. They all go for me and the only time they can get me is when one person grabs each foot and then someone barges me over."*

David talked about a DVD he wanted to get and looked at the Home Care catalogue. David asked Sue what they were having with the rissoles and Sue said maybe mashed potato. David then talked about the tuna that Sue had bought and then ate a small can on the lounge in front of "Totally Wild". David had a drink of cordial and explained that he liked tuna and enjoyed curried egg sandwiches. When "Totally Wild" finished, David changed the channel to cartoons. He knew exactly which shows were on and pushed off his knee to try to stand up.

David asked Sue if she could start making dinner and Sue then began preparing dinner while David continued to watch his shows. He sat on the lounge clutching a knife and fork. At 5:45pm dinner was ready, consisting of two rissoles, mashed potato, corn and peas. David put tomato sauce on his peas and carrot and ate his vegetables first. They sat on the



lounge to eat their dinner while watching cartoons. David put his mashed potato on his rissoles with some tomato sauce and then ate them. Immediately after he had finished his dinner, David asked for some ice cream and Sue said yes. David dished himself up a big bowl of chocolate and vanilla ice cream and also ate some out of the tub in the kitchen. David then sat on the lounge and ate his ice cream in front of “The Simpsons”. After finishing his ice cream David climbed the stairs one at a time and had a bath. David came back downstairs after his bath and read his new Emily Rodda medieval book in front of “Neighbours”. An hour later David read in bed and then went to sleep.

#### **4.11 A TYPICAL DAY IN THE LIFE OF DAVID WHITE**

6:40am	Wakes up and watches television (cartoons) in bed
7:20am	Gets changed and watches television (cartoons) downstairs
7:30am	Eats breakfast (Nesquik cereal, porridge or toast) in front of television
8:00am	Walks to school
8:10am	Sits on seat and waits for friends to arrive
8:30am	Talks with friends, plays handball or plays bull rush
9:00am	Class
10:00am	Eats an apple for fruit break
10:10am	Class
11:00am	Sits and eats his recess and lunch (Vegemite sandwich and a packet of chips) and then plays handball
11:30 – 1:00pm	Class
1:00 – 1:50pm	Sits with friends while they eat and asks for some of their food. Plays handball, touch football or soccer
1:50 – 3:00pm	Class
3:00pm	Walks home
3:10pm	Sits and talks to Mum on verandah
3:30pm	Has afternoon tea (fruit, a salad, or left over dinner)
3:40pm – 6:00pm	Watches television, talks to his mum, or has football training
6:00pm	Eats dinner (spaghetti bolognese) with Sue in front of “The Simpsons”
6:15pm	Has dessert (ice cream, chocolate or nuts) in front of the television
6:30pm	Has bath
7:00pm	Watches television and reads
8:00pm	Watches television or reads in bed

Number of hours slept: 9

## **4.12 THEMES FOR DAVID WHITE**

### **4.12.1 Dietary Behaviour Factors**

David was from a single-parent family. His mum, Sue, was very slim, however, while David was growing up she was overweight. David's older brother had moved away, however, he had a healthy weight. Sue had adopted a permissive parenting style and did not set firm boundaries around David's behaviours.

David either did not eat breakfast at all or ate a breakfast that was far too large, based on the serving sizes outlined in the Australian Guide to Health Eating (Australian Government Department of Health and Ageing, 1998). Sue was not a good role model as she did not eat breakfast. Sue said she found it difficult thinking of what to pack for David's lunch and what to make for dinner each night. David's lunch content was moderately healthy, however, on the weekend it was far too large. At school David often ate his sandwich at recess and therefore had nothing to eat for lunch and would come home from school feeling hungry. David's between-meal snacks were mainly high-sugar and energy-dense and his after dinner snacks were also often high in sugar. His snack portion sizes at home were far too large but at school were suitable. David always ate unhealthy foods if he had access to them. David did, however, always take fruit for fruit break. David ate out of boredom and often associated watching television with eating. He had access to healthy and unhealthy snacks and even when he did choose the healthy ones, they were far too large to be a snack. He usually took a whole packet or jar of something and ate from it in front of the television. Sue did not set boundaries around David's food intake and he frequently requested food throughout each day and evening.

David's dinner content was often energy-dense and his portion size was larger than an adult's. Most of the time he would finish his dinner and ask for dessert straight away before letting his dinner digest. He usually had cordial with his meals, including breakfast. David asked for dinner early in the afternoon as he was often bored and Sue cooked it early each afternoon to keep him happy.

Sue provided David with choices at each mealtime and when she suggested foods, they were most often unhealthy. Sue encouraged David to try new fruit and vegetables and bought a variety of fresh fruit and vegetables from the fruit market down the road. Sue often tried to include vegetables in all dinners and also encouraged fruit intake. Sue also started her own vegetable patch. David loved fruit and vegetables and used to count his fruit and

vegetable intake, however, he often ate portions that were too large. Sue bought cordial and let David have this with every meal, including in his drink bottle for school. Sue purchased take-away meals or offered McDonalds at times, which increased his intake of unhealthy foods. Sue rarely refused David's requests for food. She often hesitated as she knew he should not eat some of the foods he requested but then let him eat these foods anyway to avoid disappointing him. Sue often looked for different ideas and recipes and tried to gather information on what was good for them.

David ate most of his food very quickly and often requested more food soon after he finished eating. He talked about food quite often and ate all his meals with Sue in front of the television. Sue's dietary patterns were not very healthy as she never ate breakfast and often joked that cigarettes and coffee were her breakfast. She frequently ate a relatively healthy lunch, however, her dinner was usually calorie-rich and her portion size was far too big.

Sue's low socio-economic status restricted what foods she bought, however, she always ensured she used some of her money to buy fresh fruit and vegetables. She only bought items from the supermarket if they were cheap and stopped buying school snacks such as muesli bars because they were too expensive. When she did get a bigger pay, however, she often bought take-away or McDonalds, which made David view these types of foods as treats and foods he favoured. Sue did not keep much food in the house because it was difficult for her to even feed David each day, particularly with the large amount he ate. Sue started getting Chrisco as they were unable to afford different luxuries or treats. Sue hated to waste food and therefore often let David eat leftovers as snacks or for lunch on the weekend. Sue did not work and therefore had plenty of time to prepare food at dinnertime. She did not have much to occupy her time during the day and therefore dinner was often ready early.

Willow Public School encouraged healthy eating by having a daily scheduled "fruit break" where the children had to bring in one serving of fresh fruit or vegetables to eat in class before recess. David always made sure he brought in his fruit for this break and was often very excited by this. Willow Public School followed the NSW Healthy School Canteen Strategy and italicised amber foods (those food items with less nutritional value). While there were a number of green foods available at this canteen, there were also a number of amber and red foods. David was allowed to order his lunch approximately once a month,

which was when Sue was working at the school canteen. He frequently ordered amber and red foods and the orders were far too much food for one child, according to the Australian Guide to Health Eating (Australian Government Department of Health and Ageing, 1998).

#### **4.12.2 Physical Activity Factors**

David had poor perceived physical activity competence, however, he was confident in some activities such as handball and football. At home, David did not participate in many physically exerting activities. He had no one to play with and only played handball against the garage on a few occasions for five minutes and even this was of low intensity and quite boring.

David enjoyed interacting with a range of different people, however, at school he was a lot quieter and seemed unable to be himself completely as he worried about what his peers thought. David had a couple of close friends and was liked by all his peers, however, at times, he was not included in games. His weight prevented him from being involved in certain types of physical activities, which is how many of these children bonded.

Sue and David got along very well and seemed to act more like friends than mother and son. Sue did not have many friends. She did not do much during the day and seemed to enjoy David's company on the weekends and when he returned home from school. This often restricted David in making new friends and spending time with existing friends, as Sue liked it when David was home with her. David also liked spending time with his mum and was happy staying indoors and participating in sedentary activities with her.

Sue was not active at all, very sedentary and smoked a great deal. She did not set a good example for David as she often did not do anything active during the day. Sue did not encourage or participate in physical activity with David. When David asked Sue to participate with him, she made up excuses. Sue used to make David run around the complex, however, this was boring and did not last long, with Sue not participating with him. Sue used to be overweight and would not take David places, however, even after losing weight she was still inactive and lacked energy. Sue enjoyed David's company and therefore did not often tell him to go outside and be active. It was easy for David to be inactive because Sue herself was quite sedentary. Sue's low socio-economic status limited their access to facilities, however, there was an abundance of free local places, including the beach down the road, that they did not utilise as Sue did not often leave their home.

David had one 19-year-old brother, Nathan, who moved out in December 2006. David and Nathan had spent little together due to differing interests and the wide age gap between them.

David had two very close friends who were quite active, with Aiden being slightly overweight. David played in a football team in winter with several friends from school and he occasionally saw his friends at weekends. Because David's school was small, he often spent time with all of the Year 6 boys. He was liked by all of his peers, however, at lunchtimes he was sometimes left out because he was unable to keep up with the activity taking place among the boys. He tried hard to fit in with all of the Year 6 boys.

The Whites lived on a busy road where Sue would only allow David to ride small distances by himself and she did not often take him to the bike track. Sue was aware that she needed to let David out more, however, she was reluctant to do so because she worried about his safety. They had a very small backyard which limited physical activity. They did have a trampoline, however, David did not play on this by himself as he often found it boring. There were a number of elderly people living in the complex who did not like noise. David was only able to play handball as this did not disturb the neighbours. David did not have friends who lived nearby and Sue did not have a car to take him places, making it extremely difficult.

In summer Sue could not afford for David to play football with his friends but she saved up her money so that David could participate in winter. David participated in moderate to high intensity training once a week and the match at the weekend, which he found physically difficult. The coach was very critical and David often became worried he would do something wrong. David walked to school each day, however, this was only 500 metres away.

At school, David's class did aerobics twice a week but it was of a very low intensity and did not involve many locomotor movements. Mr Cane tried to take the children out for sport once a week, however, often other school-related activities took precedence. At recess and lunch, students at Willow School had a large amount of time dedicated specifically to sitting and eating, limiting the time available for participation in physical activity. At recess and lunch, David participated in the activities the other Year 6 boys were involved in. He enjoyed activities that were of low-intensity, in particular handball. When there were high-

intensity games, however, David did not want to fully participate and would stand in the game but not become actively involved as he could not keep up with the other children. David found locomotor activities difficult and became puffed, tired, red and sweaty far more easily than the other children, limiting the activities that he was able to participate in.

#### **4.12.3 Sedentary Behaviour Factors**

David spent far too much time watching television and movies and often did this to pass time until school, dinner or meals. He regularly read books but this was often with the television on in the background. He spent most of his time in sedentary activities and occasionally participated in more than one at a time.

Sue and David lived in a small townhouse where there was not much room, making it easier to do sedentary activities as opposed to physical activity. David had a television, CD player, computer and Playstation in his room.

Sue had not set a good example for David as she watched many hours of television daily and often spent entire days watching television while David was at school. When both Sue and David were not busy they would spend their time watching television or movies. They knew all the shows that were on television and what time they were on due to the amount of time they spent watching television. Even when David's friends came over to play, instead of participating in physical activity that he was unable to do by himself, they spent the majority of their time in sedentary activities.

David found sedentary activities easy and Sue liked David spending time in these activities as it meant that he was safe and happy. Sue did not set limits or restrictions on any activity and let David do as he pleased as long as he was happy. She let David watch what he wanted and did not set a bedtime for him.

#### **4.12.4 Personal and Social Factors**

David was a very happy, content and talkative child at home. He could be stubborn, at times, as he was used to being able to do what he pleased. David spent time watching movies, which were often suitable for older children. He read age appropriate fiction books on a regular basis and participated in a number of adult conversations with his mother.

David did not like his physical appearance. His weight appeared to have increased from summer to winter and he seemed uncomfortable in his everyday life. He had previously complained of being teased by peers at his school and made comments about being bigger and slower than the other children and hoped this would improve before he went to high school. David had positive peer acceptance self-esteem and was a fairly confident child in a number of other areas, such as scholastic tasks and his behaviour both at home and at school. In reality, while David's behaviour was very good at school, at home he often did as he pleased and usually did not listen to Sue's instructions. Sue tried to please David all the time to make him happy. She thought that as long as he was happy and got what he wanted then she was doing her job effectively. She cooked dinner when he wanted and did not set any rules or restrictions on what he did, as long as he was safe. David was so used to getting his own way that when Sue did not agree to his requests he fought with her until she gave in to him.

David was a very bright student and had excelled in all key learning areas, in particular Mathematics. He used higher order thinking skills in class discussions and when solving problems and Mr Cane had been amazed by his abilities. All of David's past teachers commented on how clever they thought David was. David worked well in class and often finished his work quite quickly, in which case, he would read a book he kept at his desk while he waited for the rest of the class to finish.

David participated in all class discussions and knew the answers to the majority of the questions asked. David concentrated well in class, however, he found it difficult to be motivated to do his homework at home as there were so many other things he enjoyed doing. He could not complete assignments easily at home as he did not have the Internet on the computer or a printer attached.

David got along well with his teacher, Mr Cane, as he had a good sense of humour and joked with the students often. He called David "Blacky" because of his last name and David seemed to enjoy this nickname. It was clearly evident that Mr Cane liked David immensely and said that he was a very nice and polite child. David was very quiet in class, however, Mr Cane stated that he had come out of his shell a great deal during the year as he used to be very shy in class.



#### **4.13 THE DAY-TO-DAY LIFE OF ERIN GREEN**

Erin was a very loud and vibrant child who lived with her mum, Jude, and her step-dad, Andrew. She had long mousey-brown hair, had recently lost one of her front teeth and wore glasses as she was short-sighted. She was an only child, however, she had an eight year-old step-brother, Bryce. They lived in a new area at the back of a different primary school. They lived in a fairly quiet street and had a small, narrow backyard where they kept their pet guinea pigs and rabbit. Erin saw her dad approximately once a year. Jude worked from 9am until 5pm every day and every third Saturday at a Memoriam and Andrew worked as an embalmer at the same place. Jude was Maltese and loved cooking. She was overweight herself and Andrew was also overweight.

Erin attended St Peter's Catholic School and lived approximately 20 minutes from her school. She used to attend the primary school close by but changed schools at the start of 2007, with Jude and Andrew having plans to move. The school had a large concrete area for children to play on but also a number of different grassed areas. Each term, however, certain grades were only allowed to play in certain areas at recess and lunchtime. Erin did not have many friends at school as she was fairly new and none of her classmates lived close-by. A few of Erin's peers were overweight, however, Erin was the biggest child in Year 2. Erin attended an after-school care every afternoon until her mum picked her up after work. The majority of the children at after-school care were slim and active and her best friends there were Ally and Emily. Jude was of a high socio-economic status and enjoyed spending money on high quality foods as well as providing Erin with a number of luxuries, including a double bed and a mobile phone. Erin had a toy room which contained a television and the lounge room also consisted of a large television. Both televisions were connected to pay television.

##### **4.13.1 Summer**

###### **4.13.1.1 Day One (Weekday)**

Erin got up at 7:30am and had a bowlful of Corn Flakes with a small amount of skim milk and a glass of apple juice. She ate fairly slowly with her hands, getting very distracted as she ate. Jude explained that the toy room smelt like chicken because Erin used to hide chips in there and eat them after she had gone to bed.

*Jude: This is the toy room where she lives and we find packets of food stashed and that's why it smells like chicken. It's got a chicken aroma because she likes to steal packets of things when Mum's asleep. One day she said, "Mum you look really*

*tired, why don't you go down for a sleep" and then I realised what she was doing. I thought she's putting me to bed, why? So I pretended to go to bed and that's what she was doing.*

Jude said that they always listen to music in the morning and Erin is in a bad mood if the music is not on. Erin said that she has money to spend at the canteen but Jude told her not to spend it on chips and she could buy an ice block or JJ Noodles. Jude had a cigarette and a coffee outside and explained that she went back to work straight after having Erin and her carers had fed Erin many sweets.

*Jude: When I got her back from that place she was chubby. My sister-in-law's mum used to let her eat whatever. And a lot of it I think. You don't realise until it's like oh my beautiful baby what's happened? Yeah and people were saying to me, "Oh Erin's got fat" and I thought, Oh I don't know.*

Erin has a number of tooth cavities. Jude said that Erin needs to be more active. *"For Erin now I think it's more physical activity. I think she needs to move more."*

Jude kept telling Erin to finish her breakfast and explained that it is always hard getting Erin to school on time because it is far away and it starts earlier than most schools. I drove Erin to school and she explained that she talks a lot at home but not much at school as she is only new to the school and does not know many people. She said that people at the school have called her "fat" and "fatso" and she has told the teacher about these incidents. Erin explained that people stare at her because she is new and fat and does not have very many friends. Erin said that her mum was staying home that day as she was not well but Erin was worried she would eat all the nice food. Erin said that she wonders what is for dinner tonight. *"I wonder what's for my dinner tonight. That's what I always ask Mum. Everyday when Mum comes to pick me up I'm always saying 'Mum what's for dinner?' That's the first question I ever ask."* Erin said that her teacher, Mrs Taylor, was strict sometimes.

When we arrived at school Erin was short of breath from walking to the classroom and said there were too many stairs at the school. Erin started with drama class and when returning back to class she sat on the floor by herself but her teacher, Mrs Taylor, said *"Erin move in closer. You're so far away you can't see the picture."* The class did an assessment task on length. At 9:40am Erin took out her carrot sticks and cucumber sticks and put them on her desk in front of her. The class continued to do a number of activities for their assessment

task. When Erin had to get up from the floor, she found this quite difficult. Erin then started working on number patterns and worked quietly and efficiently.

At 10:00am Mrs Taylor said, *“You can have your Munch and Crunch while you’re there too”* and Erin quickly put her hand into her plastic bag on her desk and started eating her carrot and cucumber sticks that her mum had prepared for her. Only six children in the class had Munch and Crunch. Ten minutes later Mrs Taylor told the children to put anything they had not finished for Munch and Crunch under their desk and save it for recess. Erin took her Mathematics sheet to Mrs Taylor and was told to get an activity sheet.

At 10:15am the children sat on the floor for Mrs Taylor to change the material on the table from green to purple in preparation for the start of Lent. Erin sat next to a boy on the floor and he looked at Erin and then moved to a different spot in the circle. Rachel then sat next to Erin.

Mrs Taylor started to discuss what was special about each person in the class and Erin said, *“I am special because I was the last cousin born.”* At 10:30am the bell rang for recess and Erin ate the rest of her Munch and Crunch while sitting with some girls from her class. Erin told me that she could not play outside as she forgot her hat and the teacher on duty said that Jude was making it hard for Erin by always being late to school and forgetting her hat. Erin stood around for the entire recess. At 10:55am it started to rain and the children were directed to sit undercover.

In class, Erin became distracted while sitting on the floor, listening to the story. The class named the class teddy bear and Erin suggested “Stripey”, however, no one voted for this name and it ended up being called “Kylie”. The children were told to do monster descriptions and Erin raised her hand to answer a number of questions about adjectives. The class wrote a joint description about a monster and Erin stretched her legs out on the floor. Mrs Taylor reminded Erin to put on her glasses.

Erin’s reading group listened to a story at the listening post with headphones on. They were then told to do shared reading and everyone in the class chose a partner except Erin. Erin ended up reading to me instead.

At lunch, Erin sat with a group of girls and ate one piece of bread with Vegemite and butter and then walked around by herself and ate a packet of flavoured rice crackers. Erin followed some girls from her class around but then they ran off and so she walked around by herself. Erin then tried to find other people to play with but ended up swinging around a pole by herself.

After lunch, the class had news and Erin put her hand up after each new item to ask a question but was not chosen. In groups of three, children were told to brainstorm why we need transport. Erin was put in a group with Olivia and Thomas. Mrs Taylor asked each group to share their ideas and Erin danced her way to the floor. Erin put her hand up and answered a number of questions asked about transport. Erin held her drink bottle in her hands and said that she was trying to drink two bottles of water each day.

The bell rang and Erin usually attends after-school care but because Jude was home sick that day she got a lift home with me. Erin explained that she wanted to get a dog when they moved. She said that she was very hungry and sometimes she imagines that she is eating food but she normally accidentally bites her tongue.

*Erin: I'm really hungry. Sometimes I imagine there's something, when I'm really hungry I sometimes feel like there's something in my mouth to eat when I'm starving. I really really try and bite it and I usually bite my tongue. I usually imagine there's something in my mouth and I go, "Oh this tastes beautiful" and there's nothing there.*

She said that her favourite foods are chips, fish and chips, chicken and Thai noodles. Erin said that they have Munch and Crunch at school everyday. *"We do it everyday. You don't have to bring it in but you can if you want to. And I usually want something to eat before recess."* Erin said they go out to restaurants and cafes a lot on the weekend.

When Erin arrived home, she asked her mum what she could eat. She saw a chocolate slice that her mum brought in and ate a corner of it. Jude got upset because she had bought it for Andrew but Erin did not care.

*Erin: What's there to eat? I'm hungry.*

*Erin: Mummy what can I have to eat?*

*Jude: I've chopped up some watermelon in there.*

*Erin: I don't want watermelon.*

*Jude: Well I do. It's nice and cool. What are you after? Erin!*

*Erin: Something. Something.*

*Jude: What? What do you want?*

*Erin: I don't know. What is there?*

*Jude: Macadamias.*

*Erin: I don't like macca nuts. I like Maccas though.*

*Jude: The watermelon's nicer. Look.*

*Erin: I don't want watermelon.*

*Jude: All right well you can have this or nothing.*

*Erin: No.*

*Jude: Come out of the cupboard now.*

*Erin: Fine I won't have anything.*

*Jude: Well good.*

Erin picked up a plate of chocolates from the coffee table and said that she wanted one. Jude explained, *"You won't like them cause one has alcohol in it and the other is Turkish delight. You'll like the peanut brittle but you can only have it after you eat two bits of watermelon, if you still feel like it."* Erin ate two pieces of watermelon and then got a chocolate to eat. Erin told me that she has pay television in her playroom and usually watches the Disney channel or Nickelodeon. Alternatively she would watch "ABC Kids" on normal television. Erin said she could watch television in the morning after she is ready and in the afternoon.

Erin asked Jude what was for dinner and Erin complained about the salad.

*Erin: What's for tea?*

*Jude: Spaghetti, salad and meat.*

*Erin: Oh salad. Yuk.*

*Jude: You have to have the salad so you get to have the nice stuff.*

Jude said that she could not have a coffee without having a chocolate or something sweet with it. *"How can you deny coffee and chocolate? It's the perfect match. We're naughty aren't we Erin? It's no wonder we're like this. We love it all too much."*

At 4:00pm Erin had a bath and then showed me some of her dance moves. Jude explained that she loves feeding people and maybe that is why Erin has problems with her weight as she wants to feed Erin all the time. *"That's probably why she's like that. I'm a feeder. I am. It's part of how I've been raised, it's part of my ethnicity. That's part of being a good mum is to feed them."* Erin sang and danced in her room and showed me her CDs, toys and

make-up. Erin and I then fed and played with the guinea pigs and rabbit. Jude and Erin got excited when they realised that Andrew would be at billiards tonight. Jude said that Andrew is different and that is why she likes him so much. Jude said that she and Erin enjoy their time together a lot.

*Jude: Andrew won't be home tonight. He's playing billiards.*

*Erin: Ah ha, oh yeah.*

*Jude: Horah! We love it. We like our nights by ourselves don't we Erin?*

*Erin: Yeah cause I can say I want that, I want this. He doesn't like shouting.*

Erin started to play on her Gameboy. Jude and Erin showed me their turtles and Jude explained that they are a lot bigger than they should be at their age because they feed them so well. Jude said, *"They're a product of their environment. The environment where I feed them too much. Same with Erin, she's a product of her environment. I feed them out of love though, that's my excuse."* Erin began watching the Disney channel on the pay television and Jude explained that one child is enough for her. Erin said that she does not get lonely: *"As long as I have TV and games I'm fine."* Erin sang to the television show. Erin yelled out to Jude, *"When's dinner going to be ready? I'm hungry."* Jude offered Erin some food even though she said it would only be ten minutes. Erin said that she has a fat bottom.

Jude went out to buy some cigarettes and Erin offered me a chocolate. Erin said that she wanted one and looked at them all. Dinner was served at 6:40pm. Jude asked Erin if she wanted salad and when Erin said no Jude told her she had to have some. Erin ate a piece of bruschetta and then spaghetti bolognese and a tiny amount of salad. She then served herself more spaghetti bolognese and ate another piece of bruschetta. Erin had two glasses of lemonade. Jude wanted to put red wine in it but Erin got angry and refused to have it in there. Erin asked Jude if there was any dessert and Jude explained that she had not made any.

*Erin: Is there dessert?*

*Jude: No.*

*Erin: Good.*

*Jude: It's a no dessert night.*

*Erin: I love dessert. I have it sometimes.*

*Jude: No you expect it every night.*

Erin explained, *"I'm allowed to have bad stuff every now and again. But just not all the time."* There was a lot of leftover dinner and Jude said that she always cooks too much food. *"I think I should have had six children so I could feed them all. We've always got so many leftovers,"* Jude explained, *"Erin loves every type of food. She eats bad food but she eats a lot of good food too."* Straight after dinner, Erin went to watch the pay television in the toy room. Jude said that she was glad that Erin eats good adult food and explained:

*Jude: Food is great. I love it. We eat too much. We love food in our house. I won't deny that. I think we've all been brought up like that. You know what I mean? She loves it all too. I'm a wog, I love to cook. She eats normal food, adult food and I love it. I don't know whether it's the amount or what really.*

Erin came out of the toy room at 7:30pm and started dancing around the living room. Jude said that Erin did not want to put in her lunch order at the school canteen that day as Erin knew that chicken nuggets and chocolate milk were unhealthy. Erin read to me and became very energetic and jumped up and down on the lounge. At 8:00pm Jude told Erin to go to bed and Erin drank three glasses of apple juice before going to bed.

*Erin: I want a drink please.*

*Jude: What do you want tonight?*

*Erin: Pub Squash.*

*Jude: I don't think so.*

*Erin: Lemon squash.*

*Jude: You're not allowed to have that before bed.*

*Erin: I have twice before.*

*Jude: Well those were lucky nights because guess what, you're not having that tonight. Water or apple juice?*

*Erin: Apple juice.*

Jude told Erin to hurry up and get into bed and she finally did. Erin explained that Bryce stays over a couple of nights during the week and they do not get along very well.

Jude said, *"Erin's very loud and he is very quiet."*

#### **4.13.1.2 Day Two (Weekday)**

Erin got up at 7:20am, dressed, then came into the lounge room and sat on the massage chair. The music was on again that day in the background. Erin explained that breakfast is the most important meal of the day. Jude said she bought some fibre powder as she was worried that Erin was not getting enough fibre. Erin said that she usually has normal milk;

she would sometimes have skim milk but does not particularly like it. At 7:40am Erin played her Gameboy and talked to me about the movie "Happy Feet". Jude prepared Erin Crunchy Nut Corn Flakes with a small amount of milk for breakfast and a glass of apple juice. Erin told me that she had berry crumble for dessert the previous night. *"I didn't get any ice cream last night. No I didn't have any. I had crumbly pie."* Erin became very distracted while eating breakfast and when Jude told her to get moving she started to shove Corn Flakes in her mouth very quickly.

On Tuesday nights Jude and Andrew usually go to dinner and the movies by themselves and Andrew's mum comes to mind Erin. She usually cooks fish and chips. Erin's breakfast eating was interrupted this morning as she had to do other things in between eating, including doing her hair and washing her face, as she was rushed again this morning. Erin ate with her hands a lot this morning again. She finished her Corn Flakes and then drank her milk from the bowl. When she finished she said, *"Mmm that was yum."* Jude told me that she does not realise what bad manners Erin has until there is someone else around.

Erin and I left for school and I drove her again. Erin told me that she does not like vegetables.

*Lauren: Do you like vegetables?*

*Erin: Well no one does. Mum makes me eat all mine.*

Erin explained that she does not like sport because running makes her legs sore. Erin said that for recess the previous day she had cookies and a bottle of pub squash. Erin said that she did not do anything on the weekend, as Jude had to clean the house. She said she went on the computer and looked up kids' shows on the Internet. Erin puffed a lot as she walked into school. Erin was late again that day and Mrs Taylor was waiting at the door for her as the class was doing an in-class exam. Erin said that she forgot her library bag. The class began a Mathematics sheet but Erin realised that she was away when the class completed the sheet. Erin told Mrs Taylor this and she replied, *"I told you to draw them if you were away."* Erin went over to Mrs Taylor and said that she did not understand the work. Erin ended up being one of the first to finish the Mathematics task and a girl asked Erin to be her partner in the dice game. They started to play this game on the floor.

At 9:30am the class was told to sit on the floor and that they could bring their Munch and Crunch. Erin did not have any but was very interested in what everyone else was having. Mrs Taylor asked many Mathematics questions and Erin put up her hand every time to



answer these. Erin was chosen to stand in the middle of the circle with some other children and Mrs Taylor told them to make groups of two. Erin quickly grabbed another girl. The class then played celebrity heads with numbers. Erin's shorts were too small for her and she was continually pulling these out of her bottom.

The children were told to get their hat and recess from their bag before they went to gymnastics. Erin played with Olivia until the other Year 2 class arrived. First they did some individual and partner stretching, which Erin did with Olivia. Erin got into trouble for not listening twice. Erin's class had to do obstacles where some children were made into obstacles (trees, bridges and rocks) and children had to run around, under or over them. Erin had a turn at being each obstacle. She was unable to hold herself up in the shape of a V with her hands and feet on the floor and fell over. When Erin had her turn to go over the rocks she overbalanced and fell over. Erin was very puffed even though this activity did not involve much movement.

Erin's class then rotated to the next activity, which involved practising jumping, landing, star jumps and quarter turns. Erin was put on the same side as Olivia and they hugged each other. When Erin did a star jump she almost fell over when she landed.

At recess, Erin took her cheese dip outside and sat undercover with some children from her class and ate it. She licked the cheese from her container. The play bell rang and Erin remained sitting licking her container. Erin sat with Olivia until she finished eating. Erin asked a friend if she could have a chip and she gave her one. Erin then begged for another one and the girl ended up sharing all her chips with Erin. Erin stood around with two friends talking and she remained doing so even when the teacher on duty told the children to have a run around. Erin then sat on the ground by herself.

Back in class, Erin did silent reading and Mrs Taylor then read "How does my bike work?" Erin sat up the back and was not paying attention. Mrs Taylor asked Erin to move into the middle. Mrs Taylor asked children what happens to your voice when you ask a question and Erin answered, "*It goes up.*" Mrs Taylor told Erin to put her name on the "happy side" and she did. Children then had to write a recount of what happened in gymnastics and when Erin put up her hand and said she did not have her library bag Mrs Taylor said she was not interested. Erin was one of the first to finish her recount.

Erin was the second child to tell her news. She showed her tiny instrument and turned the lever so everyone could hear the music. Erin looked down when she spoke to the class. The class then went on with independent reading and Erin took a long time to select a book. She read at her desk even though most people sat on the floor to read. Mrs Taylor told the class to begin partner reading and Erin was paired with Chloe. They took a long time to decide where to sit and when they finally sat Erin started to read to Chloe. Mrs Taylor told the children to swap who read out but then realised they did not have time to swap over.

During lunch, Erin drank her orange juice and then pulled out a number of items from her lunchbox. She ate a small yoghurt very quickly and then ate a chocolate and marshmallow biscuit. She then ate a small chocolate and a peeled carrot. Finally Erin began to eat half a ham and butter sandwich. Erin walked around for five minutes by herself and then ran over to some girls from her class, however, they did not involve her in their activity. Erin wandered around by herself again and then attempted to involve herself with some other girls but they walked off. Erin asked for a girl's chip and she gave one to Erin. Erin pretended there was a spider on her back and told a group of girls to get it off. They ignored her and walked away.

Erin sat next to Olivia in library. The librarian told children to get into pairs and Erin asked Olivia but she was not ready so she asked another girl. When Olivia was ready she got mad at Erin as she had asked her first, however Erin said, *"Yeah but then I changed my mind."* The librarian split them up, as there were not enough computers anyway. Erin's group did touch-typing.

Erin caught the bus to a community centre in the area for after-school care. Erin quickly washed her hands and asked the instructors what was for afternoon tea. Erin stood near the food preparation area. Children were asked to wash their hands and because Erin had done this before, she ended up being first in line. Erin ate her fruit, Milo, muesli and yoghurt cup at the table with another girl.

Shaun told everyone who wanted to play AFL for Active After School Communities to come downstairs. Erin went straight downstairs but instead of playing AFL she played in the toilets with two other girls, Ally and Jemma. Erin followed Ally and Jemma everywhere and they got into trouble for playing in the toilets. Erin and these two girls went upstairs and watched a Bratz DVD, which was playing. One of the instructors said that when they had

dancing a few weeks in a row, Erin was very involved in that, however, she generally enjoyed the indoor activities more. Most of the children were involved in the AFL downstairs. The instructors explained that they varied the DVDs they have on and what sports they play so that they are not gender-specific and children can try new activities. The instructors told the children that they could go outside and play but Erin did not move. Erin was told to move back from the television as she was sitting too close. Erin's friends lay down on the floor and so Erin did too. Ally got Erin a pillow to lean on.

Posted on the wall for the children to look at was the afternoon tea menu and the program.

The afternoon tea menu read:

- Monday – Chicken noodle soup, water, fruit
- Tuesday – Fruit, yoghurt, Milo and muesli, water, fruit
- Wednesday – Cruskits with cheese and tomato, water and fruit
- Thursday – Egg and lettuce sandwiches, water and fruit
- Friday – Sausage rolls, water and fruit

The program consisted of:

- Monday – Soccer, window painting, board games
- Tuesday – AASC (Active After School Communities), drawing, DVD
- Wednesday – AASC, Scoobies, Lego
- Thursday – Cricket, popstick craft, twister
- Friday – Zoingo boingo, creative craft, stencils

When the DVD finished Erin was the last to move and said, *"I don't want to get up."* She finally got up when she realised she was the only one still sitting there. Erin told Ally to go out onto the equipment with her and they did so for two minutes, then they came back in and coloured Bratz stencils. Erin showed Ally two lollipops that Jude had put in her pencil case. A girl took a texta from Erin and Erin and her friend chased the girl. Erin then started to cry. Jenna, one of the instructors, retrieved the texta and Erin immediately stopped crying. Erin gave the picture she coloured to Ally.

At 5:30pm Jude came to collect Erin. When they arrived home Andrew left for snooker and Erin started playing a spelling game on her Barbie laptop. Jude showed me some apple chips she bought at the corner shop and explained, *"They're a good alternative."*

Erin and I went to feed the guinea pigs and she showed me their new baby guinea pigs. After feeding the animals Jude told Erin to have a bath and that dinner would be ready after that. Erin tried to do a handstand but overbalanced. She told Jude that dinner smelt nice. Erin complained about having a bath but did so anyway.

Jude made ravioli, a garden salad and crusty bread, buttered thickly. Erin got out of the bath and showed me her new pyjamas. She explained that Jude had to undo the tie as they were so tight she could not get them on. Erin sat down in the massage chair and said, *"Where you don't have much fat it pushes on it."* Erin then started playing an addition game on her laptop before Jude asked her to set the table which she did. Erin asked if she could have skim milk with her dinner and Jude told her to just have apple juice. Jude told Erin that she wanted to have dinner in the lounge room so she could watch the news. Erin set the table and then Jude gave her a piece of bread to eat while she finished cooking. Jude told Erin to get herself a beanbag to sit on and Erin said that she could not as she was too hungry.

Jude gave Erin a plate of ravioli and told her to guess what was inside.

*Jude: Inside these, tell me what you think it is?*

*Erin: Bacon.*

*Jude: No.*

*Erin: Meat.*

*Jude: No.*

*Erin: I'll bite into it. Yum it's cheesy.*

*Jude: Yeah that's right, it's got cheese.*

*Erin: Mmm.*

Jude sat the plates of salad and bread between her and Erin and said that she had not bought the cheese ravioli before and it is *"heaps better than the meat one."* Jude and Erin sat at the coffee table in front of the television to eat and Jude explained that they were able to do that as Andrew was not home. Jude said that she enjoyed the dinner and they would have that again. They watched a news item where a couple ate McDonalds everyday for lunch and Erin explained that she only had it every now and again.

Erin liked the cheese ravioli and took a piece of bread with butter and licked all the butter off. Jude told her not to eat it like that but she continued doing so. Erin then put some ravioli pieces on her bread and folded it over, eating it like a sandwich. She then grabbed another piece of bread and licked the butter off, with Jude again telling her not to. Jude said

that if Erin could heat up food at school she would have given it to her for lunch the next day. Jude told Erin to eat another piece of cucumber while she served another plate of ravioli for herself. Erin ended up eating two pieces of cucumber. Erin was upset that Jude was allowed to have seconds.

*Erin: You've got seconds. That's not fair.*

*Jude: It is when I've finished my first plate.*

Throughout her meal Erin got up and did some dances even though Jude told her not to. Jude called Erin her OTT (over the top) child. *"I thought you were going to be a sweet and cute little girl but instead I got a drama queen."* Erin said she was full and Jude told her not to eat her bread then but she said that she wanted to eat it. Erin asked if she could have a chocolate, however, Jude said that she had a lot to eat at dinner.

*Erin: Can I have one of those Tim Tam [chocolate biscuit] things?*

*Jude: You had heaps to eat for dinner.*

*Erin: Yeah but that was dinner. Please?*

*Jude: No.*

*Erin: You let me have one last night. Why can't I have one tonight?*

*Jude: You just can't.*

*Erin: Just let me.*

*Jude: No.*

*Erin: Let me.*

*Jude: No. You can go to bed then.*

*Erin: No I want one.*

*Jude: No I will smack you.*

Erin brought her laptop into the lounge room and started playing. Jude talked about how she had made pizza the other night on Lebanese bread.

*Jude: With pizzas, you always put the tomato stuff on first and then cheese on top of that and put whatever you want on top and then put cheese again. I put oil on the base too. I put oil on everything, just a bit.*

Jude explained how much she loves food and how she indulges herself and her whole family as she wanted them to taste everything. *"I love food. I love it. I think our problem is that we indulge in everything and Erin knows food so well now."* Jude said that food is a very big part of her life and this rubs off on Erin. Jude told me that Andrew said to her the

previous night that Jude provided Erin with too many choices because when Erin asked for something else to eat for dinner Jude often gave it to her. Jude explained that she cut up the salad to put in front of Erin otherwise she would not eat it. She said that Erin ate two pieces of cucumber that evening and she was happy with that. Jude stated that if she organised four good dinners a week then that would be a very good effort on her behalf. Jude told Erin to pull down her t-shirt and said to me that *“she’s showing her six-pack.”*

Jude brought out Erin’s home reader for her to read to me. She read five pages and read a lot of words incorrectly, which frustrated her and she did not want to continue reading.

*Erin: They asked someone to look after their plants while they were away. And rub*

*Lauren: No.*

*Erin: And rubbish.*

*Lauren: Good try.*

*Erin: The rhubarb.*

*Lauren: The ruby.*

*Erin: No it doesn’t say that because it has a u.*

*Lauren: It’s ruby. It changes the sound.*

Erin then started playing on her laptop again. Jude told me that she always puts on weight in summer and loses it in winter. *“It’s probably due to my alcohol consumption in summer and for me it’s more of a social thing. I don’t eat that different in winter than I do in summer. I think it’s the grog and canapés and cheese.”*

At 8:05pm Jude told Erin that she had to go to bed and she did so almost straight away. When in bed, Erin told me that a boy in her class liked her. Erin said that the previous morning Jude brought Erin breakfast in bed.

*Erin: Mum came in my room with my breakfast and I smelt mango, I smelt the toast, I smelt the hot chocolate and then I woke up and said gimme gimme.*

*Jude: Yeah she wouldn’t get out of bed so I brought it in.*

*Erin: You have to wake me up by letting me smell my breakfast.*

*Jude: It’s not breakfast time. Do you want me to do it again in the morning?*

*Erin: Yes!*

*Jude: All right. If you’re quiet tonight then I’ll think about it.*

Jude got Erin a glass of apple juice to put beside her bed.

#### **4.13.1.3 Day Three (Weekend Day)**

Erin got up at 7:50am and started watching cartoons on pay television. She showed me some of her baby guinea pigs and told me that Andrew was in Jakarta at the moment where he had to identify bodies and bring them back from the plane crash. Jude had been cleaning the house all morning. Erin asked Jude what was for dinner but then explained that she had not even had breakfast yet. Erin told me she wanted biscuits for breakfast but Jude would not let her. Erin started to skip and got tired and breathless after 20 seconds. Erin told me that they had pizza for dinner the previous night. Jude stopped cleaning and asked Erin what she wanted to do that day.

*Jude: What do you want to do today Erin? We can do whatever we want.*

*Erin: Anything?*

*Jude: Yeah what do you want to do?*

*Erin: Stay at home and eat and watch movies.*

*Jude: It's such a nice day. You don't want to watch movies all day.*

*Erin: Yeah watch videos and eat popcorn.*

*Jude: I've always wanted to try rock climbing.*

*Erin: Rock climbing! Rock climbing, YEAH! Can we go rock climbing.*

*Jude: I'll give them a ring.*

Erin said that she was hungry and told Jude to “*make my breakfast*” but Jude told her to make her own breakfast that morning. Erin got the Crunchy Nut Corn Flakes out of the cupboard but told Jude to pour it as she was only using a small bowl. Erin started eating her breakfast on the lounge in front of the television, however, Jude told her to sit down at the table and she did.

Jude asked Erin what she thought about going to Hangdog but Erin ignored her as she was concentrating on the television. Erin ate her Corn Flakes with her fingers. Jude said that she needed to vacuum before they left and Erin could help but Erin said no. Jude started making a grocery shopping list and asked Erin what they needed. Erin kicked her toe on the table and got mad at Jude for not showing any sympathy.

*Erin: I just hurt my toe bad.*

*Jude: Should we call an ambulance?*

*Erin: Don't.*

*Jude: No I mean it. If it's bad we better call an ambulance.*

*Erin: I'll shove this money down your throat.*

Erin started licking her bowl even after Jude told her not to. Jude told her that she wanted Erin to sit at the table to eat. *"Fair dinkum Erin. You're supposed to be sitting down at your chair. Can you be any more feral?"* Jude said that they would not go rock climbing if she did it again, however, she continued to do it. Jude said that when she had a baby she did not think her girl would be as over-the-top as Erin.

Erin finished her breakfast and started playing with the craft she had made at after-school care. Erin asked Jude when they could go. Erin told Jude that she was still hungry.

*Erin: Mum I'm hungry.*

*Jude: You just had breakfast.*

*Erin: I'm still hungry. Can I have some of those plain biscuits?*

*Jude: You can have a pear or some more cereal.*

*Erin: All right I'll have more cereal.*

Erin decided on more cereal and Jude poured her another big bowlful of Crunchy Nut Corn Flakes. Erin sat on the lounge and ate it even when Jude said she would like her to sit at the table. Erin explained that she makes ice blocks with apple juice. Erin said that she really wanted to go rock climbing and when Jude asked why she said because it was something different. Erin skipped with her skipping rope, however, she got frustrated as she could only do a couple in a row before collapsing on the lounge. Erin said that she was hungry and then skipped again but became breathless and got stuck in the rope a number of times. Erin sat on the floor and explained that she had already seen the cartoon that was on and when she tried to get up she found it difficult. Erin put on her "Cheetah Girls" CD in the lounge room player and laid on the lounge and sang to it. Erin started counting the money in her purse, which was change from the canteen, and she said that she usually spent money on chips and ice blocks at the tuck shop. Erin asked Jude when they were going but Jude did not answer. Erin sat on the massage chair and Jude explained that it was so enjoyable being decadent and that was probably why they have weight issues. *"We love it. We live such a decadent life. That's probably why we have problems. That's part of being fat."*

Erin skipped for a little while, however, she became breathless and therefore skipped on and off for a couple of minutes. Jude and I turned the rope for Erin who skipped in the middle. Jude wanted to go and have a shower but Erin told her to keep turning the rope for a little bit and explained that she would not ask again. Jude went to have a shower and Erin explained to me that her tummy kept making noises as she was hungry. *"My belly has been making heaps of noises since breakfast. I'm starving."* Jude was ready and asked Erin what



she wanted to do first and Erin said rock climbing. Jude said that it was almost lunchtime and she did not want Erin to say she was hungry when they arrived at Hangdog.

*Jude: It's almost lunchtime and we'll get there and you'll say I'm hungry and I'm not having a hot dog today. So do you want to have lunch first?*

*Erin: No. After, I can wait. When I'm up really high I'll say "Mum I'm hungry."*

*Jude: Tell me now if you're hungry.*

*Erin: I'm hungry.*

*Jude: Well we'll have lunch first because rock climbing is open late anyway.*

Erin was happy to have lunch at home, however, Jude encouraged Erin to go out for lunch. Erin said that she only liked salad if it had cheese in it. Erin started to draw a picture of a koala and explained that she was very good at screaming and could scream very loudly. Jude said that she liked the top she was wearing because it was flowing and it is good when you are fat like her. Erin sat on the massage chair and Jude tried to get Erin to pack up her pencils but then ended up doing this for her.

We left and Erin asked Jude where they were going for lunch. Jude said wherever she drove. Erin said that she wanted Chinese but Jude said that she did not feel like Chinese. Jude asked Erin to choose between Chillis Restaurant and Harbourfront Restaurant and Erin chose Chillis, however, Jude then decided that she wanted to go to the Harbourfront for something different. Erin got upset and Jude told her not to whinge. Erin and Jude talked about Jude's favourite food. Jude and Erin discussed the food at different places in Wollongong and explained that they eat out quite a bit on the weekend. We arrived at Harbourfront and the waitress asked what we wanted to drink. Erin said a hot chocolate and Jude ordered her a skim hot chocolate and said, *"I don't know what difference that would make."* For lunch Erin wanted chicken nuggets and chips but Jude encouraged her to get the creamy tortellini. Jude ordered an octopus dish with a side of fries. When the hot chocolate was brought out, Erin clapped her hands in excitement and started drinking it straight away. Jude told Erin to make sure that she saved some room for her lunch. Jude ordered garlic bread to start with and when this came out Erin ate a piece. Erin asked Jude for another piece and Jude cut it off for her. Erin had finished her hot chocolate when her lunch came out, however, Erin did not eat much of her lunch as she did not like the bacon in it. Jude tried to encourage Erin to eat some but Erin refused to. Jude told the waitress to put it in a take-away container and she would have it for her lunch the next day. Jude told Erin to eat some chips and she did. Erin asked for an apple juice but Jude said no as she did not want her filling up on drinks when she had not eaten her lunch. Erin ate around 30 chips and told

Jude to hurry up and finish so they could have dessert, however, Jude said they were not having any.

Jude continually told Erin to pull down her shirt as it kept creeping up, however, Erin pulled it up and did a belly dance to embarrass her mum. Jude tried to talk Erin out of going to Hangdog as she did not feel like going and just felt like having a lie-down, however, Erin still really wanted to go. When we arrived at Hangdog, Erin tried one climb but it seemed too hard for her as she could not reach some of the rocks. Erin had to get her harness changed as she said it was hurting her. Jude held the rope for Erin and she constantly yelled at Jude to let her down, however, she did not yell at the worker when they held it and encouraged her to climb higher. Erin tried climbing the ladder but gave up and tried another few climbs on the wall. As we left Jude bought Erin an orange juice and she drank it on the way home. Jude stopped in at Woolworths and Erin said that she wanted to stay in the car as she was too tired and her legs hurt too much to walk around. Erin said that sometimes she would go into the shops with her mum and ask for chips, biscuits and chocolate but Jude usually said no to everything. Erin said that she did not invite friends over or go to friends' houses and said that she did not get lonely and found it peaceful. Erin told Jude that she might have a sleep when she arrived home and Jude said, *"We'll all have a little rest when we get home. It is Sunday after all."*

Erin carried in two shopping bags for Jude and then sat down and started watching pay television one metre away from the screen while wobbling her tooth. Jude bought a lot of fresh fruit and vegetables but also bought a large number of juices and soft drink. Jude asked Erin if she wanted a piece of fruit and said they had lots to choose from. Jude asked Erin if she wanted a green apple and Erin said yes. Jude gave her an apple but told her to sit on the lounge as she was too close to the screen. Erin had a little skip and while her feet did not become tangled in the rope as easily, she still became breathless. Erin said that her legs were very sore. Erin asked what was for dinner but Jude did not answer her. At 5:40pm Jude went to lie down. Erin said that she would spend her tooth fairy money on ice blocks. Erin continued watching television and lay on the lounge. She got up from the lounge and sat one metre away from the television. Erin showed me dance moves, karate kicks and push ups and kept asking if I could do them.

Erin said that she did not play any sports and sometimes swam at the pool down the road but not very often. At 7:00pm Erin said she was hungry, as they had not yet had dinner.

Erin said she could get herself something to eat. Erin continued to complain that she was extremely hungry and ended up looking in the pantry to see what she could eat. *"I'm hungry, I can smell something good. It smells like meat or something. Are you hungry? I'm starving."* At 7:30pm Erin woke up Jude because she was hungry and Jude felt guilty that she had slept for so long. Erin asked if she could have a packet of chips on a sandwich for dinner.

*Erin: Can I have a Pringle sandwich?*

*Jude: You're not having that for dinner thanks. You can have noodles or spaghetti on toast.*

*Erin: I'll have spaghetti on toast.*

Erin ate toast with tinned spaghetti on the side at the table, mainly eating with her hands. Jude told Erin that she was not getting her a drink until she had eaten half of her dinner. Jude went out for a cigarette while Erin ate. Erin licked the last pieces of spaghetti off her plate at 7:50pm. She had a bath and then asked if she could have chocolate milk, explaining, *"I get real Milo in it."* Erin drank her large glass of Milo in one go and asked if she could watch something on the Disney channel.

*Erin: Can I watch something on the Disney channel?*

*Jude: No it's bedtime.*

*Erin: It only goes until 8:30.*

*Jude: No.*

*Erin: I promise I'll get up in the morning.*

*Jude: No you're going to bed.*

Erin skipped for five minutes and then went to bed. Erin had to sleep with Jude as the baby guinea pigs urinated on her bed the night before and Jude had not had a chance to clean it up.

#### **4.13.2 Winter**

Erin's teacher had gone on leave for six weeks and therefore her replacement teacher was Mrs Floris, who was English. Erin still did not have many friends at school.

##### **4.13.2.1 Day One (Weekday)**

Erin got up at 7:20am and had breakfast at the table with the television on in the background. She ate a piece of toast with butter and Vegemite and a glass of full cream

milk. Jude made Erin two pieces of toast but Erin told her that she only wanted one. Erin showed me a pedometer her grandma gave her. It counts the number of steps taken and plays music. Erin told me she had not used it yet. Jude unpacked Erin's bag from the day before and became angry with Erin as there was an apple in there with a tiny bite taken out of it.

*Jude: Oh look what she's done. She does it every day. I buy these small apples because they're \$5.00 for a whole bag and they're small and I think a big piece of fruit can be a bit daunting. You should not do that. I would rather you did not touch the apple.*

*Erin: Okay.*

*Jude: Look at that. Eat it up.*

Jude said that Erin woke up that morning and said that she could not go to the athletics carnival as her legs were too sore.

*Erin: I can't do sports carnival because I have a sore leg.*

*Jude: I feel like staying at home and watching TV.*

*Erin: Me too.*

Jude and I talked about travelling and Jude joked to Erin, saying that she would leave her for a year.

*Jude: All right Erin I'm going to Europe. That's okay isn't it?*

*Erin: No.*

*Jude: You'll be eight and a half by the time I get back.*

*Erin: NO! Okay fine you can go cause then I can eat all the chocolate and anything I want.*

*Jude: Of course. I say I'm going away and the first thing you think of is the food you can have.*

*Erin: Yeah and I'll climb up on the stool and get the chippies from on top of the fridge.*

*Jude: That's typical.*

At 8:05am Erin and I left for school and Erin said that she was not looking forward to the athletics carnival. Erin said she was excited because Jude packed her some treats to eat including lollies, a packet of popcorn and then the usual apple, carrot, and Vegemite and butter sandwich.

*Lauren: How come you get a food treat today?*

*Erin: Because it's the sports carnival.*

*Lauren: What else do you have for lunch today?*

*Erin: Bickies, apple, popcorn, and jelly babies are my treat. I have a Vegemite sandwich too.*

Erin ate her jelly babies on the bus and at Beaton Park she sat by herself in the grandstand. Erin then moved next to Chloe and talked to her and showed all the people around her the food she had. Children had to opt to go in the 200-metre and 800-metre races but Erin did not, even though most children did. Erin drank her blackcurrant juice. Many parents had come to the carnival to support their children. Erin explained that when they had the cross country she came last and had to walk the entire course.

The tabloids started and Erin's age group began with the 100-metre run, which Erin was worried about. She did not lift her legs very high and swung her arms fairly straight and came 10th out of 11 children. In the long jump Erin's run-up was very slow and she therefore was unable to jump far. In shot put Erin sat by herself in the line, as usual, and scored one point out of a possible three, while the majority of the children scored two points. Erin said that she did not want to have to go to after-school care as her friend Ally had been a bit of a bully to her.

The next activity was ball games. Erin did not pay attention to any of the demonstrations and got into trouble from the teacher a number of times. In Captain Ball, Erin caught the ball but threw it back very hard and the girl at the front dropped it. When it was Erin's turn out the front she threw the balls so hard that most of the children could not catch them. In Tunnel Ball, Erin did not keep her legs wide enough apart and the ball continued to get stuck between her legs.

At 12:15pm the children had lunch and Erin ate her sandwich and then her carrot fairly slowly by herself in the grandstand. Erin's group then participated in the relay and Erin ran fairly fast, lifting her legs a lot higher than in her 100-metre sprint. In discus, Erin did not understand how to throw it, however, ended up getting two points out of a possible three. Erin kept looking at her pedometer. During high jump, Erin attempted a very small jump, however, when she had to jump onto a thick mat she could not make it onto the mat as she was unable to lift her legs high enough.

Mrs Floris explained that she thought Erin was one of the brightest students in the class and that her Literacy and Mathematics skills were very advanced.

Erin sat by herself on the bus back to school. She went straight to after-school care and was told to go downstairs at the centre as the Active After School Communities were there. Erin said, *"I'm not doing the activity because you don't have to and plus my legs are really sore."* Erin sat with two other girls and they practised a dance but were then told that if they were not participating they had to sit down. Erin and another girl went to the toilet and were in there for 10 minutes. Only 10 out of the 50 children did not participate in the hockey game. Erin and her friend were told to leave the toilet and they sat on the side of the court. Erin said that she had some friends at school but had more friends at a different school as they go to after-school care. An after-school care worker tried to encourage Erin and her friends to play hockey and Erin's friends played but Erin remained sitting against the wall by herself. Erin started talking to another girl.

The children then went upstairs and had their afternoon tea, which was two rice cakes with butter, cheese and devon. Erin sat on the floor to eat it. The menu and program for the week was displayed on the wall. The menu included:

- Monday 23/7/07 – Sandwiches with spreads, water and fruit
- Tuesday 24/7/07 – Rice crackers with cheese and devon, water and fruit
- Wednesday 25/7/07 – Fruit, custard with Milo or muesli, water and fruit
- Thursday 26/7/07 – Oatmeal biscuits, milk or water and fruit
- Friday 27/7/07 – Cheese on toast with milk and Milo, water and fruit

The program consisted of:

- Monday 23/7/07 – Zoingo boingo, paper bag kites, drawing
- Tuesday 24/7/07 – Active After-School Communities (AASC), puzzles/free drawing, dress-ups
- Wednesday 25/7/07 – AASC, French knitting, DVD
- Thursday 26/7/07 – Cricket, creative craft, DVD
- Friday 27/7/07 – Free outdoor play, plaster moulds, chalk board drawings

Erin went outside and stood around in the playground with her friends. Erin and her friends played hide and seek. Another girl asked if they could play with them and Ally said no. Erin only played with Emily and Ally. Erin went to see what movie was playing. She continued to swing her hips and say, *"shake your bo-dy."* Erin went to watch the movie for a while

and then tried to find where Ally was playing. She followed Ally to watch “Ratatouille”. Emily gave Erin a friendship necklace to keep.

At 5:40pm Jude came to pick up Erin and she was the second last child to be picked up. Jude let Erin finish her game of poison letter with the other children. Erin told Jude that she came seventh in her running race. When we left, Erin came home with me but forgot to ask Jude what they were having for dinner and seemed upset about this. Erin said that she was hungry. She explained that she has a Tamagotchi and her friends all play with them together. Erin said they had pizza for dinner from either Dominos or Pizza Hut the previous night. When we arrived home, Jude asked Erin if she wanted an egg with her vegetables because she knew Erin would not eat the chicken or meat they were having with it. Erin said that she wanted noodles but Jude said no. Erin said that she only wanted an egg if she could have “soldiers” with it and Jude agreed to this. Erin stated that Jude never lets her have noodles.

Jude told Erin to get her bag out of Jude’s car but Erin threw a tantrum and said she was tired and did not want to get it out.

*Erin: Where’s my bag?*

*Jude: Oh it’s still in my car. Go and grab it.*

*Erin: No.*

*Jude: No please go and get your bag.*

*Erin: No my feet are sore.*

*Jude: Go. My feet are sore too. Erin, get your bag.*

*Erin: No.*

Erin had a bath and Jude explained that Erin had become a lot more concerned about her body and she would no longer let anyone see her in the bath.

At 6:45pm dinner was ready and Erin told Jude she did not want any broccoli so Jude did not give her any. Erin had a soft-boiled egg in an egg cup and vegetables including potatoes, carrot, corn, asparagus and brussel sprouts with a cheese sauce on them. Jude asked Erin what she wanted to drink and she replied that she wanted apple juice. Erin got upset because Jude did not make her any bread soldiers and told her to make her some. Erin ate most of her vegetables and then asked for more potato but Jude and Andrew told her to eat all her vegetables and then she could have two more. She ate all her vegetables and was

given two more potatoes. She then asked for a piece of bread but Jude told her that she had to choose between the bread and the remaining potato.

*Jude: You can have the potato or the bread.*

*Erin: Oh but I really want that potato and I can't eat the egg without the bread. Half a piece of bread?*

*Jude: A quarter.*

*Erin: How much is a quarter?*

*Jude: Enough.*

*Erin: Enough to get all the egg out? Don't believe ya. I'll have the potato. I'm picking the potato because it's nice. It's nice with sauce.*

Jude made Erin eat two more spoonfuls of egg.

*Erin: I didn't get my soldiers.*

*Jude: Have two more spoonfuls.*

*Erin: I can't eat it without the soldiers.*

*Jude: One. Make it a good one.*

*Erin: NO. No more.*

*Jude: Yes two more.*

Erin said her favourite vegetable was potato. Erin said that her stomach got caught on the table. *"Oh I got this caught on my big fat bo-dy."*

After dinner Erin started acting silly and doing "pop-offs" as she had done every day and both Jude and Andrew became annoyed with her. Erin said that she had completed 6540 steps that day. Jude told Erin to give her a kiss and Erin licked Jude's face. *"That was lovely. That's really foul. You're not supposed to leave that much slobber on someone."* Jude told Erin that it was almost time for bed and she got upset as she knew that I would not be there the next day. *"Oh but that means Lauren will have to go and won't be here in the morning."* Andrew told Erin that he was getting cranky with her and she replied:

*Erin: Who cares?*

*Andrew: You'll care.*

*Erin: No I won't.*

At 7:50pm Erin went to bed.

#### **4.13.2.2 Day Two (Week Day)**

Erin stayed at her grandma's the previous night as Jude was sick and I was therefore unable to observe Erin in the morning. She explained that she got up at 7:00am and watched



cartoons. She ate two pieces of toast with strawberry jam and a glass of milk in front of the television. Erin's grandma gave her money for the canteen for recess and packed her a Vegemite sandwich for lunch.

Erin's grandma dropped her off at school at 8:25am. Erin now sat at the back of the classroom next to Bailey. Children began working with blocks to try and make number sentences. Erin tried to work with Bailey but he did not want to work with her. The class was a lot noisier than when Mrs Taylor taught, however, Erin worked well on this task. She kept yawning and resting her head on her hands. Mrs Floris asked Erin to show Bailey how to do some of the work and Erin did so. The class shared their number sentences, however, Erin kept working. She was not paying attention to Mrs Floris and Mrs Floris ended up telling Erin to put down her pencil and listen. Mrs Floris explained a new Mathematics game called "Roll the Die" and Erin was told to work with Bailey. Erin tried to talk to Bailey but he did not talk to her. About 10 minutes later Erin and Bailey were in trouble from Mrs Floris for talking. When Mrs Floris asked the class how many 10s there were in 36 the entire class got the question wrong except for Erin.

At 9:40am Mrs Floris told the class that it was time for Munch and Crunch but Erin did not have anything to eat. Mrs Floris ate strawberries while the class worked. Erin continued talking to Bailey. Mrs Floris wrote a number of words on the board where the class had to apply the rule "drop the 'e' and add 'ing'". Erin finished this task quickly and got a book to read for silent reading. The class shared their sentences and Erin was spoken to for not listening. In summer, Mrs Taylor did not reprimand Erin once. During shared news Erin sat next to a girl, however, the girl moved away from her. Mia showed her Tamagotchi for news and Erin said she had a Tamagotchi in her bag. Erin was chosen to ask Mia a question about her Tamagotchi.

At 10:30am the bell rang for recess and Erin got her purse and hat and waited for some other girls to go to the canteen. Erin lined up at the canteen for five minutes and bought a packet of chicken JJ chips. She started eating them while walking to her playing area. Year 2 had to play in a different grassed area this term. Erin sat down with some other girls from her class and showed them her purse. All of the girls went over to play but Erin stood with Michael from her class. Erin explained that she stayed at her grandma's on Tuesday night when Andrew and Jude went to dinner and the movies and on Wednesday night when Jude was sick. Erin had Wednesday off school as she was sick.

The class did modelled reading and Erin sat right at the front. Erin concentrated well in this story, even though a boy with Asperger's Syndrome was distracting the rest of the class. Erin participated in class discussions related to the book. All of Year 2 was supposed to finish off their athletics activities for sport and then start tabloids the next week but there was no equipment out. There were too many children trying to do sport at the same time so Mrs Floris brought her class back inside and explained they would go out after lunch. The class continued on with their book discussions and Erin was praised for concentrating well.

The class then did handwriting and Erin looked very pale. At lunch Erin sat with a group of girls and ate her Vegemite sandwich and drank her apple juice while talking. They all finished lunch and Erin followed the girls as they walked around talking. Erin's friends then ran off without her and Erin tried to run after them but was the last person to follow and it took her a while to catch them. They talked the rest of lunch.

At 2:00pm Erin's class went out for sport and Erin said, "*I don't want to do any sport.*" The children did a warm-up of running around a grassed area. Erin jogged for 10 seconds and then became breathless and tired and walked the rest of the time. Mrs Floris had to walk with her so she actually did finish the route. The other children had to wait for Erin. The class then played Octopus and Erin stayed on the side so she did not get tipped easily. Erin kept running out of the witches' hats to avoid being tipped. Erin lasted four rounds before people realised she was running up the side. Children then played Stuck in the Mud and Erin did the same thing and ran up the side to avoid being tipped.

Erin caught the bus to after-school care and bought a can of lemon squash from the vending machine in the foyer of the community centre. Erin, Ally and Emily sat down and started playing with the craft that was spread out on the table. Erin drank her soft drink as she started making things with paddle pop sticks, glue, pipe cleaners and furry balls. Other people in the centre were playing handball or skipping outside or watching a DVD. Erin started making a person out of a toilet roll.

The menu (displayed on the wall) for after-school care for the week included:

- Monday 30/7/07 – Sandwiches with spread (honey, jam, cheese spread, Vegemite, peanut butter, Nutella), water and fruit
- Tuesday 31/7/07 – Fruit, Milo, yoghurt and muesli, water and fruit
- Wednesday 1/8/07 – Saos with cheese and devon, water and fruit

- Thursday 2/8/07 – Tuna pasta bake, water and fruit
- Friday 3/8/07 – Nachos, cheese, corn chips with salsa, water and fruit

The displayed program included:

- Monday 30/7/07 – Zoingo boingo, bottle birds, board games
- Tuesday 31/7/07 – AASC, beads, cricket, DVD
- Wednesday 1/8/07 – AASC, stencils, soccer, Lego
- Thursday 2/8/07 – Handball, popstick craft, dress-ups
- Friday 3/8/07 – Equipment, creative craft, puzzles

Afternoon tea was ready but Erin did not realise and continued making her toilet roll person. When she realised she ran and washed her hands and went to the food counter. The workers told her she had to wait until the next batch of tuna bake was ready, however, Ally told Erin that she had one for her. Erin ate it outside with the other children and when the carers said there was enough for seconds, Erin ran inside and got another cup full of tuna bake topped with melted cheese. When she finished this, Erin started to skip with Ally and Emily. Ally came inside and sat on a pile of stacked chairs. Erin did the same thing as Ally and they both got into trouble for doing this. They began their craft again and Erin started bossing Ally and Emily. Erin watched the other two do their craft. Erin and Ally drew on the chalkboard outside, then played with their craft again and started colouring in, all in the space of 15 minutes. Erin did not want to leave until she had finished colouring her picture for me. Erin said that she wondered what Jude was cooking for dinner because she had forgotten to ask that morning.

On the way home Erin said that she did not have many friends at her school as she was only new. She said that she played games against Chloe and Michael by linking their Tamagotchis together. Erin said that they should have pay television at after-school care so that it was not so boring. Erin said that she could watch television some mornings and afternoons.

*Erin: I watch television and Austar [pay television] every day and every night. Every night and in the afternoon and in the morning if I'm allowed to.*

*Lauren: Are you allowed to on school mornings?*

*Erin: Only if I get ready really quickly and Mum's still in the shower. Or if she's still getting ready and I'm dressed then I'm allowed to.*

Erin said that Andrew was playing Snooker that night and she and Jude usually turn the music up loud and dance when he is not home. When we arrived home, Erin asked Jude what was for dinner.

*Erin: What's for dinner? WHAT'S FOR DINNER?*

*Jude: Don't yell Erin.*

*Erin: Well I can smell dinner and I don't know what it is.*

*Jude: Fish and vegetables.*

*Erin: Yuk, vegetables.*

Dinner was ready at 6:00pm as Jude was off sick from work and could get organised earlier. Erin was given a piece of fish, corn on the cob, roasted beetroot, honey carrots and roasted potatoes and a glass of apple juice. She ate at the dinner table with the television on in the background. Erin asked if there were more potatoes.

*Erin: Are there more potatoes?*

*Jude: Yes but you will have to eat your beetroot and carrot first. Try the beetroot.*

*Erin: I have before and I don't like it.*

*Jude: No you haven't.*

*Erin: Fine I will. I just have to have a taste...ewww yuk.*

*Jude: Eat your carrots Gem.*

*Erin: I don't like them. There's too much honey. Are there more potatoes?*

*Jude: Not for you.*

*Erin: Fine, I'll eat my carrots, I don't like it.*

Jude got herself more to eat and Erin asked why she got more. Jude said, "Because I've eaten what I had." After finishing her vegetables Jude gave Erin two more potatoes. Erin ate these and then saw that there were more in the pan.

*Erin: Mum there's more potatoes in the pan.*

*Jude: Yeah you're not having any more.*

*Erin: I love tatoes. I had six.*

Erin said that she ate fruit at after-school care even though she did not eat her apple in her lunchbox. Jude asked Erin if she ate her carrot and she said yes.

Jude told Erin that she could have 15 minutes free time and then she had to have a bath and go to bed. Erin said she wanted 30 minutes and Jude agreed to this. Erin drew in the toy room while she watched a show on pay television. Erin started dancing, yelling and singing and Jude told her that she was a weirdo. Jude said that Erin had to go to bed in 15 minutes

since she stayed up until 9:30pm at her grandma's house the previous night. Erin asked for a Milo before bed and Jude got this for her. Erin continued to dance, sing and be quite rude in the lounge room while Jude and I watched television.

Erin went to bed at 7:15pm but told me she wanted me to stay the night and spend the next day with her. Erin said that she had fat thighs and then drank a glass of apple juice and went to sleep.

Day 3 did not take place due to a serious family issue.

#### **4.14 A TYPICAL DAY IN THE LIFE OF ERIN GREEN**

7:20am	Gets out of bed and gets changed
7:30am	Intersperses eating breakfast (a bowl of Crunchy Nut Corn Flakes with skim milk and apple juice) with getting ready for school
8:10am	Gets lift to school
8:40am	Arrives to class late
10:00am	Munch and Crunch (has carrot sticks, an apple or nothing)
10:10am	Class
10:30am	Eats up to two snacks for recess (cheese dip, yoghurt, carrot or cookies) while sitting with friends from class
11:00am	Class
12:50pm	Eats lunch (half a sandwich with butter and Vegemite as well as up to three snacks, including yoghurt, flavoured crackers, chocolate biscuits or cookies)
1:30pm	Class
2:30pm	Catches bus to after-school care
3:00pm	Sits and eats afternoon tea (chicken pasta bake)
3:10 – 5:30pm	Spends time with two friends talking, doing craft, colouring in, watching a DVD, playing on the equipment and drawing
5:30pm	Jude picks Erin up and drives her home
6:00pm	Watches television, plays on laptop, reads or plays with guinea pigs
6:50pm	Eats dinner (beef lasagne, salad, bread and apple juice) at the table
7:20pm	Has a bath
7:30pm	Watches television, plays on her laptop or reads
8:00pm	Has a drink of apple juice before going to bed

Number of hours slept: 10

#### **4.15 THEMES FOR ERIN GREEN**

##### **4.15.1 Dietary Behaviour Factors**

Erin lived with her mum, Jude and her step-dad, Andrew. Jude was obese herself and Andrew was overweight. Erin's step-brother did not live with them, however, he was also overweight.

Erin's breakfast consisted of a cereal high in sugar. Erin was often running late in the morning and Jude tried to get her ready while she was eating her breakfast, regularly distracting her from her breakfast. Erin usually had an average-sized serving but some mornings complained of still being hungry and was given more.

Erin's lunch content was suitable, however, it usually consisted of half a sandwich, which was too small to satisfy Erin for lunch. She was also given a number of snacks, which she often ate with her lunch to fill her up. Erin's morning, afternoon and after dinner snacks were either high in sugar or energy-dense. Even when Jude did pack her a small piece of fruit, Erin did not often eat it. Her snack portions and the number of snacks were far too large also. Even though Jude was aware of Erin's weight problem she still bought unhealthy snacks for her and kept a bowl of chocolates on the coffee table, which Erin constantly looked at. Erin usually expected dessert after dinner and Jude often made an unhealthy dessert.

Dinner was far too big and usually energy-dense, cooked with very high-fat and rich ingredients, including cream, oil and butter. At times, Jude cooked Erin something different, as she did not always like the foods that Jude made for herself and Andrew.

Even when Jude did make an effort to cook healthy meals, in reality they were not healthy. Erin was often allowed seconds if she ate what was on her plate and was not frequently made to eat a lot of vegetables or salad. Erin drank apple juice with most of her meals and rarely drank water. Jude, Andrew and Erin went out to restaurants and cafés quite regularly on the weekend and Jude often let Erin choose where they went. Erin was often given a choice of what she wanted for most meals. At dinner, Jude usually provided a number of different dishes that Erin could choose from.

Erin displayed few manners when eating. She ate with her hands quite often and would sometimes lick her plate to get a reaction from her mum. Erin usually ate at the kitchen

table with either the television or music on in the background. If Jude felt like eating in front of the television then Erin was also allowed to.

Jude had a love for food, cooking and eating, which has influenced Erin's relationship with food also. Jude enjoyed rich, energy-dense foods and she often adopted a very unhealthy way of cooking. Both her and Andrew's diet contained a large number of energy-dense foods. She often blamed her love for food on her cultural heritage and said that this was something she could not change. Jude recognised that both her and Erin's love for food had a negative impact on their weight status but this was something Jude was not willing to change. Although Jude recognised her role, she often blamed Erin's weight problem on other people feeding Erin too much when she was younger.

Jude encouraged Erin to try a variety of foods, however, Andrew did not play a role in advising Erin on what to eat. Jude did restrict what and how much Erin ate at times. When Erin asked for a treat, Jude often made her eat something healthy and then let her eat the treat, which encouraged her intake of more food. Erin became obsessed with food, would talk about it a great deal and was caught stealing chips at night. Jude had to store a number of food items above the fridge because of this.

Jude was from a high socio-economic class and therefore had sufficient money available to spend on food and often bought a variety of foods for the family to try. These types of foods, however, were usually high in fat and of low nutritional value. Jude worked full-time and frequently did not get home until six o'clock, substantially limiting the amount of time she had available for food preparation. She did manage to cook extravagant meals, however, incorporating three or four dishes. They ordered take-away or went out for dinner at least twice a week. Jude felt that as long as she cooked four good meals a week then that was a good effort.

St Peter's had scheduled a "fruit break" into the morning session and Erin took a serving of fruit or vegetables most days. The school had a range of green foods and a smaller number of amber and red foods available for purchase, which aimed to align with guidelines set out by the NSW Healthy School Canteen Strategy. Erin ordered her lunch every fortnight, depending on what food was available for Jude to pack. Quite often when she ordered foods they were from the amber or red groups and were high in calories and low in nutrients.



#### **4.15.2 Physical Activity Factors**

Erin had poor perceived physical competence. She disliked running and would usually give up straight away. She had a very negative attitude towards physical activity and often made up excuses to get out of doing it. She did not like running, however, when it was in a game situation she realised she did actually enjoy it. At after-school care Erin would sometimes participate in activities she enjoyed, however, she did not have an interest in many activities and therefore did not play often.

Erin found locomotor activities difficult, particularly running and became tired and puffed very quickly. She was fairly uncoordinated and had poor balance and therefore found non-locomotor activities difficult. Erin hated doing physical education and sport at school. Erin was often still left behind as she was unable to keep up.

Erin was not involved in organised sports outside school and in terms of unorganised activities she skipped and danced occasionally, however, she became puffed and bored quite quickly.

At recess and lunch Erin usually did not have anyone to play with and therefore did not often participate in physical activity during these times. Erin did not actually want to participate in physical activity but she wanted to be accepted by her peers. When she did play with girls from her class they often stood around and talked and when they were active it was only for short amounts of time at low intensity.

Jude was a poor role model for Erin as she was very inactive and had a negative attitude toward physical activity. She was overweight herself and was not willing to do anything to lose weight. Andrew, Erin's step-dad, was also overweight and did not participate in physical activity. Jude would not often take Erin places where she could be active or participate with her. Erin did not have friends to play with and did not get along well with Bryce when he was staying at their house. Erin was therefore unable to participate with anyone. Even when Erin did have friends to play with at after-school care she often chose to be sedentary, despite a range of physical activities taking place.

Jude did not encourage Erin to be active as it would have involved her having to make the effort to take her places and participate with her. Their family lived quite comfortably and therefore had finances for Erin to participate in an activity outside of school that she would

enjoy, such as dance, however, Erin had not asked to enrol in anything and Jude had not endeavoured to find out if she would like to be involved in an activity.

Erin did not have a very big backyard and had no facilities or equipment other than a skipping rope to play with. There was a school down the road with playing space, however, Jude would have needed to take her there and this never happened. There was limited playing space at Erin's school and after-school care, however, this did not make much of a difference to Erin.

The time available for physical activity at recess and lunch was inadequate as students had to sit and eat their food before playing. On a number of occasions, Erin was not allowed to play outside at recess and lunch as she did not have her hat.

Jude's work commitments left little time for both her own physical activity and encouraging or participating with Erin. Jude and Erin often got home late in the afternoon when it was dark, not leaving much time for physical activity, however, even when they did have time on the weekend they were both usually sedentary.

#### **4.15.3 Sedentary Behaviour Factors**

Erin spent a lot of time in both screen-related and non-screen-related sedentary activities. In most of her spare time before school, after school and on weekends she spent time in these types of activities. Sedentary activities were effortless for her, she enjoyed them and they were easy to do alone.

Erin had a television in her toy room, which was connected to pay television. She had a laptop, Gameboy and a wide range of books, pens, pencils and paint to use in her toy room. Jude had bought a massage chair which Erin also enjoyed using.

Jude did not role model good behaviours when it came to screen-related activities as when she had time to relax she quite often watched the television. Jude was frequently preoccupied with household duties on the weekend and it made it easy for her when Erin was involved in sedentary activities as she was safe and happy. Jude did not often restrict the amount of time Erin spent in sedentary activities as Erin often moved quite quickly from activity to activity, interspersing short bursts of physical activity with longer periods of sedentary activities. The only time she did restrict the time she spent in these activities was

if it was her bedtime. Andrew did not play an active role in limiting the time she spent in sedentary activities either.

#### **4.15.4 Personal and Social Factors**

Jude had adopted a permissive parenting style and tried to keep Erin happy at all times. Jude did not set many boundaries for Erin and lacked responsibility when it came to parenting, for example, Erin was frequently late for school. Jude did not set a good example for Erin as she had adopted very poor weight-related behaviours herself.

Erin was a vibrant, loud and dramatic child. She was selfish, strong-willed, and stubborn and did not like it when she did not get her own way. She could be manipulative, dominating and rebellious, especially when trying to get her own way. Erin often became moody and yelled. She was very loud at home and sang, danced and acted a lot of the time. Erin was very comfortable being herself at home and at after-school care, however, at her new school she was much quieter.

Erin was not happy with her weight status and became very upset when her mum made comments or her peers teased her. Erin was not overly confident in her school work and peer acceptance. She had confidence when it came to the way she behaved. Erin behaved well at school, however, at home she often did what she liked and ignored instructions given by her mother.

Erin was a very bright student who was still settling into her new school in summer but by winter she seemed comfortable. Her knowledge and skills in Mathematics were advanced as well as her skills in writing and comprehension. Erin's fluency was not her strongest point and she often became frustrated by this when reading aloud. She tried to help her peers in class when they were experiencing difficulty with certain aspects of their work. Erin had a positive attitude towards school and did not become easily distracted in class as she did not have many friends to talk to, however, at times she appeared to be in a daze. Erin was slightly more talkative in class in winter as she knew her classmates better and also had a relieving teacher. Erin stayed on task easily, particularly when she enjoyed the task at hand.

Erin did not have many friends, although as the year progressed, she gained a few. Erin did not see her friends outside of school as she was not particularly close to them and they lived half an hour away from her. Erin was quite close to two girls who went to her after-school

care and could be herself around these girls, more so than the children at school. Erin had not remained friends with anyone from her previous school. Many of her peers did not want to associate with her as they thought she was strange. She tried many times to talk and play with a number of children, however, they often ran away and ostracised her. Most of the children in Erin's class were slim and active and all the children at after-school care were also fit and slim. Erin followed friends around quite often and was never a leader. At school she was very dependent on others, however, at after-school care she was more independent and happy to do some things by herself.

Erin and Jude had a mixed relationship, which affected her participation with her mum in physical activities. They both loved and cared for each other greatly but, at times, Erin yelled at Jude for a variety of reasons. Jude did not yell back but appeared to become annoyed when this happened regularly. Jude would not often win their disagreements and therefore rarely tried to. Jude endeavoured to ensure that Erin was happy, however, at times she gave up as no matter what she did she was unable to please Erin. Erin often spoke to Jude in a rude manner and Jude made comments about Erin not being the perfect little girl she thought she would be. Jude could be quite strict when she wanted to be, however, often Erin would refuse to do as Jude instructed.

Erin rarely saw her dad and she and her step-dad, Andrew, did not have a strong relationship. Andrew became frustrated with Erin when she was loud, dramatic or rude towards Jude. Erin liked it when Andrew was out at night as she was able to be as loud as she wanted. Erin did not listen to Andrew when he tried to enforce rules and restrictions.

Erin had an eight-year-old step-brother named Bryce, with whom Erin did not spend time as he was only at their house a couple of nights per week. Erin and Bryce did not have any common interests and their personalities were vastly different.

Erin did not have a very strong bond with her teacher, Mrs Taylor, as she was quite strict and stern. She did, however, develop a better relationship with her relieving teacher, Mrs Floris, who was very caring and interested in the lives of all the children.

#### **4.16 THE DAY-TO-DAY LIFE OF FELICITY ROSE**

Felicity was a tall, solid seven-year-old girl, of Maori/English descent. She had blonde tight curls, blue eyes and bronze-coloured skin. Felicity lived in Burleigh with her mum, Jacqui, step-dad, Tyson, 12-year-old sister, Tara, 13-year-old brother, Corey, and 14-year-old sister, Renae. Felicity did not spend much time with any of her siblings and was often left out of things. They spent a great deal of time with each other but not with Felicity. Tyson was still trying to find his place in the family and did not display much authority. Tyson was Turkish and Jacqui was Maori. Felicity spent a lot of time with Jacqui and needed constant attention from her. Jacqui recently lost a substantial amount of weight through using SureSlim, however, was still overweight. Tyson was obese and Felicity's siblings would all have been classed as overweight. Tyson was unemployed and looking for work and Jacqui worked as an office assistant at the local City Council. Jacqui was training to be a Mary Kay cosmetics consultant. Jacqui came from a middle-class background, however, found it financially difficult with Tyson not working.

They lived in a fairly small house where the three girls shared a room and Corey shared a room with his grandad who often stayed with them. They had a very small backyard which contained a pool and a trampoline. There was also a games room in the shed at the back of the house and Felicity had a television in her room. They lived on a fairly busy street with no grassed area nearby. The family owned one car and Felicity attended Burleigh Public School, which was approximately a 10-minute walk from home, however, she did not often walk. Felicity's teacher was Mrs Reece who had a love for teaching. Felicity was in Year 2, in a composite 1/2 class called Ousley 1. Felicity was the biggest girl in the school and she was only in Year 2. Felicity did not have many friends at school but often played with Amanda, a very small, thin, energetic girl. The school had its lunch break first and then a shorter recess break. Felicity wore a very big dress to school, however, her sport uniform was very tight on her. Felicity was a fairly loud child and was often a role model for her peers. There was limited playing space at this school for Kindergarten, Year 1 and Year 2 students as they had to play on a specified asphalt area, whereas the upper Primary years could play on another grassed area.

#### **4.16.1 Summer**

##### **4.16.1.1 Day One (Weekday)**

Felicity got up at 7:15am, had a shower and washed her hair. Felicity looked under the foil on the bench and asked her mum if she could eat the egg bread for breakfast. Jacqui explained that it was like French toast but with no butter or oil. Felicity ate a large plate full of Turkish bread with cooked egg on it and drank a glass of full cream milk at the kitchen bench. When Felicity had finished this, Jacqui asked Felicity if she wanted some grapes and Felicity said yes. Felicity ate a few grapes from a big bowl and then said she was full. Jacqui helped Felicity get down from the stool at the bench. Felicity said that normally she had cereal for breakfast but other times she would have egg bread.

Felicity explained that she normally had a cheese or Vegemite sandwich for lunch but that day she was having baked beans and was having Vegemite on her Cruskits. Felicity said that she always had to eat her sandwich first. Felicity said she was tired as she could not sleep the previous night because it was too hot.

Felicity and Jacqui showed me Jacqui and Tyson's wedding photos from December 2006. Jacqui started cooking some pasta for people at work and Felicity complained that Jacqui always cooked for other people. Jacqui said, *"I give you plenty of food."*

Tyson and Jacqui took Felicity to school in their van. Jacqui explained that she was trying to get Felicity to walk to school by herself and sometimes she would but she tended to complain that her bag was too heavy. Sometimes she would walk and Tyson and Jacqui would drop her bag off at school but that day Jacqui asked if Felicity wanted to walk or get a lift.

*Jacqui: Do you want to walk or do you want to drive?*

*Felicity: Wwwwwwwadrive.*

When we arrived at school Felicity walked around on the asphalt by herself for a long time and then some other children arrived and she talked to them until the bell rang.

In class they started with reading groups and I took Felicity's group. Felicity worked fairly slowly and accidentally put the leg of her chair on a child's foot who then started crying for a long time. An hour later, the class went through their spelling words and Felicity answered some of the questions asked by Mrs Reece. Her teacher explained to me that Felicity was always trying to get out of doing her work. Felicity worked with her friend,

Amanda, next to whom she sat and five minutes later they got into trouble for talking while the teacher was talking. The children were told to put away their spelling sheets but Felicity showed the children at her table how she accidentally glued her pencil to her sheet. The children had to put their spelling words in alphabetical order and Felicity correctly ordered each word.

Mrs Reece explained that she moved children to different tables every couple of weeks, depending on how well they were working. That day they were changing tables again and Felicity was not happy about it. Mrs Reece called out names and told individual children where to sit. Felicity was seated next to Ruby and they gave each other a “high-five”. Mrs Reece said to the children that if they had been given a new seat then they could get their lunch from their bags and eat this at their desk. Felicity went to her bag and got her sandwich and her 1.25 litre bottle of water. She ate her baked beans sandwich at her desk. Mrs Reece told the remaining children on the floor that they could find an empty seat at any table and Amanda found a seat at Felicity’s table. Mrs Reece, however, moved Amanda to a different table. Amanda walked past Felicity and pulled her hair and then Felicity went over and punched Amanda as a joke but Amanda appeared to be hurt. It was wet weather and Mrs Reece told the class that they could either go over to the COLA to play or they could stay inside for a bit longer. Felicity stayed in and ate her Cruskit biscuits and drank some of her water.

A girl called Ruby came over to Felicity’s table and gave her an invitation to her party. Mrs Reece told the class to finish eating and then go out to the playground to play. Felicity ate her orange from her bag. Mrs Reece said that Felicity used to come to school with a whole orange, which was not cut up, but now Jacqui cut it into wedges. Felicity went outside and got a hula-hoop, which was put out for the children. She got one and swung it around on her arm as she was unable to swing it around her waist. Felicity found another hula-hoop and swung one on each arm. A girl came up to Felicity and told her that one of the hula-hoops was hers and she tried to pull it off but Felicity refused to let go. The teacher on duty intervened but Felicity still did not give up the hoop. Felicity ended up getting it but could not swing her hips enough to make it stay on her waist. A girl came over to her and said, *“You can’t be mean to everyone, Felicity. You always are.”* Felicity ignored her and started talking to someone else. The teacher on duty announced that there were four extra hula-hoops for those people who did not have one and Felicity went over and picked up all four extra hula-hoops and started to play with them. A teacher announced that they would do

their hula-hoop competition which they did each lunchtime. Children with hula-hoops had to aim to be the person who could swing the hula-hoop around their waist for the longest. Felicity went in this competition but was the first of 50 children to get out. When the competition ended Felicity started to throw her hula-hoop into people. The bell rang and Felicity tried to take people's hula-hoops and put them away. One girl started crying as Felicity was rough with her when she tried to put her hula-hoop away.

Felicity went inside for Mathematics groups to the classroom next door. Mrs Reece said that Felicity used to be a very quiet person in class but had now completely opened up. Mrs Reece rolled her eyes when she talked about Felicity not wanting to do certain things in class. They did Mathematics work on odd and even numbers. Felicity and Amanda sat next to each other and were distracted. Felicity received a sticker for finishing her work. The children finished their Mathematics work and then played with hula-hoops as part of their fitness. Normally children did a fitness program where they walked around the school but the day was too wet and so they could not do that. Instead they played poison ball in the classroom. Felicity had a turn in the middle but got out almost straight away. The class started talking about Easter and Felicity said that she was going to the Easter show but was only allowed four show bags. One child from Ousley 1 and Ousley 2 competed in a hula-hoop competition and Felicity put up her hand to compete but was not chosen.

The bell rang for recess and the children had to again eat inside due to the wet weather. Felicity took her drink bottle inside and drank constantly from it without taking her lips off the bottle. The teacher told people to pack up and go outside but Felicity continued to drink her water until it was finished. A boy told Felicity that her head looked red, however, she ignored him. Felicity got her pink notebook from her bag and went outside with a girl who had a skipping rope. The girl started skipping and then Felicity asked for a turn. The girl did not want to let her and so Felicity made a fist with her hand as if she was going to hit the girl if she did not let her. Felicity then said, *"If you let me have a go, I'll let you draw in my book."* The girl ended up letting Felicity have a go but the rope was far too small for Felicity and she could not skip very well because of this. Felicity became frustrated but would not let anyone else have a go of the rope.

The bell rang and Felicity's year had assembly for an hour. When they arrived back at class, the children were told to read through their spelling words and Mrs Reece praised Felicity for beginning her reading straight away. The children were given their homework sheet and



newsletter. Only Felicity and one other boy forgot to bring in their home reader to change. Felicity started doing her homework sheet while Mrs Reece was talking.

Tyson picked up Felicity from school and on arriving home, Felicity got herself a glass of milk and a peanut butter dipper pack. Tyson asked Felicity if she wanted to help him cook dinner and she said yes. She told me that she usually helped Tyson cook dinner. Tyson explained that they usually ate at 4:30pm or 5:00pm on Mondays as they had Maori culture and would therefore have to eat at the earlier time. Felicity helped Tyson make Feta and spinach parcels. Once she had finished helping, Felicity wanted to play Monopoly but had no one to play with so she played by herself. Tyson asked Felicity if she should do her homework instead of playing and Felicity thought it was a good idea but did not want to finish playing. Felicity said that Tyson played against her sometimes. Tyson asked Felicity if she wanted baked beans with her dinner as she might not get full. Felicity said yes. When Corey, Renae and Tara arrived home they did not say hello to Felicity or Tyson. Felicity explained that Amanda was her best friend at school. *"She's been in my class for years. She's been in my class in Year 2 and Year 1 and Kindergarten."*

At 4:30pm Tyson and the children had dinner. Felicity had corn on the cob and then asked if the rest of the baked beans were for her. Tyson said, *"You can have most of them but you need to leave some room for bread and then you can have some fruit after that."* Felicity poured all of the baked beans on her plate, which covered three quarters of her dinner plate. She ate all of her baked beans and then some of the corn but said she did not like the corn. Tyson ended up throwing it out.

*Felicity: Tyson, I don't like my corn.*

*Tyson: Why?*

*Felicity: Too salty.*

*Tyson: Well just wash it off.*

*Felicity: No I got it in the baked beans sauce by accident.*

*Tyson: That's all right. What's wrong with that?*

*Felicity: Yuck. Owwww I don't like it.*

*Tara: You're just trying to get more cheese and spinach parcel.*

*Felicity: No.*

Felicity ate her cheese and spinach parcel quickly and worried that she was not going to be able to get another one. Corey, Renae and Tara came back for seconds and Tyson told Felicity to eat what she had first.

*Felicity: Oh I get to get two.*

*Tyson: Well finish that one first.*

Felicity ate it all and then asked for another half. She ate the second one more slowly. Felicity ate at the kitchen bench while Corey, Tara and Renae ate in their room with the television on as they did not have a kitchen table. Felicity finished her dinner and Tyson asked her if she wanted some grapes and fruit cut up. Felicity said no. She explained that normally on Tuesdays they had take-away pizza and Tyson explained this was because it was cheaper on that day. Felicity said that she wanted more parcel but Tyson said there was not any left as Jacqui still had to get some.

Felicity sat down and watched television and then started playing with a balloon. Tyson asked Felicity several times to go and brush her teeth but she did not do so. At 5:45pm the family left for Maori culture and picked up Jacqui from work on the way. Jacqui ate her dinner in the car.

At 6:00pm we arrived at the Community Centre where they did singing and dancing to Maori music. Felicity did a song at the start and then went into a room outside and started playing with the other children. She sat down and played on a toy laptop even though Jacqui continually tried to get Felicity to participate. Felicity participated in approximately three songs altogether and would play with the younger children the remaining time. Felicity wrestled with some of the younger children outside. Felicity taught me one of the dances at which she felt confident. Jacqui tried several times to get Felicity to participate but she did not. Felicity accidentally hurt a little girl and thought she would get into trouble so she hid. For the last song Tara and Renae tried to get Felicity to participate but she refused to. Jacqui said that they would look at the animals on the way out if she participated, so she did.

When they arrived home, Felicity put on “The Biggest Loser” on television. Jacqui unpacked Felicity’s schoolbag and said, “*Oh Bub you drank all your water?*” and Felicity said, “*Yeah I drank it in one gulp.*” Felicity asked for a drink and then Jacqui offered her some fruit and she said yes. Jacqui gave Felicity a big plate of fruit to share with the other children. Felicity had a drink of water and almost an entire plate of fruit, including orange, grapes and apple. A KFC advertisement came on television and Felicity said that Jacqui never let them have KFC.

*Felicity: You wouldn’t let us have KFC.*

*Jacqui: Yeah that's because it's Mummy's favourite and that's why I don't buy it no more. I used to eat it once a week.*

*Felicity: No you never buy KFC.*

*Jacqui: Because it's not healthy Felicity.*

*Felicity: Can't you just buy it once?*

*Jacqui: Yeah I'll buy it for you when you turn 20.*

*Felicity: I'll be gone.*

Tyson, Jacqui and Felicity watched television in the lounge room while the other three children watched television in their bedroom. "Bondi Rescue" then came on and they talked about sharks, rips and blue bottles. Jacqui told me that she and Felicity were caught in a rip the previous day as they could not be bothered to walk to get between the flags. "*Yeah we shouldn't be lazy. I just couldn't be bothered to walk to the flags. They were too far away.*"

At 8:30pm when the television show finished, Jacqui told Felicity to put on her pyjamas and go to bed and Felicity refused to. Felicity got upset and started to cry because she did not want to have to sleep in Corey's bed because they were all watching a movie in the other room.

*Felicity: No I'm not sleeping in there.*

*Jacqui: But Corey's watching TV.*

*Felicity: It's not fair.*

Tyson explained that Felicity was a very stubborn child and Corey only slept in there because they often stayed up late. Felicity started to read a book in the lounge room and then went to bed to read. Felicity turned out the light at 9:00pm.

#### **4.16.1.2 Day Two (Weekday)**

Felicity got up at 7:20am this morning and had a shower. Felicity did her homework and explained that she still had not had breakfast. Jacqui asked Felicity what she wanted for breakfast.

*Jacqui: What do you want for breakkie?*

*Felicity: I don't know.*

*Jacqui: Come and have a look. Do you want Weetbix or Corn Flakes?*

*Felicity: Weetbix and Corn Flakes.*

Felicity had a very large bowl of Weetbix and Corn Flakes and an orange. She told Jacqui what she wanted packed for school. Jacqui said that her friend was doing a Krispy Kreme

fundraiser and she did not want to buy a box because she thought she would eat them all, but ended up getting a box anyway. *"I bought those off a friend for a fundraiser and I said I didn't want them and she said you won't eat them and I will that's the problem but I didn't eat one. I let the kids eat them."* Felicity was disappointed that there were no more doughnuts left and explained that it was probably because she had had two the previous night.

Felicity explained that on Mondays, Wednesdays and Thursdays they were allowed to go on the school computers at lunch and recess. After breakfast, Jacqui asked Felicity if she wanted to do her homework so that she would not have to do it that night, however, Felicity did not want to. Felicity told me that she was walking to school, as there was no petrol in the car. Felicity started to play with the piano program on her laptop, which Jacqui explained that she bought with her pocket money. Felicity asked Jacqui if she could take her laptop to school and Jacqui said yes.

At 8:10am, Felicity and I walked to school. Felicity walked very slowly up the big hill and almost stopped a couple of times, as she was very puffed. Felicity said that she usually walked about two times a week but complained that she had to walk to and from school the previous day. Felicity said that she did not have any friends that lived close-by. She explained that Amanda used to live near her and they would spend a bit of time playing together after school but now she did not and they only ever saw each other at school. On the weekend Felicity said she was going to go to her cousin's house on Friday night and on Saturday night she has a disco on at Zoom Play Centre.

At 8:30am Felicity and I arrived at school and Felicity sat with two girls and talked. She then wandered around by herself. The bell rang and when walking to class Felicity pulled on the bag of the boy in front and then pushed him and he almost fell over. Felicity started to laugh.

The class started with reading groups, where I again took Felicity's group. They had to write a description of a bag. Felicity tried to help a girl in Year 1 with her description and did not get much of her own work done. After this the class had news. Felicity sat at the front and blocked the view of the other children, however, they moved to the sides of her and did not tell her to move. Felicity put her hand up after each person's news to ask a question.

The class then did a handwriting task and Felicity was one of the first children to finish. The class was quite unsettled and Mrs Reece tried to talk over the class and became very frustrated with them. Felicity talked to Ruby about the drawing she was doing under her writing and Felicity then got up and showed Amanda her pictures. Amanda touched Felicity's book and so Felicity punched Amanda. Mrs Reece asked Felicity about her Mathematics and reading card which she had not brought in again. The rest of the class changed their home reader and Mathematics cards, however, Felicity remained seated at her desk. A boy picked up a book and Felicity said to him, *"You're not allowed to read that unless you ask Andrew."* When Mrs Reece returned to the class Felicity said, *"Sam has been playing with Andrew's book and didn't ask."* Mrs Reece told Felicity to get a book and read and Felicity walked around for five minutes before getting a book to read.

The lunch bell rang and Felicity continued to read her book on the floor of the classroom, even when Mrs Reece told the class to put their books away and go outside. Felicity finally got her laptop and lunchbox out of her bag and sat down in a designated eating area with Amanda and some other girls. Felicity only talked to Amanda. She ate her peanut butter roll extremely quickly and then took out her Krispy Kreme doughnut and ate that. She took two big bites of it and then put the remaining half of it in her mouth. When Felicity was told to go and play she found it very hard to get up, pushing off one leg to get up. Felicity found some spilt M & M chocolates that were left on a table and Felicity ate them. Felicity then sat in a shady spot with her laptop. Felicity only let Amanda play with the laptop too and when a boy tried to touch her laptop she yelled at him and hit him, telling him to go away. Felicity played with her laptop the entire lunch and said that if she had not brought it then she would have played games on the computers inside.

The children went to drama. Felicity had to act as a troll and got an award for being the most dramatic. When Felicity's shoe fell off in the play the class broke up into hysterics. The class then went to the library and Felicity sat up the back and leaned on the wall. Children were told to choose a book to borrow and Felicity chose a joke book and read some jokes out to the boys around her. Mrs Webster chose two students to be wizards and said, *"I think I'm going to have to pick you Felicity, because you are perfect."* Mrs Webster put a big purple cape on her. The children then sat and listened to "The Lion King" CD while Mrs Webster showed the book.

At recess, Felicity took her apple, book and bottle of water out to the playground. Felicity showed her book to Amanda and two other girls while also eating her apple. When the children were told to play Felicity tried to finish her half-eaten apple but threw about a quarter of it in the bin. Felicity put away her book and water and her and Amanda played with a hula-hoop. Amanda was quite good at it and Felicity tried to copy her but could not do it, so she and Amanda started throwing their hoops up a slope and waiting for them to roll back down to them. When walking back to the classroom, Felicity started jumping around and accidentally knocked Brittany who told the teacher. Felicity was worried she was going to get in trouble and sat at the back of the classroom crying.

Felicity's class had sport where a male teacher taught them Fundamental Movement Skills. They discussed what would make them run better and talked about high knees, arms up high and keeping your head straight. The teacher said that he would demonstrate what you should not do and then Felicity had to tell him what else you should do when you run. The teacher ran on his heels and Felicity said, *"You shouldn't run on your heels."* The children lined up and had to practise running proficiently. They had to: run without using arms (Felicity was pretty fast); big arms (Felicity was average); straight legs (Felicity almost fell over); run with head on their shoulder; run on heels; run on tip toes and lean forward. The class then moved onto skipping and the teacher discussed the components of skipping, including knees up high to cover more ground; head straight; arms in circles; don't twist body. Felicity did not do all the components correctly when they practised as she was competitive and attempted to be the fastest. The class then went on to throwing to a partner and Felicity and Amanda worked together. If you dropped it you had to sit down and when you caught it you had to take a step back. Felicity dropped the beanbag the first time and therefore had to sit down straight away. The class looked at the following components: make hands into a cup; bring it into you; look at what you're catching. The teacher asked Felicity to help him demonstrate and so Felicity threw him the beanbag. When he threw it back she caught it into her chest. The children had to practise catching with one hand, which Felicity did well. She was then chosen to be one of five leaders in doing a shuttle run. Felicity started to throw the beanbag back to the people in her line instead of running back with it and handing it to the next person.

On the way back from sport Felicity went to the toilet. She was in the toilet for a long time, however, the bell rang and when I went to find her she was no longer in there. She came back to the classroom 15 minutes later where Tyson, Mrs Reece and I were waiting for her.

Mrs Reece asked her if she had an accident and she said yes as she could not hold on. Felicity said she did not know where she had put her sport shorts and Tyson became annoyed with her about this. Tyson did not comfort Felicity who was very upset.

When we arrived home Tyson asked Felicity if she wanted to go in the pool and she said yes. Tyson had to pick up Jacqui from her Mary Kay cosmetics course. Felicity ate a banana and then got a plum to eat from the fridge. She got changed into her swimmers and wrapped a towel around her body. She put her towel over the fence in front of me and said, *"Yay you can't see me now."* Felicity told me that she swam quite a bit. Jacqui got home and asked Felicity about her day and Felicity talked about how good she was in drama. In the pool, Felicity swam laps, did handstands and swam the length of the pool under water.

At 4:30pm Tyson told Felicity to get out of the pool as they were going to have a BBQ at the park but Felicity did not want to get out. Finally she asked if she could ride her bike there. Felicity complained the entire way to the park, explaining that she wanted to go to the park but did not want to go swimming. Tara, Renae and Corey became annoyed by her whingeing in the car. When they arrived, Jacqui said that they would go for a swim first and Felicity said, *"I'm not going"* and walked over to the play equipment by herself. Jacqui asked the other children what they wanted to do and they said they were hungry so Tyson and Jacqui started cooking at the park. Felicity played on the play equipment while the rest of her family sat down. Felicity had a look in the esky and Jacqui asked Felicity if she wanted a drink. Felicity said yes. Felicity poured herself a drink of lemonade and started to whinge about the sausages. Jacqui said that she was sick of hearing Felicity whinge and that she would have to go to bed early that night.

For dinner, Felicity was given two sausages and a bread roll. She tasted a piece of cucumber and then threw it away. Felicity did not have any salad. Jacqui went over to see Tyson at the BBQ and while she was gone Felicity put another sausage on her plate. When Jacqui got back she questioned Felicity, *"Did you take another sausage?"* and Felicity said yes. Felicity ate a bread roll with sausage and sauce on it and one plain sausage with her hands. She went to get another drink of lemonade but Jacqui said, *"You can't have another drink until you've eaten all your dinner."* Felicity then ate her last sausage and poured herself another drink of lemonade. Felicity drank her whole drink and then took a piece of steak and started eating it with her hands. She ate half and then said she could not finish it as she was full.

Felicity collected rocks with Jacqui and Tyson on the beach while the other children sat on the beach. Felicity then explained that she wanted to go for a swim at the beach but the others wanted to swim in the pool at home so Jacqui decided to go home. Felicity became upset about this and sulked the entire way home. On the way home Jacqui and Tara talked about the food Tara wanted for Scout camp on the weekend. She said that she wanted two minute noodles and Felicity said she wanted some too.

As soon as they arrived home Felicity went straight in the pool with Tara and then stayed in by herself. She swam for half an hour before getting out and getting changed. Felicity got a plum to eat and Tyson realised that there was not one for him to eat. Jacqui asked Felicity how many plums she had had. Felicity said she had three that day and Tyson said, *“I only bought six. One for each of us.”* Felicity asked if she could watch “The Biggest Loser”. Tyson ate an apple and Felicity asked him if she could have a bite. Felicity ended up eating half of Tyson’s apple and asked Jacqui if she could have another one, however, she was not allowed. Tyson started to eat an orange and he gave Felicity a few pieces when she asked him. A KFC advertisement came on television and Felicity said that KFC was yummy. Felicity told Jacqui that she did more exercise than her.

*Jacqui: Yeah I still treat myself to yummy foods but I do exercise too.*

*Felicity: I do stuff too.*

*Jacqui: Yeah you do.*

*Felicity: I do more than you.*

Jacqui explained that when she went on SureSlim she had to eat a lot of protein but did not believe in starving herself. *“We got told to eat a lot more protein so I filled up on protein but if you starve yourself you’d end up eating twice as much.”*

Felicity played with Jacqui’s Mary Kay cosmetics while watching “Saving Babies”, however, Jacqui became angry with Felicity for touching all of them. They watched “Jamie Oliver’s Cooking Adventures” and talked a lot about different types of foods. Felicity asked Jacqui if she could read her book before bed and Jacqui said yes. At 8:30pm Felicity went to bed in Corey’s bed again.

#### **4.16.1.3 Day Three (Weekend Day)**

Felicity got up at 8:20am and lay under a quilt on the lounge watching television. Jacqui made Felicity “egg bread” and she ate her breakfast while sitting on the lounge. Jacqui and Tyson also ate their breakfast on the lounge with Felicity. Felicity started complaining



about her breakfast and said she did not like it as there was something different about it. Jacqui tried to convince her that it was the same. Felicity ate her breakfast but played with it more than she normally did, trying to work out what was different. Jacqui then offered Felicity an orange and Felicity said yes. Felicity ate an orange, while Tyson and Jacqui ate apples. Corey and Renae were at their grandad's that day and Tara was on a Scout's hiking trip. Jacqui sat with Felicity under her quilt and gave her a cuddle before Felicity went to have a shower. Felicity got out of the shower and played with a balloon from Zoom Play Centre the previous night. Tyson put on "Happy Feet" for himself, Jacqui and Felicity to watch. Felicity told me that she had seen it at the movies before. Jacqui got a seat and bunny rug for Felicity for the movie. After half an hour, Felicity asked Jacqui when they were going for a ride.

*Felicity: When are we going to go?*

*Jacqui: After this.*

*Felicity: Can we go now?*

*Jacqui: No, 10:30.*

*Felicity: I'm bored. That's half an hour. Mum can we leave in 10 more minutes. Is it 10:30 yet?*

*Jacqui: I'm just watching this.*

*Felicity: Ohhhh.*

Felicity sat back down for 15 minutes and then said she was bored and wanted to go. Tyson became annoyed as he wanted to watch the movie and Felicity went and sat with Jacqui. Felicity continued to ask if they could go.

At 11:00am the movie finished and Felicity put on her shoes to go for a ride to Cringila. Jacqui said, "*Can't I just sleep all day? I don't know what I was thinking saying we'd go for a ride today.*" Felicity rode for 40 minutes to get to Cringila, while Tyson, Jacqui and I walked. Jacqui said that Felicity had only just progressed from training wheels as she was too lazy to teach her to ride properly but Jacqui's sister took the training wheels off when they were on holidays. Felicity rode on a bike track next to the road but was told to stop at certain points as Jacqui did not want her crossing roads by herself. Jacqui said that normally Felicity stops at the slopes and they have to push her bike for a while. Felicity rode the majority of the way and waited at certain points for us to catch up. It was a very busy place to ride and cars sped past regularly. Felicity complained that her knees were sore and it looked as if her bike seat needed to be moved up. When we arrived at Cringila, Felicity said that she was starving. We walked over to the kebab shop where they visited regularly.

Felicity told Tyson that she wanted cheese and chicken on her kebab and Tyson ordered a normal sized kebab with cheese and chicken and no salad. Felicity asked Tyson to get them to make hers first. Jacqui and Tyson ordered meat kebabs with no salad and extra meat. We sat outside the kebab shop, located at the petrol station, on crates. Felicity ate almost her whole kebab and then said she was full. Jacqui started to wrap it up again and Felicity asked if she could eat it again when she was hungry. Felicity then said she wanted one more bite and Jacqui unwrapped it again and Felicity ate four more bites before Jacqui wrapped it up again.

We walked for another two minutes to visit Tyson's mum who was Turkish and recently returned from a nine-week holiday in Turkey. As soon as they arrived at the house Felicity asked if she could eat the rest of her kebab. Jacqui gave it to her to eat outside. Felicity played with her nieces and nephews and rode her bike outside. Jacqui explained that she walked most places but Tyson was pretty lazy and would drive everywhere. Jacqui said that she would have just liked to eat and sleep. After an hour, we left Tyson's mum's house and Tyson complained about having to walk back. Felicity stopped after 100 metres and said, "*I can't ride or walk cause my feet are sore.*" After 10 minutes of walking Felicity realised she really needed to go to the toilet and Jacqui tried to get her to go to the toilet behind some bushes but Felicity was too embarrassed as it was on a busy road. Felicity threw a lot of tantrums and complained a great deal on the way home. Tyson ended up pushing the bike most of the way back.

Jacqui poured everyone a glass of water when we arrived home. Jacqui asked Felicity if she wanted to go in the pool but Felicity said no. Jacqui then asked Felicity if she wanted to play Uno [a card game] and Felicity said yes. Jacqui cut up a plate of fruit while we all began playing. As soon as Jacqui put down the plate of fruit, Felicity grabbed a piece of banana. She ate this quickly and Jacqui told Felicity to have a different piece of fruit next but Felicity ate another piece of banana and when Jacqui was not looking, sneaked another piece. Tyson told Felicity to finish off the plate of fruit and she did.

Jacqui said that she was going to the shops to get some milk and nuts as she felt like eating some nuts. Felicity said she wanted to go with her but firstly asked if they were walking or driving. Felicity was not keen to walk but Jacqui said they were driving so Felicity decided to go. Jacqui said she owed Felicity some money and she would give it to her at the shops but she was not to buy any junk food with it. We left for the shops and Tyson drove around

the car park for a long time, trying to find a close parking spot. Jacqui became frustrated and said, *“Come on. We can walk. You don’t need to find the closest spot.”* We got into Woolworths supermarket and Jacqui tried to choose some mixed nuts that were not too expensive. Jacqui picked some unsalted nuts and then asked Tyson if he wanted some unsalted cashews because they were on special. Felicity said she wanted some peanuts but Jacqui said there were peanuts in the mixed nuts pack. Jacqui then said that she wanted something else yummy to eat but did not know what. Jacqui asked Felicity to pick a cheese and yoghurt and they ended up choosing Brie cheese for Felicity and Jacqui chose the yoghurt. Jacqui told Felicity she could choose the chocolate and Felicity chose a big family size block of Crunch chocolate for the family to share. Jacqui chose a block of chocolate for Tara as she said that she and Tyson had eaten Tara’s whole block of chocolate the previous night. Felicity picked up a cookies and cream king-size Kit Kat and said she wanted to buy it with her own money. Jacqui made sure Felicity knew it was not a normal Kit Kat and Felicity said she had had it before. Jacqui also bought generic full cream milk and mussels because Felicity said she wanted them. They compared the prices of all the products before buying them. Felicity paid for her chocolate bar and then ate the whole Kit Kat while she waited for Jacqui and Tyson to pay for the rest of the groceries.

When we arrived home, Jacqui asked Felicity what she wanted to do that afternoon. Jacqui put out cheese, crackers, mussels, nuts, cucumber, tomato, hummus and cous cous for people to snack on. Felicity ate some mussels, nuts and crackers and then got herself some more unsalted nuts. Jacqui said that it was a bit hard financially at the moment as there was only one parent working.

Tyson came in from cooking on the barbeque and asked Felicity what meat she wanted to for dinner. Felicity ate a piece of steak while lying on the floor and then licked her plate. Everyone else ate on the lounge with the radio on. Tyson asked Felicity if she wanted some tomato and cucumber, however, Felicity declined. Jacqui asked Felicity if she wanted something else but Felicity said she did not know. Tara leaned on Felicity’s stomach and Jacqui said, *“Tara don’t do that cause Felicity’s stomach might pop.”* Felicity told Tara that when she went to high school she had to look after her but Tara said that she would not. Jacqui said, *“Maybe by the time you get to Year 12 you will be quite nice to your baby sister and you might actually say hello to her when you see her.”*

After dinner Felicity played the Playstation for two hours. She and I played Buzz, which was a music trivia game. As soon as we came back inside from the games room Felicity became upset as she noticed that the chocolate had been eaten. Jacqui said that she could not have any more.

*Felicity: Mum can I have chocolate now?*

*Jacqui: No you already had chocolate today.*

*Felicity: No.*

*Jacqui: Yeah you did.*

*Felicity: Can I open the one I chose?*

*Jacqui: No.*

*Felicity But I chose it.*

*Jacqui: Just because you chose it doesn't mean we eat it tonight.*

*Felicity: Oh please.*

*Jacqui: No Felicity.*

Jacqui told Felicity that they would open it the next night. Felicity then watched television in the lounge room. Jacqui and Felicity chose a book for her to read. Felicity chose a Dr Seuss book and read it in the lounge room while Jacqui, Tyson, Tara and I watched "60 Minutes". Felicity's cousins dropped off Corey and Renae and Jacqui told Felicity to go to bed and lie down. Felicity argued with Corey as she wanted to sleep in her own bed but Corey wanted to watch television with Tara and Renae. Felicity ended up losing the fight and had to sleep in Corey's bed but kept crying. Jacqui lay down with Felicity and she calmed down significantly. At 8:30pm Felicity came back out to the lounge room to give her mum a hug. Felicity started watching the Joanne Lees movie but she became scared so she went to bed. Jacqui said that on the weekend her family usually just relaxed and sometimes would go to the beach but mainly stayed at home. Jacqui explained that in winter Sunday was usually their pyjama day where they had showers and put their pyjamas on for the rest of the day.

#### **4.16.2 Winter**

Tyson was still looking for full-time work but was working casually as a security guard. Jacqui was also working as a security guard and had applied to join the army reserve. She was still working at the local City Council and selling Mary Kay products. Tara and Renae had run away from home and were living with Jacqui's sister at Lake Illes and attending the local high school. Jacqui said she missed them a lot but her sister also loved having them

there and spoilt them. Felicity was not very good friends with Amanda and jumped between other friends during winter.

#### **4.16.2.1 Day One (Weekday)**

Felicity got up at 7:10am and sat under a blanket while Jacqui made her breakfast. Jacqui gave Felicity two pieces of egg bread while she sat on the lounge with the radio on. Felicity said that she had gymnastics the next day and that she could swing around the bars really well. Tyson said that he never ate breakfast. Felicity lay down on the lounge after finishing her breakfast. She said that she forgot to get her homework from school the previous day. Jacqui kept telling Felicity to get up and have a shower but Felicity did not want to move from the lounge. At 7:55am Felicity finally had a shower. Jacqui said that they were having a lamb roast for dinner and Tyson made a very nice roast dinner. At 8:00am Jacqui told Felicity to hurry up and get out of the shower. Felicity came out wrapped in her towel and stood in front of the heater. Jacqui hugged and kissed Felicity before doing her hair for her.

Felicity and I walked to school again. It was a very short walk to the school, however, it took Felicity a long time to walk as she walked extremely slowly and puffed a lot along the way. Felicity said that each recess Jacqui put up a piece of cake that Felicity helped her make. Felicity said that she had made a chocolate berry cake the previous week and made a chocolate cake this week. *“My mum puts all the ingredients in and then I stir it. I made a chocolate cake with berries last week and this week I just made a plain chocolate cake.”* Felicity said that Jacqui packed her a piece of cake for recess and a sandwich or crackers for lunch and fruit for fruit break. Felicity said that she did not walk to school much and said that Jacqui wanted her to start walking. She started walking the previous day and had to walk both to and from school.

Felicity explained that her only real friend was Amanda and when we arrived at school she put her bag down and said that she normally waited for Amanda at the classroom. Felicity ended up borrowing a girl's skipping rope and used it for the entire morning session. The girl seemed annoyed that Felicity would not give it back. Mrs Reece was away and Bob Lyon took the class. Felicity said that Mr Lyon usually gave them work that was far too easy for their class. When the bell rang Felicity kept skipping and when the girl who owned the skipping rope tried to get it back, Felicity skipped away from her.

The class began with reading groups and Felicity's group sat outside with a parent helper. Felicity came back into the classroom puffing after walking 50 metres. Felicity started cleaning up rubbish around the classroom even though she was supposed to be working. Mr Lyon went through the spelling words with the class and Felicity was not involved in any of these discussions. Mr Lyon handed out their spelling sheet and Felicity said it was easy. Felicity became fairly distracted when she was supposed to be doing her spelling sheet. She broke her rubber in half, played with her pencil case and then got up to sharpen her pencil using the electric sharpener. Once Felicity started working she asked Mr Lyon a lot of questions about the sheet as she did not understand it. She ended up being the last student to finish the sheet. Mr Lyon reprimanded Felicity for not listening to him and having things in her hands. Felicity did not sit next to anyone in class anymore. She concentrated in handwriting, however, was the last person to finish the task.

At 11:00am the bell rang for lunch and Felicity took out a Vegemite lavash wrap and a piece of chocolate cake. Felicity sat with some girls from Ousley 2 to eat. She ate her wrap very quickly and then ate her cake more slowly, licking the chocolate off the plastic wrapper. Felicity followed her friends to the play equipment where she had a turn on the flying fox. When Felicity did this she could not hold her weight up and so let go of the bar and swang it to the other side. Felicity had five turns of this but then stood at the bottom and swang the bar across for other people. Felicity then went on the monkey bars with Lily, however, she was still unable to hold herself up. Felicity no longer played with Amanda in the playground and Amanda often played with two other girls from Felicity's class.

In Mathematics, Felicity became distracted and tried to avoid doing work again. In Mathematics they worked on addition by linking numbers together to add to the number 10. The children then did skipping outside for fitness. Felicity lined up a big rope that was being swung by the teacher and was attached to a pole. Felicity started on the outside a number of times and ran into the middle to start skipping. She stayed in for a long time but then another girl tried to skip with Felicity and kept getting stuck in the middle. Felicity became very puffed each time she had a turn. Felicity ended up skipping in the middle while two classmates swung the rope, however, they did not swing it high enough and Felicity kept getting stuck.

The bell rang for recess and Felicity got an orange, from which Jacqui had cut the skin in a spiral. Felicity ate it in the playground while talking to two friends. One girl asked Felicity

if she could play with them but Felicity said she was not sure and walked away. When the play bell rang Felicity got her joke book from her bag and started showing some of the children. She read the jokes to peers and the teacher on duty. After lunch Felicity's class had Scripture and then finished off their handwriting. They marked a sheet from the previous day, however, Felicity got into trouble for calling out some of the answers.

Tyson picked up Felicity from school. We arrived home and Felicity started playing with Corey's crutches and became very puffed from doing so. Tyson started to organise dinner and Felicity asked to have some pasta now but Tyson said no. Tyson told Felicity to do her homework.

*Tyson: You should be doing something starting with "h". Homework?*

*Felicity: Could I put a movie on?*

*Tyson: Shouldn't you be doing something else? Your homework?*

*Felicity: I don't have any.*

*Tyson: Yes you do.*

Felicity found an apple in her bag and started to eat it. Tyson told Felicity to do her homework again but Felicity ignored him. She started colouring in her homework and then started crying as Tyson would not let her open some new pencils. Felicity went into the bathroom and would not come out even when Tyson said she would not get dinner otherwise. She came out ten minutes later and gave Tyson a hug and said she was tired. At 4:15pm, Felicity started doing her homework while Tyson turned on the television to "Totally Wild". Felicity ended up watching this show with Tyson and Corey while she waited for the glue to dry in her homework book. She got herself a musk lolly and started to eat it in front of the cartoons. Tyson left to pick up Jacqui and when she got home Jacqui gave Felicity a hug and a kiss and said she was starving. Felicity lay on the lounge in front of the cartoons.

At 5:30pm dinner was ready.

*Felicity: Can I have my pasta with cheese on it?*

*Jacqui: Hold on.*

*Felicity: Where's my pasta? I want cheese on my pasta.*

*Jacqui: We're having gravy.*

*Felicity: I want gravy on my meat and cheese on my pasta.*

*Jacqui: Try it with gravy.*

*Felicity: Ewwwww.*

Felicity refused to have it, getting the cheese out of the fridge herself. Jacqui asked Felicity if she wanted sweet potato and she said yes but then said no to cabbage. Felicity ate her dinner on the lounge in front of “Mash”. She had lamb, fried potato, sweet potato, gravy on the side, pasta with a lot of grated cheese on top and a glass of water. The show changed to “Deal or No Deal” and Felicity started to talk about the show. Tyson offered everyone garlic bread and Felicity said yes and was given three pieces.

*Tyson: Who wants some garlic bread?*

*Felicity: ME!*

*Tyson: I know you love your garlic bread.*

Jacqui asked Felicity if she liked the way she cut the orange that day but Felicity said no. Felicity finished her dinner and licked the plate with her fingers. Felicity said that she wanted more garlic bread.

*Felicity: I want garlic bread but I know there's none left.*

*Tyson: There's a little bit.*

*Felicity: Oh yes!*

*Tyson: You have to share and then you have to have fruit later.*

She had two more pieces and then Felicity wanted to eat a pear but Tyson and Jacqui told her to wait for a little while.

Felicity asked Jacqui if she could put on “The Santa Clause” and she said yes. Felicity said she wanted her fruit and Jacqui gave her a plate of fruit including apple, pear and orange, which she ate in front of her movie. Jacqui asked Felicity if she wanted more fruit and she said yes. Felicity said that she was going to restart her movie as she could not hear it very well. Jacqui told Felicity to only turn it back to where she stopped hearing it. Felicity rewound it and Jacqui told her to stop or she could not watch it, however, Felicity started crying and Jacqui again threatened to turn the movie off if she did not stop crying.

*Jacqui: Stop crying. You're too tired. I'm turning it off.*

*Felicity: NO!*

*Jacqui: Well stop crying. Go to bed. I told you.*

*Felicity: No.*

*Jacqui: Yes, go.*

*Tyson: Stop or we'll put you out with Hercules [their dog].*

Jacqui sent Felicity to bed but she continued to cry uncontrollably. Jacqui smacked her but she still did not stop so Jacqui ended up talking to her to calm her down. Jacqui listened to Felicity read in bed and then Felicity went to sleep at about eight o'clock.



Jacqui explained that the children enjoyed it when her dad was home as he gave the children toast in the afternoon and then they were not hungry for dinner but became hungry again at nine o'clock.

#### **4.16.2.2 Day Two (Weekday)**

At 7:00am Felicity got up and Tyson asked Felicity what she wanted for breakfast. She said Weetbix and Corn Flakes. Felicity sat on the lounge with a quilt on her and ate a bowlful of two Weetbix and Corn Flakes with the radio on in the background. Felicity said that on Sunday they went for a long ride to North Wollongong. After finishing breakfast Felicity had a shower. Jacqui packed Felicity's lunch, consisting of a Vegemite sandwich, a packet of biscuits, a Crunchie, an apple, a mandarin and a packet of Mambi noodles.

Felicity stood in front of the heater with her towel wrapped around her. She did not want to let Jacqui brush her hair and did this herself. Felicity said it was Environment Day at their school and they had games and activities all day. Tyson explained that he had been looking for work everyday but had not had any luck yet. Felicity said that she ate everything in her lunchbox the previous day and then explained that she was up to chapter two of her book.

Jacqui told me that Felicity wanted a lift to school, as her bag was very heavy. Felicity arrived at school and looked for Mrs Reece but could not find her so she sat and talked to two other girls. Felicity started playing a tip game on the steps of the canteen. Felicity was chosen to be the tipper and was unable to tip the other children before they reached either the step or a designated line as she was not quick enough. One girl told the other girls to go slowly for Felicity "*because she's slow*". Felicity said that she tipped one girl but the girl disagreed and all the girls ended up siding with the other girl. Felicity sat down on the step and started to cry and then went to the toilet for 10 minutes crying. At 8:55am, Felicity started playing tip again.

The first activity was recycling rubbish and Felicity did not participate in this game. They then went outside to experiment with magnifying glasses and Felicity worked with a Year 1 girl to look at different organisms and objects. The next activity was supposed to be looking at living things in a garden, however, it was raining so they watched a video on the environment instead. The next activity was computers and Year 2 was told to select a game about the environment to play. Felicity pushed some children out of the way to choose the game she wanted and then sat by herself to play her game.

The lunch bell sounded and Felicity took her Mickey Mouse lunchbox outside and sat with two girls. Felicity ate her Vegemite sandwich and one of the girls explained that she was not sure whether she was inviting Felicity to her birthday party or not. Felicity crushed her Mambi noodles with her hands before eating these very quickly. Felicity's friend said to her that Felicity had a lot more food in her lunchbox than she did. Felicity ate her Crunchie as she walked to put her lunchbox away. She then started playing on the flying fox with her two friends. When Felicity had a turn she walked her feet on the ground as she could not hold herself up and was tall enough to reach the ground. The other children then got Felicity to push them on the flying fox as they ended up going a lot faster when she did. Felicity did this for about 10 minutes before one child ended up falling off and hurting herself. The girl starting crying and a number of children told the teacher what Felicity had done, however, Felicity's friends stood up for her and she did not get into trouble.

The bell rang and Felicity's class changed their home readers and Mathematics cards, however, Felicity had left both at home again. Their class then went to see a play put on by the Botanic Gardens. Felicity actively participated in this by singing and laughing throughout. After the play, Felicity's group went to do art shading where they shaded on a piece of paper while leaning on leaves, bark and other natural objects.

At recess Felicity sat inside as it was wet outside and ate her chocolate biscuits slowly. She then ate her orange. The children were told to go down and play under the COLA and after finishing her orange Felicity put gloves on and started picking up rubbish with a special device they were shown. Some other girls did this with Felicity but then they stopped and Felicity continued by herself.

Mrs Reece explained that they had a gymnastics company come to teach them gymnastics for half an hour on a Thursday. Mrs Reece tried to take the children out for an extra half an hour as sport was supposed to be an hour. They also did fitness three times per week, which was hula-hoops last term and skipping this term. Mrs Reece said that Felicity was the last person to start any type of physical activity and when they had cross country Felicity pretended she had asthma so she did not have to participate. The teachers found out subsequently that she did not have asthma.

At the end of lunch Felicity went to a production put on by the Year 6 students. Felicity said that she was not friends with Amanda anymore and did not have friends over or get asked

over to friends' houses often. When the play finished Mrs Reece got out the skipping ropes for the children and Felicity started skipping. Felicity became puffed and red very quickly.

Tyson picked up Felicity from school and started cooking as soon as we arrived home. Felicity asked Tyson what he was making.

*Felicity: What's for my tea?*

*Tyson: Chicken and vegetables roasted in the oven. We buy our chicken from Chickos. They're good there.*

Felicity said that she wanted a banana and even though Tyson told her to save it for school, she ate it anyway. Tyson said that he chose the vegetables on special to have with dinner. Felicity said, *"You better make most of the vegetables potato because it's my favourite."* Felicity started working on her lollipop artwork for school. She said that she was going to read her Bratz book after she finished colouring in. Felicity explained that they usually watched television in the morning and afternoon. She said that she wanted another banana to eat but Tyson would be able to tell. Felicity explained that she wanted to start dancing and swimming again and Tyson told her that she would be going back to doing swimming. Tyson then picked Jacqui up from work. Jacqui came home and said she was starving.

Jacqui explained that Felicity was very bright with everything but it depended what mood she was in whether she would do things or not. Felicity finally finished colouring her lollipop but threw it out as she did not like it and started colouring a new lollipop. Tyson said that he loved cooking and he learnt from Jacqui and his dad. Felicity explained that she could cook toast and noodles.

*Felicity: I know how to cook. I learnt three years ago. I'm good at it.*

*Lauren: What do you cook?*

*Felicity: I cook toast, noodles, cheese under the grill but only under my Pop's grill. I can cook on the barbeque but I need someone else to turn it off and I need an adult watching in case I make a mistake.*

Tyson turned the television on to "Temptation" and Jacqui and Tyson watched this show while Felicity continued colouring her lollipop. Felicity then started to watch the television program while she tried to get rid of her hiccups. Jacqui told Felicity that she bought her a new book to read.

Jacqui asked Felicity if she was going to have avocado and spinach and Felicity said she would if she could have Feta cheese with it.

*Jacqui: Are you going to have spinach tonight Felicity? Tyson cooked it for you.*

*Felicity: I want a bit of cheese with it.*

*Jacqui: And avocado. You love green things.*

*Felicity: No, no, no, no, no.*

*Jacqui: You love green things.*

*Felicity: Oh avocado.*

*Jacqui: Did you put onion in?*

*Tyson: Yes.*

*Felicity: Onion! Ewwww.*

*Tyson: I was going to do a curry tonight but she doesn't like curry.*

*Felicity: Ewwwww.*

At 5:20pm dinner was ready and Felicity was given chicken with the skin on, potato and Feta cheese. Felicity did not want spinach, onion or cauliflower. Felicity ate her chicken with her hands and ate fairly quickly. She then helped herself to more potato, chicken and Feta cheese. Jacqui got herself another full plate of dinner and explained that she always had two plates full at dinner. Jacqui tried to encourage Felicity to have spinach but she did not want any.

*Felicity: I don't want spinach.*

*Jacqui: Just put the cheese on it.*

*Felicity: Yeah I want the cheese but I don't want the spinach.*

*Jacqui: Try to eat a bit.*

*Felicity: No.*

*Jacqui: Spinach is good for you, try to have some.*

*Felicity: I don't like it.*

*Jacqui: I'll give you a little try.*

*Felicity: NOOOOOOO!*

Felicity said that she was good at describing what different foods taste like. *"I am good at explaining foods. This Feta tastes like salty and yummy and the chicken is slimy and dry. Yummy. It's nice inside you and yum."*

Straight after dinner Jacqui offered Felicity some walnuts and sultanas and Felicity ate some sultanas but no walnuts. Felicity grabbed a banana from the bunch and Jacqui told her

she was not allowed one. Felicity started doing a game in a kids magazine while Tyson and Jacqui watched the news. Felicity asked Jacqui to help her with the game, in which she had to find certain objects on the page. Felicity's grandad rang and Felicity talked to him for a little while and asked her mum if she could stay there. Jacqui said yes but firstly made sure that it was okay with her dad.

Felicity had a shower and then stood in front of the heater with her towel wrapped around her. Jacqui read "Taniwha" out loud and Jacqui helped her pronounce many of the words. Felicity then read to herself in bed. Tyson explained that they usually had pizza on a Tuesday night as it was \$10.00 for two pizzas from Pizza Hut. Tyson and Jacqui watched television while Felicity sang to herself in her room.

At 8:00pm Felicity came out of her room and Jacqui tried to hug her but she did not want to be hugged. Jacqui went over and sat with Felicity but Felicity was very tired and cranky. Felicity asked for a drink but did not want to share her water with Jacqui. Jacqui told Felicity that she was going to bed after this show and Felicity said no.

*Jacqui: After this show you're going to bed.*

*Felicity: No.*

*Jacqui: Yes.*

*Felicity: I want to watch my own movie.*

*Jacqui: No I told you you can't.*

Felicity told me that she did most things by herself and wished she had more friends and did not like her hair. Felicity watched "Medical Emergencies" and asked for a hug from Jacqui after all. Jacqui said that she thought Felicity had enjoyed her sisters being away because she could do what she wanted. Felicity went to bed at 8:20pm. Jacqui explained that her dad used to feed them well but she was a fairly big child too.

#### **4.16.2.3 Day Three (Weekend Day)**

Felicity got up at 8:40am. Jacqui asked her what she wanted for breakfast and Felicity said egg bread. Felicity lay on the lounge with her quilt over her. Felicity sat up and ate two pieces of egg bread and drank a glass of water while music played in the background. Jacqui then asked Felicity if she wanted a piece of fruit and Felicity asked for a banana, which she ate quickly. After having a shower, Felicity played with a cassette recorder. Jacqui explained that Felicity had had a late night as Tyson was working as a security guard and Jacqui let Felicity stay up and watch "Forrest Gump" with her to keep her company.

Jacqui told me that she, Renae and Tara went to a family reconciliation meeting on Friday to try to sort out some of their issues as her two daughters were still living at her sister's house. Felicity started helping Tyson get some Turkish coins together for his niece's birthday party. She threw a tantrum because she was not allowed to keep some of the coins for herself. Jacqui sent Felicity to her room where she screamed and cried uncontrollably for 15 minutes. Jacqui went into her room a few times and smacked her and told her to be quiet. She then said Felicity might not be able to go to the party if she kept carrying on. Felicity finally calmed down after Jacqui went in and started talking to her. Jacqui explained that Felicity was very tired because of the late night. Felicity helped Jacqui wrap the present and then said she wanted to play Yahtzee [dice game]. Felicity and I played Yahtzee while Jacqui scored. Jacqui offered Felicity a pear to eat as she explained Felicity had already had a banana that morning. Felicity asked Tyson to cut up the pear for her which he did. Felicity ate this while we played.

Jacqui said that they were going to watch Felicity's cousin play football for a little while but Felicity complained and said she did not want to. It ended up raining and Jacqui decided not to go. Instead they went to Warrawong to vacuum out the car, which Felicity helped to do. Felicity, Tyson, Jacqui and I arrived at Tyson's niece's birthday party and Felicity played Hungry Hippos board game with the children. Felicity then went upstairs and danced and sang to music playing up there. Felicity ate a Freddo Frog that was given to the girl as a birthday present.

Jacqui explained that Felicity was very smart and picked up things easily. She thought that Felicity's weight must have something to do with her Maori background. Jacqui said that she had noticed that Felicity's stomach had gotten a lot bigger and Felicity now had to wear her jeans very low as they would not fit over her stomach. Felicity wore her jeans that day with a black top that was continually riding up. Jacqui had to keep reminding her to pull down her t-shirt and pull her jeans up.

Felicity and the other children came downstairs and started eating things from the platter of corn chips, salt and vinegar chips, pretzels, cheese and rice crackers. Felicity mostly ate corn chips and salt and vinegar chips. Jacqui told Felicity that she should try the pretzels as they were healthy but Felicity tried them and did not like them. Felicity sat down on a seat next to the food platter and ate constantly from it. She ate the last corn chip before another girl reached for it and Felicity started singing, "*Sucked in, sucked in.*" Felicity then started

playing Uno with the other children, constantly eating from the food platter. They then went back upstairs and danced together to music. Felicity spent a lot of time with Yasmin who was in Year 5 but was the same height as Felicity. Felicity then came downstairs and ate some more chips.

At 3:40pm, Renae and Tara came over for half an hour as they were living two streets away. They sat in the lounge room with Jacqui and Felicity and chatted as they ate chips. They left and Tyson's brother put on "The Simpsons" movie for the children to watch. When the movie finished Felicity explained how much she enjoyed it. She went upstairs for 20 minutes and danced with the girls.

At 5:30pm the dinner arrived which was catered from Chickos. This included barbeque chicken, chips, lasagne, garden salad, potato salad, hummus, bread, rice sticks and beetroot. Jacqui dished up Felicity's dinner and offered her different things, however, Felicity only wanted chicken and chips. Felicity ate two chicken drumsticks and a plate full of hot chips in the lounge room with the other children. Twenty minutes later Felicity came out of the lounge room and said that she did not like one of her chicken drumsticks as it was too spicy so Tyson gave her another big piece of chicken. Felicity went into the lounge room to eat it. After finishing dinner, she watched television with the children.

Dessert was then served, which included a birthday sponge cake, chocolate cake, apple crumble, berry forest cake and berry yoghurt for 25 people. Tyson's sister asked everyone what they wanted for dessert and Felicity chose birthday cake and chocolate cake, with no one having only one piece of dessert. Felicity ate all her chocolate cake but did not like the sponge cake. Jacqui explained that Felicity always selected the dessert that looks the nicest and not the ones she would enjoy the most. She said that Felicity would have loved the berry yoghurt. After finishing dessert, Felicity asked the birthday girl to go upstairs and dance again which they did. At 7:30pm Jacqui tried to get Felicity to come downstairs so they could go home but Felicity continued to dance.

*Jacqui: Come on Felicity.*

*Felicity: No I'm not leaving the disco.*

Tyson's two sons also arrived at the party late, one aged 16 and the other 17. Felicity finally came downstairs and we left. The birthday girl gave Felicity a lolly bag, which she was

extremely excited about. The lolly bag consisted of a number of chocolate bars and other lollies. Felicity gave Yasmin a hug goodbye.

On the way home Felicity ate a Fantale and lollipop. Jacqui told Felicity not to eat any lollies as she would feel sick.

*Jacqui: Don't eat those now or you'll get a sore belly.*

*Felicity: No I won't.*

Jacqui dropped something in to Tara and Renae at her sister's house and told them to come out and say hello to Felicity, which they did quickly and then went back inside. Felicity continued to eat other lollies on the way home. She started blowing on her party blower and Jacqui became mad at her and told her to stop, however, this did not appear to faze Felicity.

*Jacqui: Hand it here or I'll pull over and smack you.*

*Felicity: No you won't.*

After arriving home, Felicity and Jacqui selected a book for Felicity to read. Felicity read in bed aloud to Jacqui until she turned out the light at 8:40pm. Felicity started to sing in bed. Jacqui told her to go to sleep but she continued to sing.

Jacqui said that she loved eating healthy foods and lost 60 kilograms by doing SureSlim. She explained that her health had suffered that year and had been buying the wrong foods and it was just a matter of getting out of those habits. Jacqui said that sometimes Tyson and Felicity were as bad as each other as they would open a big packet of chips and eat the entire bag in one night. Felicity blamed it on Tyson but she knew it was her too. Jacqui said that their family overindulged. If there was something nice then they would have to eat it all at once. Jacqui thought that Felicity would grow out of her weight as her other children were chubby when they were younger but not as much as Felicity.



#### **4.17 A TYPICAL DAY IN THE LIFE OF FELICITY ROSE**

7:20am	Gets out of bed and lies on lounge
7:30am	Eats breakfast (Weetbix and Corn Flakes with full cream milk or egg bread) sitting on the lounge with the radio on in the background
7:50am	Has shower and gets ready
8:05am	Leaves for school (either walks or gets a lift)
8:20am	Sits on seat at school
8:35am	Wanders around and talks to different people
9:00am	Class
11:00am	Sits with friends and eats lunch consisting of sandwich (white bread with peanut butter, cheese or Vegemite) and up to three high-sugar snacks (small chocolate bar, noodles, cake) and a bottle of water. Then plays on play equipment, skips, reads, talks or plays on computers in the computer room
11:50am	Class
1:10pm	Eats one nutritious snack (fruit or Cruskits) and water with friends and then plays on equipment, skips, reads, talks or plays on the computer in the computer room
3:00pm	Gets lift home
3:10 – 5:30pm	Eats afternoon snack (fruit) while watching television, doing homework, playing board games, talking to Tyson or helping Tyson prepare dinner
5:30pm	Watches television
6:00pm	Eats dinner on lounge while watching television (cannelloni with spinach and ricotta and a tomato-based sauce)
6:20pm	Continues watching television or goes to Maori culture
7:00pm	Has a plate of fruit while watching television
7:10 – 8:30pm	Watches television or reads
8:30pm	Reads in bed

Number of hours slept: 10

## **4.18 THEMES FOR FELICITY ROSE**

### **4.18.1 Dietary Behaviour Factors**

Both Felicity's mum, Jacqui, and her step-dad, Tyson, were obese. Although Jacqui had recently lost weight by using a weight-loss company, SureSlim, she still had a lot of excess weight. Felicity had three older siblings, all of whom were overweight.

Felicity's breakfast was too large and quite energy-dense. Instead of making a change to low fat milk, Felicity had full cream milk when she had cereal also. Even after eating a huge breakfast, Jacqui and Tyson would still offer Felicity more food. Tyson was not a good role model as he never ate breakfast in the morning. Felicity's lunch was moderately healthy and the portion sizes were usually suitable.

Felicity's snacks at school were usually high in sugar and the portion sizes were either too big or she was given too many snacks. Even after school, Felicity ate far too much food. Felicity was always offered fruit as a snack at home, which she enjoyed, however, she often had too many servings of fruit at a time. Even after dinner, Felicity was offered fruit as a snack, however, at other times the family had chocolate. When high-sugar or energy-dense foods were available, Felicity took advantage of this and ate it instead of a healthier option, always eating a large amount. When Felicity's grandad was home, he would often cook Felicity toast for afternoon tea, which meant she was not hungry at dinnertime.

Dinner was often energy-dense. Felicity was served an adult-sized meal and after finishing that either helped herself to another plate or Jacqui served it for her. Tyson cooked most dinners and did not employ low fat cooking methods, however, Jacqui frequently did. Felicity did not like many vegetables and Jacqui and Tyson allowed her to choose what vegetables she had on her plate. Felicity had water with all of her meals and was not given a choice.

Felicity ate most of her meals in front of the television and sometimes at the kitchen bench as the Roses did not have a kitchen table. Felicity's rate of eating varied considerably, however, she would eat even when she was full.

Jacqui and Tyson provided a number of options in relation to food and often did not wait for Felicity to be hungry before they offered her more food. They did not provide many restrictions on what she ate. Jacqui did try, at times, to encourage Felicity to choose the

healthier option but this usually did not work. Tyson did not restrict this at all. Socio-economic status did affect what they bought. They would always still buy fruit and vegetables but would just choose the items on special. They often did not buy low fat options of milk, cheese and yoghurt as they did not like the taste as much and were usually more expensive. They often bought generic brands. They could, however, afford to buy treats such as chocolate every week, which were not generic brands.

Jacqui and Tyson loved food, displaying great enjoyment in cooking and eating. Jacqui had lost a significant amount of weight recently while being on SureSlim. Jacqui and Tyson encouraged fruit intake by offering it as a snack, however, they usually gave Felicity too much and did not encourage her intake of vegetables. They always ensured that they had a variety of fruits for Felicity to choose from. Tyson and Jacqui encouraged Felicity's intake of food by offering more food after she had just eaten a big meal. They always had two plates of food at dinner and Felicity copied this behaviour. Jacqui contributed to Felicity's intake of some unhealthy foods by buying unhealthy foods, encouraging her to make a cake each week and also buying fundraiser chocolates and doughnuts. When Felicity had access to these types of foods she chose these foods quite regularly as opposed to healthier options such as fruit. Felicity's siblings also appeared to be very unhealthy and she often copied some of their behaviours, however, Felicity did eat more than they ate despite their older age. Tyson had quite an unhealthy diet and ate a lot of energy-dense foods. Although Jacqui ate quite well, she ate far too much of everything. Felicity's siblings also opted for high-energy foods and their portion sizes were far too large.

Due to work commitments, Jacqui had little time to prepare meals at night, however, Tyson put a great deal of time and thought into the dinners he prepared as he did not work. Because Tyson did not work at all during the summer observations they had limited money to spend on food, however, they did manage to purchase high-quality food quite often. They did not purchase take-away meals often, however, Jacqui explained that they used to regularly in the past.

The school did not have a "fruit break" scheduled into their daily routines, however, this was not a problem for Felicity as she often exceeded her daily fruit intake. The school aimed to follow the guidelines set out by the NSW Healthy School Canteen Strategy, however, although there was a wide variety of green foods available, there was also a

moderate number of amber and red foods available daily. Felicity very rarely ordered her lunch from the canteen.

#### **4.18.2 Physical Activity Factors**

Felicity had poor perceived physical activity competence. Felicity found physical activity particularly hard and often got tired, red, sweaty and puffed easily. She often gasped for air when participating in a low-to-moderate intensity activity and had to stop, limiting her participation. Her fitness level was low and having extra weight made it even more difficult. Felicity found it hard to play on the play equipment as she could not easily hold her body weight up. Even though Felicity faced physical difficulties, if she liked an activity she would work hard at it.

Felicity did not enjoy participating in physical activity by herself and since Jacqui worked long hours on weekdays the responsibility fell to Tyson. Tyson did not take her places nor was she able to participate with her siblings. Felicity did not live very close to anyone from class and even if she did, she did not have very close friends that she would have spent time with outside of school. At home, Felicity did not participate in any organised sport and did not take part in non-organised sports unless Jacqui encouraged it.

Felicity spent most of her time with Tyson, who was not a very good role model for her. Tyson was not interested in physical activity and made it easy for Felicity to be inactive also. Tyson hated exercise and complained about it when Jacqui made him participate with them. Jacqui was a very good role model, having lost a large amount of weight in the past. She had incorporated incidental physical activity such as walking to work into her everyday life. Felicity's siblings were not good role models as only Corey played football of a weekend and they were all inactive of an afternoon and had a negative attitude towards any sort of exercise.

Jacqui encouraged Felicity to be active on the weekend. These activities usually involved the whole family, however, Felicity often had to wait for Jacqui to be keen to go. Felicity was always willing to participate in physical activity when she was in the mood and had the opportunity, however, she was not often motivated to participate by herself and was not keen to start playing sport. Felicity did not participate in structured or unstructured physical activity after school and was not encouraged by Tyson to do so.

Some of Felicity's peers were threatened by Felicity as she was a lot bigger and louder than the other children. Although Felicity was in Year 2, she was the biggest girl in the school. Some peers liked her, however, others thought she was too bossy and did not like spending time with her. Felicity's friendships were constantly evolving and changed significantly from summer to winter. Felicity had problems with friends at school. She was often very controlling and bossy and often her friends stopped playing with her for that reason. In winter, however, she started playing with another child who was controlling and Felicity often felt insecure around her. Felicity's friendships in winter were not as strong as previous friendship groups and she was often left out of things because of this. Felicity amused herself most of the time, however, she would play with others if they were participating in activities she wanted to do. All of Felicity's friends were fairly active, however, one of her new friends in winter was overweight.

The Roses lived on a busy road and had a small backyard. They had a trampoline and swimming pool in their yard, however, Felicity often became bored using these by herself. Felicity walked to school some days and found it extremely difficult walking up the hill. She had previously not been allowed to walk to school alone due to Jacqui's concerns for her safety.

Jacqui had limited time during the week to participate in physical activity or encourage Felicity to participate. Tyson had plenty of time to be active with Felicity or to encourage her to participate herself. Tyson disliked participating in any sort of physical activity and therefore did not encourage Felicity to be active. It was easier for him if she was inside as then he did not have to worry about watching her outdoors or taking her places. Jacqui encouraged Felicity to be active at weekends, however, she was not home of an afternoon to motivate Felicity.

Felicity's teacher ensured that the students participated in physical activity regularly during school hours. Felicity had physical education once a week, which involved skill development as well as moderate-to-high intensity games. This aimed to develop children's skills so that they became more competent and confident in physical activity. Fitness occurred three times a week for half an hour, which involved low- or moderate-intensity activities. The children were not provided with instructions and the teacher allowed students to use the equipment without informing them as to what was required.

Often the time available to participate in physical activity at school was inadequate as children had to sit and eat their food for a large proportion of each break. Felicity participated in sports during some recess and lunch breaks, which ranged in intensity, however, on other occasions she was inactive the entire break. Since Felicity did not have anyone to play with at home, she seemed to enjoy having people to play with at school.

Felicity was not involved in any organised physical activity outside of the school environment. Even though she was from a lower socio-economic status, if she was interested in a sport or activity Jacqui would have spent her money on this. Two of Felicity's siblings participated in organised activities, however, Felicity had a preference for sedentary activities.

#### **4.18.3 Sedentary Behaviour Factors**

Felicity spent a lot of time before school, after school, on the weekends and during some recess and lunch breaks in screen-related and non-screen-related sedentary activities. Felicity spent spare time in the mornings and after school in a range of non-screen-related activities and enjoyed watching television or movies at night with Jacqui and Tyson. Felicity read fiction books most nights before bed. Felicity found it easy to spend time in sedentary activities as there was often no one else to play with and it was easier to do sedentary activities by herself.

Felicity had a playroom out the back of the house, which had a Playstation set up. She also had a television in her room, however, her siblings often used this and so she often watched television with Jacqui and Tyson. Tyson put the television on quite often in the afternoon and Felicity was automatically drawn to it. Felicity spent more time in sedentary activities during the week than the weekend as she often had Jacqui to participate with in physical activity.

Tyson was very sedentary himself and did not set a good example for Felicity. Jacqui was sedentary when she got home from work and at times on the weekend, however, she did often encourage Felicity to be active on the weekend. All of Felicity's siblings were also fairly inactive. It was easier for Tyson in the afternoon if Felicity was involved in sedentary activities as he knew she was safe and happy. He did not have to worry about what she was doing and could organise dinner without having to keep her entertained. In the evening Jacqui was usually tired after work and encouraged Felicity to be inactive as she was

feeling tired herself. Tyson encouraged Felicity to be involved in sedentary activities at the weekend as this meant he would not have to be active and he enjoyed sedentary activities.

Felicity did not have many rules and restrictions when it came to sedentary activities. If Felicity was happy then Jacqui and Tyson often let her do what she wanted. Felicity's bedtime was 8:30pm and Jacqui tried to enforce this but Felicity frequently threw a tantrum, as she was not ready to go to bed. Most nights she did not get enough sleep for a seven-year-old girl.

Jacqui was extremely busy with full-time work and often did not get home until after dark. Jacqui quite often participated in physical activity with Felicity on the weekend, however, during the week Felicity was quite sedentary as Jacqui was not there to encourage her to be less sedentary.

#### **4.18.4 Personal and Social Factors**

Felicity had a fun and vibrant personality and enjoyed being in control. She could be dominating, controlling and stubborn, at times, and tried to get her own way whenever possible. Felicity's mood and attitude varied. She could be energetic and outgoing on occasions but then inactive, quiet and shy at other times. She had a very sensitive and emotional side and quite often became upset at school and at home.

Felicity did not like her appearance. She hated her hair and was self-conscious with her weight, at times, as she tried to cover her body. At other times, however, she used her weight and height to her advantage when she endeavoured to get her own way amongst peers at school. Felicity's weight had increased substantially from summer to winter, with even Jacqui commenting that her stomach had grown much bigger. Felicity was confident in her scholastic ability and behaviour and believed she was liked amongst her peers. She generally abided by rules at home, however, this was not the case at school. Felicity abided by Jacqui's rules and requests more than Tyson's. Jacqui was a loving and supportive mother who cared for all of her children. She wanted all of her children to be happy, however, she could also be strict towards Felicity when she had to be.

Felicity and Jacqui had a strong, affectionate relationship. Jacqui indulged Felicity and gave her a lot of attention because she was the youngest and also the most demanding. She had adopted a permissive parenting style and did not set boundaries around food, sedentary

behaviours and bedtime. Felicity did not see her dad often. She did not have a close relationship with her step-dad, Tyson, however, they did appear to grow closer from summer to winter.

Felicity did not have a strong relationship with her three siblings. They often ignored her and left her out most of the time. In summer, her three siblings spent a lot of time together and each sibling would only associate with Felicity if the other two siblings were not home. Felicity did not seem perturbed by her lack of relationship with her siblings and enjoyed playing games by herself. She often did talk about her siblings and her love for them was evident. They were, however, not very good role models as they were quite inactive and slightly overweight. They often became frustrated with the attention Felicity received from Jacqui and frequently acted too “cool” to engage in family activities. Felicity would not talk very much with her siblings and they therefore rarely fought. Felicity, however, often became frustrated when she could not sleep in her own bed as Corey was sleeping in it. In winter, Felicity’s two sisters had run-away from home and although she did miss them a little, she also liked the freedom of being able to go into her room whenever she liked.

In school, her cognitive ability was average to above-average. She participated well in discussions and, when she applied herself, she often finished her work quickly. She was not motivated to work when a casual teacher took her class as she felt the work was far too easy. She excelled in art and music and had a strong passion for drama.

Felicity became quite distracting to the students at her table and would often talk a lot, for which she was frequently reprimanded. When she was not sitting with friends, she did not become distracted as often and her classroom teacher often changed the seating arrangements to avoid Felicity and other classmates’ distractions. Felicity’s work ethic was fairly poor. She often tried to avoid completing work and would either help others or wander around the room until she was told several times to do her work. Felicity was motivated to work if it was a subject area or topic she enjoyed. Felicity often forgot her Mathematics cards and home readers and regularly did not complete her homework.

Felicity and Mrs Reece had a moderately good relationship, however, no one in her class appeared to have developed a very strong rapport with their teacher. Mrs Reece became frustrated with Felicity at times as she voiced her thoughts that Felicity was lazy and was constantly trying to get out of doing her work.



## **CHAPTER 5 - CROSS-CASE ANALYSIS AND DISCUSSION**

The findings from this study have provided a unique insight into the day-to-day life and experiences of six obese children and the observed factors associated with their obesity. This chapter will provide a cross-case analysis to compare the findings from the six children by outlining the high-occurrence factors. These findings will then be discussed and interpreted in the context of Davison and Birch's Ecological Systems Model (2001) and other literature relating to factors associated with the key weight-related behaviours.

### **5.1 CROSS-CASE ANALYSIS**

This study has reinforced that the development of childhood obesity is complex with a number of high-occurrence contextual factors observed. High-occurrence was defined by its observation in the lives of five or six of the child cases.

A number of child factors were found to be an influence for all six children, including regular requests for food and a lack of self-control around food. A number of dietary behaviours were consistently found with the family environment being a key influence. Five children regularly ate either a high-sugar or energy-dense breakfast. Furthermore, all six children were regularly provided with and frequently consumed high-sugar or energy-dense snacks. Not only were the types of foods these children ate a problem but the portion sizes were far too large, based on the serving sizes outlined in the Australian Guide to Health Eating (Australian Government Department of Health and Ageing, 1998). Three children regularly ate big portion sizes at breakfast, with these same three children also eating after dinner snacks that were too large. All six children's dinner and morning and afternoon snack portions were excessive. These portion sizes were more appropriate for an adult and the parents justified this by explaining they would still be hungry if they did not have a large portion. Parents in all six families adopted permissive parenting practices and often let their children choose what they wanted to eat, placing no restrictions on how much could be eaten. Five of the children's parents did not model healthy dietary patterns and behaviours themselves, setting a poor example for their children. Five also regularly ate meals and snacks in front of the television. In the community context, although the children rarely bought from the canteen, all of the children's schools provided a variety of unhealthy options.

In relation to physical activity, five of the children perceived they were not very good at physical activity. This affected their participation, as they did not believe their athletic

ability was as good as their peers. Physical difficulties were an issue for all children, presenting a barrier in the form of low cardiorespiratory fitness, poor fundamental movement skills and difficulties completing daily physical tasks such as getting up off the ground or getting out of bed.

Within the family context, all six children participated in small amounts of physical activity after school and on the weekend. All the children did not have someone to participate with in physical activity on a regular basis. Many were not confident or motivated to participate alone and therefore often resorted to sedentary activities that they could undertake on their own. A lack of positive role models, specifically from siblings, was an issue for all six children and five of them also received very little, if any, parental support and encouragement to participate in physical activity.

Five of the children had a small backyard, which limited the opportunity to be active without having to leave their house. There were also a number of barriers to being active in the school environment. School sport and fitness at each of the children's schools often consisted of developmentally inappropriate activities for obese children. Often these were monotonous or involved elimination games whereby the unfit children were eliminated first resulting in them being inactive for a large part of the session. The time schools allowed for physical activity play during recess and lunch was found to be inadequate for all of these children. All of them either did not participate or were involved in low-intensity activities during recess and lunch breaks in schools.

It should be acknowledged that while separate summer and winter observations took place to cater for differences in activity levels in different seasons, there did not appear to be substantial differences. Two children joined an organised sport in winter, however, they also appeared to spend less time in non-organised activities throughout the observation days.

There were a number of high-occurrence factors related to sedentary behaviours for the children in this study. All enjoyed sedentary activities and felt confident when participating in these compared with physical activities. Five of the children substantially exceeded the recommendation of two hours a day in screen-related activities (Australian Government Department of Health and Ageing, 2004), especially on weekends and after-school. Similarly, the same five children read books regularly.

The family environment had a large influence on time spent in sedentary activities. All of the children's family environments encouraged participation in sedentary activities and, more specifically, small screen recreation, by having more than two televisions and other types of electronic media in the house. Not only did these children enjoy participating in small screen recreation but so did the friends of five of the children. All six children's parents adopted a permissive parenting style and either had a lack of rules related to when and how long their child participated in sedentary activities or did not enforce the rules. Parents from all six families regularly encouraged their child to participate in sedentary behaviours by role modelling these types of behaviours and using small screen recreation as a proxy babysitter while they completed other tasks. On a positive note, five of the children's parents did not use sedentary activities as a reward.

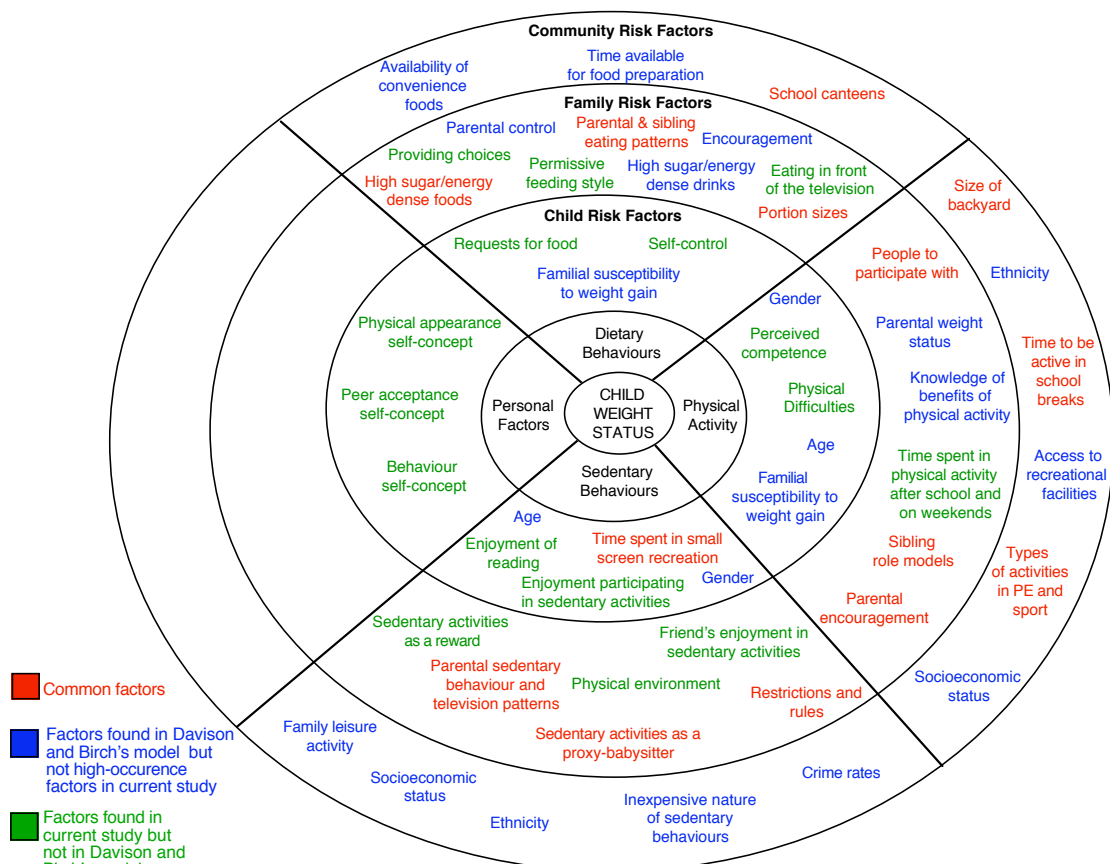
There were a number of personal characteristics that affected the weight status of the children in this study. These were found to impact upon all of the children's behaviours. Poor physical appearance self-concept was an issue, which manifested across all facets of their lives. All children showed good behavioural self-concept. Five of the children had positive peer acceptance self-concept even if in reality a number of them were not popular amongst their peers.

## **5.2 DISCUSSION**

This study provides an insight into the risk factors, the relationships among these risk factors, and the potential influence of each risk factor on the weight status of an obese child. It shows that development or change in weight status needs to take into account the context in which the individual is embedded. My study was conducted across all aspects and contexts of obese children's lives. It is therefore appropriate to use a contextual model, such as Davison and Birch's Ecological Systems Model (2001), to frame the cross-case discussion for each of the three main behaviours influencing child obesity (dietary behaviours, physical activity and sedentary behaviours) (see Figure 2.1). This model was only used after data collection and analysis had taken place and therefore factors found in this study were subsequently mapped against Davison and Birch's risk factors. Davison and Birch's (2001) model represents factors related to childhood obesity, based on the findings from determinants and correlates studies. Their model highlights the importance of taking into account the environment in which an individual is located in order to understand the emergence of a specific feature. This contextual model shows the child characteristics impacting on a child's weight status. These factors are not considered in isolation but also

in relation to the family, community and larger contexts. For the three key behaviours influencing child obesity, I will therefore examine child, family and community characteristics.

Prior to exploring these characteristics it is important to understand how they are defined in the context of this study. Child characteristics relate specifically to those risk factors directly affecting the child. These include age, gender, susceptibility to weight gain, personality, and likes and dislikes (Davison & Birch, 2001). Family characteristics incorporate parenting styles and practices, sibling and peer influences and all other aspects of the home environment. Community characteristics relate to societal, demographic and larger environmental factors. They include school context, parental work-related demands, ethnic background, and socio-economic status, which all influence a child's weight status as a result of their influence on child and family characteristics. Results will be discussed and compared with those outlined in Davison and Birch's contextual model and other studies where appropriate. Figure 5.1 is a comparative chart, showing similarities and differences between Davison and Birch's model and the findings of this current study.



**Figure 5.1: Comparative chart**

### **5.2.1 Dietary Behaviours**

A number of high-occurrence dietary behaviours that were common among the participants in the study have also been reported in Davison and Birch's (2001) Ecological Systems Model. These are shown in red in Figure 5.1. While no high-occurrence child characteristics were similar, the family characteristics which were common included the consumption of high-sugar or energy-dense foods, large portion sizes and parental and sibling eating patterns and role modelling. For the community context, school canteens provided a wide range of unhealthy foods although the children did not regularly purchase food from them.

High-sugar and energy-dense breakfasts and snacks have not only been identified in this study but by other researchers (McGloin et al., 2002). This could be explained by many children enjoying these types of foods rather than more nutritious types. Children are more likely to eat more of the foods that they prefer (Anliker, Bartoshuk, Ferris, & Hooks, 1991), which is a problem as this can lead to over-consuming unhealthy foods. This idea is supported by other research, which highlights that children typically prefer sweeter tastes (Anliker et al., 1991) and high-energy foods (Johnson, McPhee, & Birch, 1991). The preference for energy-dense foods has been found to predict adiposity in children (Fisher & Birch, 1995). Social learning has a powerful effect as children often model their food intake on those whom they respect around them (Benton, 2004), for example parents, siblings or peers. Even though most of these children did not have a good relationship with their siblings, their older siblings still modelled eating patterns and behaviours which were mostly unhealthy.

Consistent with Davison and Birch (2001), this study found that portion sizes were a problem for all of the children at different meal times. Contrary to popular thought, children do not necessarily eat until they are full. Rather, if given a large portion they may overeat (Levitsky & Youn, 2004). Some pressure comes from parents such as those who suggest children have to "clean their plate" or eat dinner if they want dessert (Birch & Fisher, 1998). Studies have shown, however, that children overeat if given a large portion compared with a smaller portion (Raynor & Wing, 2007; Rolls, 2003). Furthermore, research has shown that obese children are provided with and eat larger portions than non-obese children (Waxman & Stunkard, 1980). In this study many of the parents were aware that they were serving their child a larger meal than other family members and knew that this exceeded the recommended portion sizes. These parents provided their obese child with larger portions as they believed that their child would be hungry otherwise. This is a

concern since research has found that large portion sizes may distort visual cues and decrease an awareness of satiety and food consumption (Rolls, Roe, Kral, Meengs, & Wall, 2004; Wansink, Painter, & North, 2005).

Both Davison and Birch (2001) and this current study found that parental and sibling eating patterns and preferences were associated with poorer dietary behaviours. For children, eating has been shown to be a social behaviour, and other eaters, including parents, other adults, peers, and siblings, influence the development of their own food preferences and eating behaviours (Birch & Fisher, 1998). Research has shown similarities between child and parent patterns of dietary intake (Laskarzewski et al., 1980; Oliveria et al., 1992; Perusse et al., 1988; Vauthier, Lluch, Lecomte, Artur, & Herberth, 1996) and associations have been found between the food preferences of children and parents (Borah-Giddens & Falciglia, 1993). Parents act as role models for these children and it is highly likely that children will want to eat foods they see their parents consuming (Birch & Marlin, 1982). This may also be the case for older siblings as they have been shown to influence the eating behaviours of younger children (Birch & Fisher, 1998). This is concerning in the case of a number of the parents and siblings in the current study who regularly consumed foods that were energy-dense.

While both Davison and Birch's model and my study identified the impact the school canteen could have on a child's weight, the children in my study rarely purchased from it. Davison and Birch (2001) found that school lunches in the United Kingdom and the United States of America were usually quite unhealthy and similarly my results found that these six Australian school canteens provided many unhealthy options for the children. Differences do exist between the school lunch systems of Australia, the United Kingdom and the United States of America. While a small number of children in Australia buy their lunch at the canteen, most children from the United Kingdom and the United States of America purchase their lunch in a cafeteria-style environment. The nutritional state of these Australian school canteens is surprising, particularly since a policy was established in 2003 in New South Wales, which mandated healthy school canteens in all government schools and recommended the same for Catholic and Independent sectors (NSW Health, 2004).

Research suggests that school nutrition policies play an important role in improving children's health and nutritional status (Davis, David, Northington, Moll, & Kolar, 2002; Perez-Rodrigo & Aranceta, 2003). Only a small number of the children in this study,

however, regularly purchased their recess and lunch from the school canteen. This is consistent with prior research, which found that 86% of children in Australia brought their lunch from home (Bell & Swinburn, 2004). Those children in this study who did buy their lunch or snacks at the canteen, however, did not purchase a nutritious option. This is consistent with the findings of other research, which has shown that children using the canteen often tended to purchase less healthy foods and high-sugar drinks (Finch, Sutherland, Harrison, & Collins, 2007). While this was the case, when they did buy their lunch or snacks at the canteen it was particularly important for the canteen to provide healthy options, eliminating some of these less nutritious options. This is particularly the case for these children who may not be exposed to a healthy diet in their home environment.

Although there were factors that aligned this study and Davison and Birch's (2001) model, there were also a number that were mentioned by Davison and Birch that were either low- or moderate-occurrence factors in my study. These are shown in blue in Figure 5.1. Low-occurrence was defined as being a risk factor for one or two of the children in my study and moderate-occurrence for three or four children. For the child characteristics this included familial susceptibility to weight gain, however, because of the homogeneous nature and the small size of the sample this was only an issue for half of the children in the current study. For family and community characteristics this incorporated the consumption of high sugar and energy-dense drinks, parental control of when, what and how much to eat; encouragement to eat in absence of hunger; time available for food preparation; and the availability of convenience foods. While Davison and Birch found that controlling a child's food intake was a risk factor for poor dietary behaviours, my study found that a lack of restrictions and a permissive parenting style was an issue. Each of these risk factors were not high-occurrence factors in my study, however, this does not mean that they are not important factors affecting a child's weight status. These factors were observed to be a problem for a small number of children in my study and therefore it cannot be generalised that these factors did not affect the weight status of the children in this study. In actual fact these risk factors existed for between one and four of the children.

There were also high-occurrence child and family characteristics for the children in this study that were not cited by Davison and Birch (2001). These are shown in green in Figure 5.1. For the child risk factors these included regularly requesting food and a lack of self-control. Lack of self-control is based on the serving sizes and number of serves

recommended for children 5 to 12 years of age in the Australian Guide to Healthy Eating (Australian Government Department of Health and Ageing, 1998). Family characteristics consisted of regularly eating meals in front of the television, providing children with choices surrounding their diet and a permissive parenting style. Although these were not mentioned as risk factors to a child's weight status by Davison and Birch (2001), they have subsequently been found by other researchers to be important risk factors (Bedrunikova, 2007; Coon, Goldberg, Rogers, & Tucker, 2001; Crossman, 2005; Ebbeling, Pawlak, & Ludwig, 2002; Fiates, Amboni, & Teixeira, 2007; Moens, Braet, & Soetens, 2007).

This study found that regularly requesting food was a problem for all of the children. Previous studies have focused on the relationship between television viewing and media advertisements and food requests (Nestle, 2006; Taras, Sallis, Patterson, Nader, & Nelson, 1989) and food requests during mealtimes (Klesges, Coates, & Brown, 1986), however very few studies have focused on the relationship between requests for food and child obesity generally. Since children have a preference for high-sugar (Anliker et al., 1991) and energy-dense foods (Johnson et al., 1991), they may be more likely to request these types of foods as opposed to those with a higher nutritional value. Parents are responsible for the foods kept in the household and research has shown that the foods made available to the child influences what they request (Campbell, Crawford, & Hesketh, 2006). The parents in this study kept foods they knew their children liked, as they feared that food would be wasted or their child would go hungry otherwise. Many of the children also ate out of boredom, which is consistent with prior research (Nowak, 1998). For some of the children in this study they tended to associate certain activities such as television watching with eating as this had become a routine for them. This has been shown to be the case for a number of children (Robinson, 2001). Even when these children did not request food, they were offered food by their parents and encouraged to snack to "tide them over" to their next meal.

All of the children in this study lacked self-control in relation to food intake. While Davison and Birch (2001) did not include this in their model, it has been included in other research. Ebbeling and colleagues (2002) found that compared with their non-obese counterparts, obese adolescents were more likely to indulge in fatty foods and were less able to compensate for this excess energy input. All of the parents in this study adopted a permissive style of parenting, which has been linked to lower levels of self-regulation skills (McMaster & Wintre, 1996; Patock-Peckham, Cheong, Balhorn, & Nagoshi, 2001). The children in this study were served large portions, given access to a range of foods and able



to choose when, what and how much they ate. They therefore had an unrealistic view of the types of food and how much they should be eating. Many of these children also often ate while they were participating in a different activity, in particular television watching, which has been shown to affect their ability to regulate how much they eat (Fiates et al., 2007). The regular requests for food, however, may not necessarily reflect a lack of self-control but may be due to an increased appetite or increased preference for energy dense foods. These children may have been hungrier than their normal weight peers for a number of reasons. For example, it has been shown that high levels of circulating glucose and insulin in utero may be related to a child's hunger and food preferences in early life (Ong et al., 2004). In this case, a constantly demanding child will create a parent who appears permissive but may arguably be responding appropriately to their child's needs.

Davison and Birch (2001) did not specifically refer to eating in front of the television but evidence suggests that children with a higher weight status are more likely than normal-weight children to eat their meals in front of the television (Carter, 2000). This is concerning for obese children especially since it is known that children who eat with their families without having the television on are more likely to consume healthier meals (Coon et al., 2001).

Many of the children in this study became distracted when eating their meals in front of the television. This has also been identified in the literature, showing that children who eat in front of the television become easily distracted and do not concentrate on their food (Fiates et al., 2007). This led to the children consuming larger portions when they ate in front of the television, ignoring signs of fullness. Literature has shown that many obese children often find it difficult to identify levels of hunger and fullness and people who watch television while eating also tend to be unaware of how much they eat, which encourages overeating (Fiates et al., 2007). Many of the parents believed that eating in front of the television meant that their child behaved better as it avoided table conflict and kept him/her happy, which is consistent with the literature (Bedrunkova, 2007). On most occasions, not all family members were home for meals, which may have meant that it was easier for them to eat in front of the television instead of sitting at the dinner table. The dinner table, however, is a good opportunity for conversation and social interaction between family members. Eating in front of the television seemed to impede a child's relationship with other family members, which has also been shown to be particularly important for a child with weight issues (Crossman, 2005).

All of the parents adopted a permissive parenting style, whereby children were allowed to make their own decisions regarding what they ate and the amount of food consumed. Permissive parents are considered to lack control over the child's eating and let the child eat whatever he/she wants (Anliker, Laus, Samonds, & Beal, 1992). Parenting style has been found by other researchers to affect the behaviours of children. Adopting a permissive parenting style was found to be most prevalent in families with overweight children (Moens et al., 2007). Many of the parents in this study did not try to control their child's eating, as they wanted to avoid dealing with conflicts when their lives were already busy. If healthy eating behaviours and self-regulation are developed in the context of low levels of parental control then one would expect that children with permissive parents would be most likely to develop these characteristics. However, it is more likely that a certain amount of parental guidance and control is necessary to develop self-regulation and eating patterns. (see section 2.5.1).

All of the children were provided with too much choice regarding when to eat, what to eat and how much to eat. While Davison and Birch (2001) emphasise that parents may control what an obese child eats, this study found that some parents were also giving children too much choice and employing a permissive parenting approach. When given the choice of what to eat, many children chose less nutritious foods, which is consistent with prior research (Eppright, Fox, Fryer, Lamkin, & Vivian, 1970). Since obese children have a preference for unhealthy foods it is concerning that they are given so many choices around food as they are more likely to select these types of foods as opposed to those with nutritional value (Birch & Fisher, 1998). This may be explained by having greater access to options with low nutritional values compared to those with high nutritional value (Davison & Birch, 2001).

### **5.2.2 Physical Activity**

There were a number of high-occurrence physical activity-related factors that were common among the participants in the study, and also appear in Davison and Birch's (2001) Ecological Systems Model. These are shown in red in Figure 5.1. While there were no high-occurrence child and community characteristics that were similar, common family risk factors included not having anyone to play with, lack of sibling role models and no parental encouragement to participate in physical activity.

All the children felt they did not have anyone to be active with outside the school environment, including friends, siblings and parents. This highlights the importance of having active family members and peers with whom to participate in order to shape and support children's participation in physical activity. Literature shows that children are more active when they have someone with whom they can participate (Goran et al., 2003; Goran, Reynolds, & Lindquist, 1999; Sallis et al., 2000; Trost, Kerr, Ward, & Pate, 2001). Many physical activities undertaken by children require another participant, for example, hide and seek, kicking a soccer ball, playing handball, playing tip or throwing a netball. If children do not have siblings or friends with whom they can be active, the responsibility falls with their parents. Many of the parents in this study, however, were not active with their child for a number of reasons. Some parents felt their child could not keep up and lacked skills and fitness to participate in particular physical activities. Some had a poor relationship with their child, making it less motivating to participate together. A number of parents were embarrassed to be seen participating with their obese child who had poorer skills and lacked fitness. A lack of time was a barrier for some of the parents, with literature showing that parents are busier and have less time these days (Strazdins & Loughrey, 2007). Davison and Birch (2001) also identified lack of time and parental work hours as a barrier to being active, by leaving less time available to support and encourage their children's activities.

If children do not have siblings or parents to participate in physical activity with, they may rely on participating with their friends. Not only do obese children find it harder to make and keep friends than non-obese children (Falkner et al., 2001), they have also been shown to have lower movement skill proficiency (Okely, Booth, & Chey, 2004; Southall, Okely, & Steele, 2004), perceived competence (Franklin et al., 2006; Southall et al., 2004) and cardiorespiratory fitness (Slaughter, Lohman, & Misner, 1980; Watson, 1988) than other children. Children are often drawn to being active with someone if that person is skilful and can participate with them, which poses a further barrier for obese children.

None of the children had siblings who acted as a role model for them. Davison and Birch (2001) suggest that siblings can assist in setting an example for children. Similarly, these researchers stated that peer interactions and activity patterns may also shape children's inclination toward and participation in physical activity (Davison & Birch, 2001). Five of the children in this study did not have a good relationship with their siblings, which is concerning as siblings are a strong source of motivation when it comes to participation in physical activities (Freedson & Evenson, 1991; Moore et al., 1991; Sallis, Patterson,

McKenzie, & Nader, 1988). It may be particularly important for these children to have a sibling role model as many of these children do not have parental role models. Siblings can be a role model as well as someone with whom these children can participate (Andersen & Wold, 1992; Perusse, Tremblay, Leblanc, & Bouchard, 1986; Stucky-Ropp & DiLorenzo, 1993). Older siblings often provide cues for activity or inactivity, with younger siblings looking up to the older ones and copying their behaviours (Lamb & Sutton-Smith, 1982). If older siblings are not physically active or do not model these healthy behaviours, younger ones are less likely to be active. Previously children could play more frequently in their neighbourhood and find a friend to be active, however, now children play less in these environments due to parental concerns about safety and increased traffic (Timperio, Salmon, Telford, & Crawford, 2004; Weir, Etelson, & Brand, 2006). As such, there is an increased need for siblings to be playmates.

External motivation is important for obese children especially since they may not be internally motivated to be physically active. Older siblings may also teach their younger siblings locomotor and non-locomotor skills, which would assist in developing their perceived competence and enjoyment in physical activity (Eccles, Wigfield, & Schiefele, 1998). Literature has shown that children who perceive they are skilled are more likely to increase their participation in physical activity (Davison, Downs, & Birch, 2006).

Lack of parental encouragement for physical activity was a common physical activity risk factor. Parental encouragement consists of transporting the child, observing activity and providing ongoing support for physical activity (Troost et al., 2001). Parents provide most of the cues for physical activity for children of this age (Moore et al., 1991). For example, they transport, pay costs, suggest what organised sports to play, and initiate unstructured activities such as bike riding, swimming or going to the park. If parents do not encourage children in these areas it makes it less likely that the child will participate (Troost et al., 2001).

There were also common community characteristics between Davison and Birch's (2001) risk factors and my findings. These included having a small backyard, an inadequate amount of time available to be active during recess and lunch at school, and inadequate activities for physical education.

Having a small backyard limited the amount of physical activity the children could do at home, especially when their parents restricted where the children were allowed to go for safety reasons. Having a small backyard has been linked with lower levels of activity among children (Hesketh, Waters, Green, Salmon, & Williams, 2005; Timperio et al., 2004; Zabinski, Saelens, Stein, Hayden-Wade, & Wilfley, 2003). Given that houses are occupying a larger “footprint” on blocks of land and that the size of the average block of land is decreasing (Australian Bureau of Statistics, 2004), the phenomenon of a small backyard is becoming more common (Hesketh et al., 2005). For primary school children, the backyard may be the only safe environment for physical activity. Davison and Birch (2001) identified that a lack of access to recreational facilities was a risk factor as there has been a decrease in accessing recreational facilities due to urban sprawl and greater distances of such facilities from the home. Increasing concerns about stranger danger (Morris, Wang, & Lilja, 2001; Timperio et al., 2004; Valentine, 1997) and traffic (Hillman, Adams, & Whitelegg, 1990) have meant that parents are less likely to allow their child to play on the streets of their local neighbourhood. Crime rates and neighbourhood safety were also cited by Davison and Birch (2001) as influencing a child’s activity levels. Therefore, having a backyard that is conducive and supportive for physical activity is important.

Similarly, both Davison and Birch (2001) and my study found that the amount of unstructured playtime available for physical activity in school was inadequate. Playtime can be described as being the time allocated for play or recreation, such as recess and lunch. Davison and Birch (2001) suggested that recess and lunch breaks were being reduced in schools due to time demands and greater pressure for higher academic achievement in schools. At each of the six schools, the children had a small amount of time available to participate in physical activity during their school breaks. Children had to sit for 10-15 minutes during playtime to eat their recess or lunch, which was aimed at minimising the amount of rubbish in the playground and ensuring all children ate lunch. This study supports prior research, which suggests that the lack of available time to be active in schools was an issue affecting the physical activity behaviours of children (Zask, van Beurden, Barnett, Brooks, & Dietrich, 2001). In relation to physical activity at recess and lunch, all six children either did not participate, participated in low-intensity activities, or participated in fast-paced activities at a lower intensity than was required. Playtime in schools represents an opportunity to be active where many of the aforementioned barriers are removed. For example, the school playground is a safe environment (Gottfredson & Gottfredson, 2001), there is plenty of space (Guinhouya, Hubert, Dupont, & Alain, 2005;

Zask et al., 2001), and there is someone with whom to be active (Blatchford, 1998). As such, the time available for play can make a substantial contribution to overall physical activity levels.

Davison and Birch (2001) advocated that physical education is often a low priority in schools, with less time allocated to the planning and implementation of this subject. Inappropriate games have been found to frequently take place, especially in physical education, because teachers either lack knowledge of active games that involve maximum participation by students or do not enjoy teaching physical education. Elimination games in which obese children and the least skilled are eliminated first creates a negative physical activity experience for these children and causes decreases in their perceived competence, which in turn, negatively impacts on their actual competence and participation (Tyson-Martin, 1999). Obese children may also be targeted by peers in these types of games as they are viewed as easy to eliminate (Tyson-Martin, 1999).

While two hours of planned physical activity may be timetabled each week in many schools, it is often one of the areas that is regarded the least important and therefore it is often reduced or eliminated when schools give priority to other curriculum areas such as English, Mathematics and Science (Kahan, 2008). Physical education, however, was not regularly reduced or eliminated in the schools in this study. Literature has found a strong link between physical education and more time spent being physically active (Sallis et al., 1997), decreases in the prevalence of obesity (Gortmaker et al., 1999), and increases in fundamental movement skill proficiency and enjoyment in physical activity (Salmon et al., 2005). Research has shown that children engage in more moderate-to-vigorous physical activity in non-elimination games compared with elimination games (Bruggeman, 2006). This is particularly the case for obese children who are not as skilled or physically fit and therefore may be eliminated first (Bafale, 2008; Tyson-Martin, 1999).

While there were a number of similarities between my findings and Davison and Birch's model (2001), there were also a number of physical activity risk factors cited in their model that were found in my study but were not high-occurrence factors or were not cited at all in my study. These are shown in blue in Figure 5.1. These factors included familial susceptibility to weight gain as a child risk factor and parent weight status as a family characteristic, while community characteristics incorporated socio-economic status, ethnicity and access to recreational facilities. The fact that familial susceptibility to weight

gain and parent weight status were not risk factors for all of the children in my study reinforces that it is perhaps the environment driving child obesity and its risk factors more than biological factors. Davison and Birch (2001) also incorporated a number of factors that were not risk factors for any of the children in my study. For child characteristics these included age and gender, and for family characteristics this included lack of knowledge of the benefits of exercise. Although these factors were not high-occurrence factors in my study, this does not mean that they are not important factors influencing a child's physical activity patterns. The participants of my study were a purposeful sample of six obese children and their families. These factors were either not important for any of the six participants or, in some cases, were just not important for more than four of the participants. In Davison and Birch's (2001) model, community characteristics such as socio-economic status and ethnicity refer to influences at the community level, with medium to large samples. Because my study focused on one region of New South Wales and only included six families from this community, it is not appropriate to generalise that these families represent an entire community. It is understandable that demographic factors including age, gender, socio-economic status and ethnicity would not be identified as risk factors in this study because the nature of naturalistic investigations has meant that the sample is too small and homogeneous, with all the children being obese.

A number of high-occurrence physical activity risk factors were found in my study, however, these were not cited by Davison and Birch (2001). These are shown in green in Figure 5.1. These have, however, been explored in other related studies. These child characteristics included physical difficulties and poor perceived physical activity competence. These characteristics may not have been included in Davison and Birch's model as they may arguably be difficult to measure as they are factors central to the child. Often they rely on self-report measures, which have consistently shown bias and lacked reliability or accuracy, particularly in children (Kohl, Fulton, & Caspersen, 1999; Strauss, Smith, Frame, & Forehand, 1985). Participation in a small amount of activity after-school and on weekends was cited by this study as a family risk factor but not by Davison and Birch (2001). This may be because previous studies have not directly observed the physical activity behaviours and patterns of children in their own environments and, again, have relied on self-report measures.

All of the children faced physical difficulties, in particular low cardiorespiratory fitness, poor fundamental movement skill proficiency, and limitations in performing some daily

living activities such as getting up off the floor and out of a seat. Lower cardiorespiratory fitness can be defined as the ability of the body's circulatory and respiratory systems to supply fuel and oxygen during physical activity (Quinn, 2007). This was evident in that the children in this study became fatigued more quickly than their peers, could not keep up with their activity levels, felt discomfort and on some occasions pain and therefore did not find physical activity enjoyable. Lower fitness levels have been previously reported among overweight and obese children (Slaughter et al., 1980; Watson, 1988). These children also had lower locomotor skills than their normal-weight peers, which meant that they could not easily perform skills such as running, sliding and jumping, potentially resulting in lower perceived competence and enjoyment of physical activity (Weiss, 2000). When they did try to participate they were often not included in activities, as their peers knew they were not as skilled. This is supported by literature, stating that most obese children have poorer locomotor skills in comparison to their non-obese peers (Okely et al., 2004; Southall et al., 2004). Problems performing daily living tasks and activities meant that these children became fatigued more quickly, which often stopped them from being more active and increasing their incidental physical activity. Prior research supports this finding as higher levels of body fat plus increased loads on the major joints have the potential to lead to pain and discomfort, inefficient body mechanics and further reductions in mobility (Hills, Hennig, Byrne, & Steele, 2002). Pain and discomfort lead to lower levels of enjoyment for these children, which, in turn, affect their motivation to participate in other forms of physical activity. Because these problems affect the likelihood that children will engage in physical activity, these difficulties may be part of the cycle that perpetuates the accumulation of excess body weight in children.

The finding that the majority of the children in the current study had poor perceived physical competence is consistent with prior research (Franklin et al., 2006; Southall et al., 2004). Children are far more likely to enjoy and participate in activities that they feel they are proficient in (Weiss, 2000). Research indicates that children with higher perceived physical competence are more active (Marsh, 1996) and physically fit (Marsh, 1996; Wang, Chatzisarantis, Spray, & Biddle, 2002) than those with low perceived competence. For the children in this current study this may deter them from participating in physical activity. These children may not be confident to try new activities and participate in unfamiliar games with peers. These children would be more likely to participate in activities that they are good at and are safe, which may be more sedentary in nature.



Lack of physical activity after-school and on weekends was consistent across all six cases. Although research has shown that activity levels are lower in overweight and obese children compared with their leaner peers (Riddoch et al., 2007), after-school and on weekends are key time periods when all children should be active. Prior accelerometry data has shown that on weekdays the morning travel to school period, lunch break and immediate after-school periods, and the entire weekend are the key times when children are most active (Riddoch et al., 2007). There are many reasons why the children in this study may be inactive during these key physical activity time periods, including having no one to play with, lack of participation and encouragement from parents, lack of sibling role models, and the size of a child's backyard. Each of these factors have been discussed in detail in this section.

### **5.2.3 Sedentary Behaviours**

There were a number of sedentary behaviour risk factors found in both my study and Davison and Birch's model (2001). These are shown in red in Figure 5.1. A consistent child characteristic was time spent in small screen recreation and common family risk factors include restrictions and rules, parental sedentary behaviour and television patterns and using sedentary behaviours as a proxy babysitter. No common high-occurrence community risk factors were identified.

All of the children spent an excessive amount of time in small screen recreation and regularly exceeded the recommendation of less than two hours per day for 5 to 12-year-old children (Australian Government Department of Health and Ageing, 2004). This is consistent with prior research reporting that obese children spend excessive amounts of time in sedentary activities (Epstein, Paluch, Gordy, & Dorn, 2000). There are a number of reasons why these children spend too much time in these types of activities. The fact that they enjoy, and their friends are also interested in, these types of activities may lead to spending large amounts of time in these activities. Having easy access to different sedentary activities such as television, video and computer games as well as parents not providing or enforcing rules on small screen recreation time may also influence the behaviours of these children. Most of the parents regularly modelled poor sedentary behaviours themselves or encouraged their children to participate in these types of activities to keep them entertained while they were busy with other household and work commitments. These factors influencing excessive time spent in sedentary activities will be discussed further in this section.

Lack of restrictions and lack of enforcement of rules related to sedentary behaviours were consistent. These risk factors have also been supported by other research stating that lower levels of television viewing are associated with rules and restrictions enforced by parents for media use (Van den Bulk & Van den Bergh, 2000). Parents are busier now than they were in previous generations (Pocock & Wilson, 2001), which may suggest that they no longer have the time or energy to impose strict rules. Maintaining control over one's participation in sedentary activities is more of a challenge these days than it has ever been due to the vast amount of small screen recreational activities available. These activities have been found to be addictive (Csikszentmihalyi, 2004) as children do not yet know how to limit the time spent in these activities themselves. The wide range of small screen recreational activities available makes it easy for children to remain engaged for hours. If children do not have restrictions, it is easy for them to continue participating in these types of activities, particularly if they are enjoying them.

All of the children's parents spent a large amount of time in sedentary activities, in particular watching television, which influenced the sedentary behaviours of the children in this study. This is consistent with prior research suggesting that parents shape their children's behaviour by their own television viewing and sedentary practices (Baughcum, Burlow, Deeks, Powers, & Whitaker, 1998; Granich, Rosenerg, Knuiman, & Timperio, 2008). As previously mentioned, parents are busier these days (Pocock & Wilson, 2001), which may mean they feel a need to relax in sedentary pursuits when at home. There are also more options available making sedentary activities more enticing to adults, including pay television and game consoles (Roberts & Foehr, 2008). Since parents serve as role models for children's behaviour, children are likely to adopt similar patterns to their parents. With parents spending time in sedentary activities, children do not have their parents to encourage and participate in more active pursuits. The time they spend in these activities may replace the time parents have available to be active with their children. Also, having parents who regularly partake in sedentary activities may result in these types of activities being far more accessible and reinforced to children than physical activity leisure opportunities.

At least one parent in each family used sedentary behaviours as a proxy-babysitter when they were busy with other tasks. Literature supports the idea that many parents use sedentary activities as proxy-babysitters to keep children entertained as they do housework, cook or find time for themselves (Hersey & Jordan, 2007). The increasing demands placed

on parents have made it easier for them to allow their child to spend excessive amounts of time in these types of activities. This poses a problem because if the child's parents are encouraging this type of behaviour then children subconsciously think that it is acceptable for them to spend excessive amounts of time in small screen recreation. These routines are extremely hard to change once they have been established (Prochaska & Norcross, 2002).

Davison and Birch (2001) also incorporated a range of characteristics that were found to be moderate-occurrence characteristics or not risk factors for any of the children in my study. These are found in blue in Figure 5.1. Family leisure activity time was found to be a moderate-occurrence risk factor in the community context. There were also a number of characteristics that were not risk factors for any of the children in my study. In terms of the community context, socio-economic status, ethnicity, high rates of crime and the inexpensive nature of sedentary behaviours were cited in their model. While these characteristics were either not evident at all in my study or were important for less than four cases, it must be acknowledged that this study is a naturalistic inquiry and therefore it is understandable that these were not risk factors (see section 5.2.2 for a further explanation).

Likewise, there was a range of sedentary behaviour risk factors found in my study, which were not noted by Davison and Birch (2001), however, these have been found in other related studies. These are shown in green in Figure 5.1. For child characteristics, these included enjoyment in participating in sedentary activities and enjoyment of reading books. In relation to family characteristics, these included having friends who enjoy participating in sedentary activities and living in a physical environment that promotes sedentary behaviours.

All of the children enjoyed participating in sedentary behaviours and found it easy to do so for long periods of time. Enjoyment in sedentary behaviours is a risk factor for spending excessive time in these types of activities (Aaron, Storti, Robertson, Kriska, & LaPorte, 2002). According to Competence Motivation Theory, children are motivated to participate in a specific behaviour because they enjoy it and derive satisfaction and pleasure from it (Harter, 1993). The main sources of this enjoyment are their perceived competence and the social support they receive when participating in these activities. Many of the children in the study felt they were extremely good at sedentary activities and often had friends to participate with. Many parents also often encouraged these behaviours through role

modelling or encouraging their child to participate while they did other activities themselves.

This current study adds another dimension to child obesity research by illustrating that most of the children enjoyed reading regularly. Again, Competence Motivation Theory hypothesises that children spend time participating in activities they enjoy and are good at (Harter, 1993) and therefore these children may spend excessive time reading because this is an activity from which they gain satisfaction and excel in. In adults, reading has not been found to be associated with obesity among men (Shields & Tremblay, 2008). Among women, those who read more than 11 hours per week were more likely to be obese than those who read for a smaller number of hours (Shields & Tremblay, 2008). To my knowledge, the relationship between child obesity and the amount of time a child reads has not been investigated, however, it could be hypothesised that findings would be similar to adults. Reading may displace time available to participate in physical activity. Parents often encourage their children to read in order to develop their reading and literacy skills. Research has shown that parents who allow time for their child to read each day had a higher reading performance (Hewison & Tizard, 1980) and this is therefore encouraged by schools. While these skills are important for children to develop, reading is often not seen as affecting the weight status of children to the same degree as small screen recreation activities. This attitude and encouragement from parents may result in children spending long periods of time reading.

In relation to family characteristics, most of the children had friends who enjoyed participating in similar sedentary activities to them and since literature suggested that peers are an influential role model for children (Kennedy, Strzempko, Danford, & Kools, 2002), this may have influenced the amount of time spent in sedentary behaviours. Since friends are a major source of social support for children, if these friends are not a positive influence to adopt healthy weight-related behaviours, then it will be more difficult for these children to adopt healthier behaviours themselves. Children discuss a number of sedentary activities during school or playtime with friends whether it is a movie, television show, or electronic games. Because obese children often try hard to fit in socially at school (Strauss et al., 1985), they may be encouraged to spend more time in these activities in order to contribute to conversations and socialise with peers. When children socialise with friends outside of school, they may be more likely to participate in small screen recreation if their friends enjoy these types of activities. Children often want to demonstrate competence to peers and

since these children are not competent in physical activity, they may strive for this in small screen recreation.

All of the children in the study lived in a physical environment that promoted the participation in sedentary behaviours, in particular, small screen recreation activities. This is consistent with other studies, which reinforce that an increase in television watching and time spent in sedentary behaviours is strongly linked to increased access to television and other forms of small screen recreation (Saelens et al., 2002). It is unclear whether new sedentary behaviours have displaced physical activity or have replaced more traditional sedentary activities, such as reading or listening to the radio. Over time, families have reported having more televisions and videocassette recorders in the home, a higher frequency of children eating meals in front of the television, and a higher percentage of children having televisions in their bedrooms (Saelens et al., 2002). In Australia, access to pay television has also substantially increased (Australian Government, 2009). Living in an environment which promotes participation in sedentary activities, makes it easy for these children to spend a large amount of time in these types of activities.

Tangential to the discussion of these findings was the unexpected finding that almost all of the parents in this study did not use sedentary behaviours as a reward. This finding is consistent with prior research (Salmon, Timperio, Telford, Carver, & Crawford, 2005), which found no connection between the use of television as a reward and the time spent in sedentary activities. If parents use this as a reward, it gives children the impression that sedentary behaviours are special and, when given the opportunity to participate in these activities, they would. However, since the parents in this study did not restrict or have rules related to the amount of time their child spends in sedentary behaviours, it was probably unnecessary for them to use these types of activities as rewards. These children could participate in sedentary activities as often as they liked and it was a large and, to them, important part of their daily activities.

#### **5.2.4 Personal Factors**

There were a number of personal characteristics that influenced all facets and behaviours of the lives of the obese children in this study, which are shown in green in Figure 5.1. These consisted of poor physical appearance self-concept, good peer acceptance self-concept, and good behavioural self-concept. Although not explicitly mentioned in Davison and Birch's model (2001), they have been cited in other literature as having an influence on a child's

weight status. While Davison and Birch (2001) focus on the risk factors for developing poor dietary, physical activity and sedentary behaviours, these personal characteristics may not only lead to developing poor weight-related behaviours but may also be a consequence of obesity. That is, they may emerge and continue because of a child's obesity status. However, unlike the previous factors, they exert their influence across many aspects of an obese child's life.

Having poor physical appearance self-concept, which refers to a person's perception of how they look, was consistent with other literature which shows that compared with thin peers, overweight children have lower self-esteem with respect to physical appearance (Franklin et al., 2006; Phillips & Hill, 1998). An individual's perception of their physical appearance can impact on their psychological experiences and development (Friedman & Brownell, 1995). A child's perceived physical appearance is influenced by how people around them react to their body and their physical appearance (National Institute on Media and the Family, 2002). Research has shown that peers believe that obese children have a poorer physical appearance than their normal-weight peers (Phillips & Hill, 1998). Children are also becoming increasingly aware of what society's standards are for the 'ideal body' as the images presented by the media of the 'ideal' shape have become increasingly thinner over the years (Spitzer, Henderson, & Zivian, 1999). When participating in physical activity, many of the children in this study became body-conscious which influenced their participation and enjoyment of physical activity. This is consistent with research showing that physical appearance and body image were barriers to young people's participation in physical activity (Sallis et al., 2000). The children in this study spent a large amount of time watching television, which is concerning for their physical appearance self-concept as research has indicated that there is a link between television watching, negative body image and eating disorders (Becker, Burwell, Gilman, Herzog, & Hamburg, 2002).

Good peer acceptance self-concept was perceived by these children. In reality, however, only half of the children were liked and accepted by their peers. Many of the children were confident to begin participating in physical activities with peers, however, they either discontinued participation themselves as they lacked the fitness and skills or were not included by peers because a number of them were not actually liked by their peers. Peer acceptance offers important opportunities for companionship and active alternatives to eating and sedentary behaviour (Bukowski, Hoza, & Boivin, 1994). The findings of this current study are not consistent with prior research suggesting that low, not high, peer

acceptance self-esteem has been strongly associated with a higher BMI (Schwimmer et al., 2003). The children in this current study may have been too young to correctly judge how their peers feel about them. The lower observed social acceptance from others to them may be expected, especially given the stigma associated with obesity and the social rejection linked to ratings of fat body shapes (Hill & Silver, 1995; Latner & Stunkard, 2003). Evidence of social marginalisation of overweight adolescents (Braet, Tanghe, Decaluwe, Moens, & Rosseel, 2004) and teasing by peers (Strauss & Pollack, 2003) also gives integrity to this aspect of self-concept.

All of the children in this study had good behavioural self-concept and felt they did the right thing and followed rules in a range of different settings. This is consistent with other research, which shows that compared with normal-weight peers, obese children did not have lower behavioural conduct self-esteem (Franklin et al., 2006; Manus & Killeen, 1995). In reality, however, two children in school and four children at home did not consistently behave well, follow instructions or abide by rules. This is consistent with research on emotional and behavioural functioning, which found that obese children have more behaviour problems than non-obese children (Bosch, Stradmeijer, & Seidell, 2004). A link has been found between poor behaviour and permissive parenting and since the parents of all six families had adopted a permissive parenting style, this may assist in explaining why a number of these children behaved poorly in different settings. For the children who did not behave well at school, this affected their relationships with peers who often got tired of their poor behaviour. They were often left out of lunchtime activities as they could not follow rules properly. This is concerning since obese children already find it harder to make and keep friends (Falkner et al., 2001). For those who misbehaved at home, this affected their relationships and closeness with parents and siblings. This poor behaviour may be explained by these children having poor global worth self-esteem and therefore “acting out” to draw attention away from their weight status. It is unclear why these children perceive that they behave well when my observations indicate a number of them do not. The relationship between perceived competence and actual behaviours is not always consistent and this may explain the difference. While some studies among children did find a strong relationship between perceived and actual competence in physical activity (Piek, Baynam, & Barret, 2006; Ulrich, 1987), others have either indicated a moderate relationship (Raudsepp & Liblik, 2002; Rudisill, Mahar, & Meaney, 1993), or that there is no relationship at all (Bois, Sarrazin, Brustad, Trouilloud, & Cury, 2002). This may assist in

providing an explanation as to why the perceived behaviours and actual behaviours of the children differed.

### **5.3 STUDY LIMITATIONS**

The present study has certain limitations that need to be taken into account when considering the findings and its contributions to the body of research. Naturalistic inquiries are concerned with human beings in all of their complexities. The time spent with each of the children and their families was lengthy and the interactions were personal. The sheer volume of data and the detailed level of analysis meant that the research was confined to six children and their families. Only the high-occurrence factors, which were risk factors for unhealthy weight-related behaviours for five or six children, were discussed in this chapter. This meant that the factors, which were important for between one and four of the children, were not discussed and compared with other literature. Although there were a number of similarities across the cases in this study, there were also a number of differences suggesting that these risk factors will not be the same for all obese children. The complex nature of obesity means that there is often a wide range of individualised and personal factors influencing a child's weight status.

This study was limited geographically to the Illawarra region in New South Wales, Australia. A total of six observation days was spent with five of the families, while five days was spent with one family. The families involved in this study had previously inquired about an after-school child obesity treatment program. Although they did not take part in the program, they had inquired because they were aware they had a child who was obese and therefore wanted to do something to change their unhealthy weight-related behaviours. These families were also comfortable to invite me into their private lives. It is therefore possible that these families may have had better behaviours than those families who had not acknowledged their child's weight problem by inquiring about treatment programs or agreeing to let someone observe their family's everyday patterns and behaviours.

By acting as a participant observer, I understood that I would have an impact on the behaviours of the children. As the study progressed, I found myself regularly reflecting on the effect my presence was having on the children, families, teachers and other individuals with whom I was interacting. I had chosen to act as a participant observer knowing that my presence might influence the behaviours of the children I was observing. Prolonged engagement and spending time with families before starting data collection, however,



would have assisted in minimising the effect I had. By scheduling specific observation days with the families, they knew in advance the days I would be observing them. This could have affected the behaviours and activities which took place on these days. It is often argued that the recording of the behaviour in naturalistic inquiries can be biased. In this present study it was my decision what to record and therefore the findings can be categorised as subjective. I did, however, take steps to reduce the subjectivity of the data, including introducing member checks and data triangulation with field notes being complemented with digital recordings and casual conversations (refer to section 3.7.1.1).

#### **5.4 SUMMARY, RECOMMENDATIONS AND CONCLUSION**

This research was undertaken to find out what daily life was like for an obese child and what factors affect a child's weight status. The findings from this study are consistent with and contribute to past and current research theories and findings related to factors affecting the weight status of a child, in particular Davison and Birch's use of Ecological Systems Model (Davison & Birch, 2001). The research questions have been thoroughly explored and explanations for the varying results provided. This study adds to the literature on child obesity risk factors, which aims to focus on the contextual factors surrounding the whole child. These factors are not considered risk factors in isolation of each other, rather they work together in order to determine the risk of the development of excess weight.

The development of childhood obesity involves a complex set of factors from a range of contexts that interrelate to place a child at risk of developing weight problems. This research identified a large number of high-occurrence risk factors for child obesity, which were common across all six cases. Child characteristics interact with a range of other risk factors, placing a child at risk of becoming overweight. Physical difficulties affected their participation in physical activity, and high levels of sedentary behaviour and enjoyment of these activities may also place a child at risk of developing weight problems.

Within the parenting and family level, this study contributes to our understanding of the importance of parents in shaping children's physical activity, dietary and sedentary behaviours. It specifically highlights the impact parenting style can have on the behaviours of obese children. Parents act as a source of encouragement and provide their children a person with whom they can participate in physical activity. The time parents have available not only affects their participation in physical activity but also their encouragement of using sedentary activities as a proxy-babysitter for their child. Parents also have a role to play in

enforcing rules and restrictions on sedentary activities, particularly small screen recreation. Parenting practices are also influential by providing children with decisions around food, determining the number of high-sugar and energy-dense meals and snacks that are made available to these children, the size of these meals or so-called 'snacks', and providing children with opportunities to eat in front of the television. Siblings experience both shared and non-shared environments (Davison & Birch, 2001) with these children. Not only do parents assist in moulding child-behaviours but siblings and peers also have an impact. Siblings act as role models when it comes to physical activity participation as well as eating patterns and behaviours, and friends can be a source of encouragement to participate in sedentary activities. Siblings and friends may also provide these children with someone with whom to participate in physical activity, acting as a further source of motivation.

The picture would not be complete without the interaction of the community, demographic and societal characteristics. The school environment plays an influential role in shaping a child's behaviours and parents can be better supported through the school system. School policy and procedures may shape the behaviours of these children through the availability of unhealthy foods at the canteen as well as the amount of time children have to be active at recess and lunch. Teachers may have an impact on an obese child's attitudes towards physical activity through the amount of time allocated to physical education and the types of activities introduced. Schools are currently not effectively providing opportunities for children to be physically active. Since schools provide an alternative for extended care, the promotion of appropriately targetted physical activity programs or interventions after-school may assist in encouraging children to be more active in the after-school window. This would overcome some of the barriers associated with children being active at home including lack of space and equipment, limited time of parents to take children places to be active and having no one to be active with. In terms of environmental factors, the size of a child's backyard can affect their participation in non-organised physical activity in the home setting. Time spent in sedentary activities can be increased by the availability of, and the number of indoor activities, which were easy for these children to access and participate in.

In light of the findings, this study highlights that childhood obesity is a complex problem with a multifaceted aetiology. It is not as simple as an imbalance in energy intake and energy expenditure. These risk factors within the child, family and community levels do not act separately but are interconnected. It can be argued that the family plays a large role in

the initial development of child overweight and obesity. It is surprising that there are few programs that involve more than one family member. Research has shown, however, that interventions that aim for weight loss among children and their parents have more promising long-term results than those that focus solely on the child (Golan, Weizman, Apter, & Fainaru, 1998). For interventions to be successful, they need to consider the variety of risk factors relating to parents and the family environment, while also accounting for child as well as community, demographic and societal characteristics.

Research assessing the predictors of child obesity has generally adopted approaches that do not reflect the contextual intricacy and dynamic systems within which risk factors for childhood obesity come to light. That is, child obesity research has traditionally not considered the family system or the multileveled context in which child risk factors emerge, such as the community and the school environment. Very few studies have focused on the daily lives of obese children and the range of behaviour settings and factors affecting their life. Studies have focused on aspects or parts of an obese child's development, however, research exposing the intricate details of their day-to-day encounters is lacking. Most of the research conducted in the area of child obesity is quantitative. Collecting both subjective and objective data at both intra- and extra-individual levels may help to alleviate some of the pitfalls associated with child obesity interventions and add greater depth to the research about the obese child.

The idea that behaviour is the result of a person's environment has been proposed by a range of researchers, one of the earliest being Lewin (1951, 1997). His work led to the development of social ecological models for understanding behaviour (Bronfenbrenner, 1977; McLeroy, Bibeau, Steckler, & Glanz, 1988). In the obesity domain, researchers and practitioners such as Davison and Birch (2001), have acknowledged a need to look at the influences of obesity outside the individual child.

To build on this current study, it may be useful to use naturalistic approaches in other areas. Focusing on the lives of non-obese children as well as obese children may help to compare their experiences and behaviours, gaining a deeper understanding of the risk factors to developing weight problems. To effectively find out the risk factors to child obesity, it would be useful to compare obese with non-obese children who live in the same neighbourhood and whose parents are the same weight status, socio-economic status cultural background and family structure. On the other hand, research is also needed with

diverse samples including different ethnic backgrounds and socio-economic status. Similar studies could be conducted with younger children to gain a clearer understanding of the development of child obesity risk factors from a younger age. If this approach were to be used to research adolescents, it would have to be modified to account for the different schooling procedures in secondary schools as well as the different social and emotional issues faced by this group of individuals. It may also be beneficial to research the effect of the amount and the type of sleep on a child's behaviours. Future research needs to adopt a broader contextual approach in order to develop far more effective interventions and programs. The success in solving this problem depends on our ability to understand the world of an obese child.

## REFERENCES

- Aaron, D. J., Storti, K. L., Robertson, R. J., Kriska, A. M., & LaPorte, R. E. (2002). Longitudinal study and the number and choice of leisure time physical activities from mid to late adolescence. *Archives of Pediatrics and Adolescent Medicine*, 156, 1075-1080.
- Abbott, R. A., Macdonald, D., Mackinnon, L., Stubbs, C. O., Lee, A. J., Harper, C., et al. (2007). *Healthy kids Queensland survey 2006 - Summary report*. Brisbane, Australia: Queensland Health.
- ACHPER. (1987). *Australian health and fitness survey 1985*. Parkside, South Australia: ACHPER.
- Adachi-Mejia, A. M., Longacre, M. R., Gibson, J. J., Beach, M. L., Titus-Ernstoff, L. T., & Dalton, M. A. (2007). Children with a TV in their bedroom at higher risk of being overweight. *International Journal of Obesity*, 31, 644-651.
- Adler, P. A., & Adler, P. (1994). Observational techniques. In N. K. Denzin & Y. K. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 248-261). Thousand Oaks, CA: Sage Publications.
- Altheide, D., & Johnson, J. M. (1998). Criteria for assessing interpretive validity in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Collecting and interpreting qualitative materials* (pp. 283-312). Thousand Oaks, CA: Sage Publications.
- American Diabetes Association. (2000). Type 2 diabetes in children and adolescents. *Pediatrics*, 105, 671-680.
- Andersen, N., & Wold, B. (1992). Parental and peer influences on leisure-time physical activity in young adolescents. *Research Quarterly for Exercise and Sport*, 63, 341-348.
- Andersen, R. E., Crespo, C. J., Bartlett, S. J., Cheskin, L. J., & Pratt, M. (1998). Relationship of physical activity and television watching with body weight and level of fatness among children: Results from the Third National Health and Nutrition Examination Survey. *Journal of American Medical Association*, 279, 938-942.
- Anliker, J. A., Bartoshuk, L., Ferris, A. M., & Hooks, L. D. (1991). Children's food preferences and genetic sensitivity to the bitter taste of 6-n-propylthioouracil (Prop). *American Journal of Clinical Nutrition*, 54, 316-320.
- Anliker, J. A., Laus, M. J., Samonds, K. W., & Beal, V. (1992). Mothers' reports of their three-year-old children's control over foods and involvement in food-related activities. *Journal of Nutrition Education*, 24, 285-291.
- Answers Corporation. (2008). Answers.com. Retrieved 14 January, 2009, from <http://www.answers.com/topic/behavior>
- Atkin, L. M., & Davies, P. S. (2000). Diet composition and body composition in preschool children. *American Journal of Clinical Nutrition*, 72(1), 15-21.
- Atlantis, E., Barnes, E. H., & Fiatarone Singh, M. A. (2006). Efficacy of exercise for treating overweight in children and adolescents: A systematic review. *International Journal of Obesity*, 30, 1027-1040.
- Attewell, P., Suazo-Garcia, B., & Battle, J. (2003). Computers and young children: Social benefit or social problem? *Social Forces*, 82(1), 277-296.
- Australian Bureau of Statistics. (2004). Are we building on smaller blocks? Retrieved September 28, 2005, from <http://www.abs.gov.au/Ausstats/abs@.nsf/Lookup/15CDFB6CDB264658CA256F02007967BE>
- Australian Government. (2009). Free-to-air television in Australia. *Get the picture* Retrieved 5th July, 2009, from <http://www.afc.gov.au/gtp/wftvanalysis.html>

- Australian Government Department of Health and Ageing. (2004). *Active kids are healthy kids: Australia's physical activity recommendations for 5-12 year olds*. Canberra, Australia: Australian Government Department of Health and Ageing.
- Australian Government Department of Health and Ageing. (1998). *The Australian Guide to Healthy Eating*. Canberra, Australia: Commonwealth of Australia.
- Aylott, M. (2006). Developing rigour in observation of the sick child: Part 1. *Paediatric Nursing*, 18(8), 38-44.
- Azizi, F., Allahverdian, S., Mirmiran, P., Rahmani, M., & Mohammadi, F. (2001). Dietary factors and body mass index in a group of Iranian adolescents: Tehran lipid and glucose study-2. *International Journal for Vitamin and Nutrition Research*, 71(2), 123-127.
- Bafile, C. (2008). Is This "It" for Tag? Retrieved 25 October, 2008, from [www.education-world.com/a\\_admin/admin/admin498.shtml](http://www.education-world.com/a_admin/admin/admin498.shtml)
- Baker, L. M. (2006). Observation: A complex research method. *Library Trends*, 55(1), 171-189.
- Ball, K., Timperio, A., & Crawford, D. (2006). Understanding environmental influences on nutrition and physical activity behaviors: Where should we look and what should we count? *International Journal of Behavioral Nutrition and Physical Activity*, 3(33).
- Bandini, L. G., Schoeller, H. N., Cyr, H. N., & Dietz, W. H. (1990). Validity of reported energy intake in obese and non-obese adolescents. *American Journal of Clinical Nutrition*, 52(3), 421-425.
- Banis, H. T., Varni, J. W., Wallander, J. L., Korsch, B. M., Jay, S. M., Adler, R., et al. (1988). Psychological and social adjustment of obese children and their families. *Child Care Health Development* 14, 157-173.
- Bao, W., Srinivasan, S. R., Wattigney, W. A., Bao, W., & Berenson, G. S. (1996). Usefulness of childhood low-density lipoprotein cholesterol level in predicting adult dyslipidemia and other cardiovascular risks. The Bogalusa Heart Study. *Archives of Internal Medicine*, 156, 1315-1320.
- Bao, W., Srinivasan, S. R., Wattigney, W. A., & Berenson, G. S. (1994). Persistence of multiple cardiovascular risk clustering related to syndrome X from childhood to young adulthood. The Bogalusa Heart Study. *Archives of Internal Medicine*, 154(16), 1842-1847.
- Baranowski, T., Baranowski, J., Cullen, K., Thompson, D., Nicklas, T. A., Zakeri, I., et al. (2003). The Fun, Food, and Fitness Project (FFFP): The Baylor GEMS Pilot Study. *Ethnicity and Disease*, 13(Suppl 1), S30-S39.
- Baranowski, T., & Nader, P. (1985). Family health behavior. In D. Turk & R. Kerns (Eds.), *Families, health and illness*. New York: Wiley.
- Baughcum, A. E., Burlow, K. A., Deeks, C. M., Powers, S. W., & Whitaker, R. C. (1998). Maternal feeding practices and childhood obesity: A focus group study of low-income mothers. *Archives of Pediatric and Adolescent Medicine*, 152, 1010-1014.
- Becker, A. E., Burwell, R. A., Gilman, S. E., Herzog, D. B., & Hamburg, P. (2002). Eating behaviours and attitudes following prolonged exposure to television among ethnic Fijian adolescent girls. *British Journal of Psychiatry*, 180, 509-514.
- Becker, H. S., & Geer, B. (1970). Participant observation and interviewing: A comparison. In W. J. Filstead (Ed.), *Qualitative methodology: Firsthand involvement with the social world* (pp. 133-142). Chicago: Markham.
- Becque, M. D., Katch, V. L., Rocchini, A. P., Marks, C. R., & Moorehead, C. (1988). Coronary risk incidence of obese adolescents: Reduction by exercise plus diet intervention. *Pediatrics*, 81, 605-612.
- Bedrunkova, R. (2007). TV - Everywhere you look. *media&internet* Retrieved 28 October, 2008, from <http://www.yomag.net/1223-tv-everywhere-you-look/>

- Beech, B. M., Klesges, R. C., Kumanyika, S. K., Murray, D. M., Klesges, L. M., McClanahan, B., et al. (2003). Child- and parent-targeted interventions: The Memphis GEMS Pilot Study. *Ethnicity and Disease*, 13(Suppl 1), S40-S53.
- Bell, A. C., & Swinburn, B. A. (2004). What are the key food groups to target for preventing obesity and improving nutrition in schools? *European Journal of Clinical Nutrition*, 58, 258-263.
- Bell, J. (1993). *Doing your research project* (2nd ed.). Buckingham, UK: Open University Press.
- Bell, J. (1999). *Doing your research project* (3rd ed.). Buckingham, UK: Open University Press.
- Bellisle, F., Rolland-Cachera, M. F., Deheeger, M., & Guillaud-Bataille, M. (1988). Obesity and food intake in children: Evidence for a role of metabolic and/or behavioral daily rhythms. *Appetite*, 11(2), 111-118.
- Benton, D. (2004). Role of parents in the determination of the food preferences of children and the development of obesity. *International Journal of Obesity*, 28, 858-869.
- Berenson, G. S. (2002). Childhood risk factors predict adult risk associated with subclinical cardiovascular disease: The Bogalusa Heart Study. *American Journal of Cardiology*, 90, 3L-7L.
- Berg, B. L. (2001). *Qualitative research methods for the social sciences* (4th ed.). Needham Heights: Pearson Education Company.
- Berk, L. E. (2000). *Child Development* (5th ed.). Boston: Allyn and Bacon.
- Berkey, C. S., Rockett, H. R., & Field, A. E. (2000). Activity, dietary intake, and weight changes in a longitudinal study of preadolescent and adolescent boys and girls. *Pediatrics*, 105(4), E56.
- Birch, L. L., & Fisher, J. O. (1998). Development of eating behaviours among children and adolescents. *Pediatrics*, 101, 539-549.
- Birch, L. L., & Marlin, D. W. (1982). I don't like it; I never tried it: Effects of exposure on two-year-old children's food preferences. *Appetite*, 3, 353-360.
- Blatchford, P. (1998). The state of play in schools. *Child Psychology and Psychiatry Review*, 3(2), 58-67.
- Blomquist, B., Borjeson, M., Larsson, Y., Persson, B., & Sterky, G. (1965). The effect of physical activity on the body measurements and work capacity of overweight boys. *Acta Paediatrica of Scandinavia*, 54, 566-572.
- Bogaert, N., Steinbeck, K. S., Baur, L. A., Brock, K., & Bermingham, M. A. (2003). Food, activity and family - Environmental vs biochemical predictors of weight gain in children. *European Journal of Clinical Nutrition*, 57, 1242-1249.
- Bogdan, R. C., & Biklen, S. K. (1992). *Qualitative research for education: An introduction to theory and methods* (2nd ed.). Boston: Allyn and Bacon.
- Bois, J. E., Sarrazin, P. G., Brustad, R. J., Trouilloud, D. O., & Cury, F. (2002). Mothers' expectations and young adolescents' perceived physical competence: A yearlong study. *Journal of Early Adolescence*, 22(4), 384-406.
- Booth, M., Dobbins, T., Aitken, R., Denney-Wilson, E., Hardy, L., Okely, A., et al. (2009). The short-term costs of managing conditions associated with overweight and obesity among Australian teenagers *Journal of Paediatrics and Child Health*, doi:10.1111/j.1440-1754.2009.01503
- Booth, M., L., Macaskill, P., Lazarus, R., & Baur, L. A. (1999). Sociodemographic distribution of measures of body fatness among children and adolescents in New South Wales, Australia. *International Journal of Obesity*, 23, 456-462.
- Booth, M., Okely, A. D., Denney-Wilson, E., Hardy, L., Yang, B., & Dobbins, T. (2006). *NSW Schools Physical Activity and Nutrition Survey (SPANS) 2004: Full report*. Sydney, Australia: NSW Department of Health.

- Booth, M. L., Dobbins, T., Okely, A. D., Denney-Wilson, E., & Hardy, L. L. (2007). Trends in the prevalence of overweight and obesity among Australian children and adolescents, 1985-1997-2004. *Obesity, 15*, 1089-1095.
- Booth, M. L., Macaskill, P., McLellan, L., Phongsavan, P., Okely, A., & Patterson, J. (1997). *NSW Schools Fitness and Physical Activity Survey*. Sydney, Australia: NSW Department of School Education.
- Booth, M. L., Wake, M., Armstrong, T., Chey, T., Hesketh, K., & Marthur, S. (2001). The epidemiology of overweight and obesity among Australian children and adolescents, 1995-97. *Australian and New Zealand Journal of Public Health, 25*(2), 162-169.
- Borah-Giddens, J., & Falciglia, G. A. (1993). A meta-analysis of the relationship in food preferences between parents and children. *Journal of Nutrition Education, 25*, 102-107.
- Bosch, J., Stradmeijer, M., & Seidell, J. C. (2004). Psychosocial characteristics of obese children/youngsters and their families: Implications for preventive and curative interventions. *Patient Education and Counseling, 55*, 353-362.
- Bourdon, S. (2002). The integration of qualitative data analysis software in research strategies: Resistances and possibilities. Retrieved 14th January, 2008, from [www.qualitative-research.net/fqs/fqs-eng.htm](http://www.qualitative-research.net/fqs/fqs-eng.htm)
- Braet, C., Tanghe, A., Decaluwe, V., Moens, E., & Rosseel, Y. (2004). Inpatient treatment for children with obesity: Weight loss, psychological well-being, and eating behaviour. *Journal of Pediatric Psychology, 29*, 519-529.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*, 513-531.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1989). Ecological systems theory. *Annals of Child Development, 6*, 187-249.
- Bruggeman, K. E. (2006). *The effects of elimination and non-elimination games on physical activity and psychosocial responses in children*. Kansas State University, Manhattan, Kansas.
- Bukowski, W. M., Hoza, B., & Boivin, M. (1994). Measuring friendship quality during pre- and early adolescence: The development and psychometric properties of the Friendship Qualities Scale. *Journal of Personality and Social Psychology, 11*, 471-484.
- Burke, V., Beilin, L. J., Simmer, K., Oddy, W. H., Blake, K. V., Doherty, D., Kendall, G. E., Newnham, J.P., et al. (2005). Predictors of body mass index and associations with cardiovascular risk factors in Australian children: A prospective cohort study. *International Journal of Obesity and Related Metabolic Disorders, 29*, 15-23.
- Burns, R. B. (1990). *Introduction to research methods in education*. Melbourne: Longman Cheshire.
- Burns, R. B. (1997). *Introduction to research methods* (3rd ed.). South Melbourne: Addison Wesley Longman Australia.
- Cambourne, B. (2003). Taking a naturalistic viewpoint in early childhood literacy research. In N. Hall & J. Marsh (Eds.), *Handbook of early childhood literacy*. Thousand Oaks, CA: Sage Publications.
- Campbell, K. J., Crawford, D. A., & Ball, K. (2006). Family food environment and dietary behaviors likely to promote fatness in 5-6 year-old children *International Journal of Obesity, 30*, 1272-1280.
- Campbell, K. J., Crawford, D. A., & Hesketh, K. D. (2006). Australian parents' views on their 5-6-year-old children's food choices. *Health Promotion International, 22*(1), 11-18.



- Campbell, K. J., Waters, E., O'Meara, S., & Summerbell, C. D. (2001). Interventions for preventing obesity in childhood. A systematic review. *Obesity Reviews*, 2, 149-157.
- Carey, R. F., McKechnie, L. E. F., & McKenzie, J. (2001). Gaining access to everyday life information seeking. *Library & Information Science Research*, 23, 319-334.
- Carter, J. (2000). TV eating up family mealtime [Electronic Version]. *Texas Medical Center News*, 22. Retrieved 25/8/2008 from [http://www.tmc.edu/tmcnews/11\\_01\\_00/page\\_10.html](http://www.tmc.edu/tmcnews/11_01_00/page_10.html).
- Chaput, J. P., Brunet, M., & Tremblay, A. (2006). Relationship between shorter sleeping hours and childhood overweight/obesity: Results from the 'Quebec en Forme' Project *International Journal of Obesity*, 30, 1080-1085.
- Clandinin, D. J., & Connelly, M. (2000). *Narrative inquiry: Experience and story in qualitative research*. San Francisco: Jossey Bass Publishers.
- Cohen, L., Manion, L., & Morrison, K. (2000). *Research methods in education* (5th ed.). London: Routledge Falmer.
- Cole, T. J., Bellizzi, M. C., Flegal, K. M., & Dietz, W. H. (2000). Establishing a standard definition for child overweight and obesity worldwide: International survey. *British Medical Journal*, 320, 1-6.
- Collins, C., Warren, J. M., Neve, M., McCoy, P., & Stokes, B. (2007). Systematic review of interventions in the management of overweight and obese children which include a dietary component. *International Journal of Evidence-Based Healthcare*, 5, 2-53.
- Commonwealth Scientific Industrial Research Organisation. (2007). *Australian National Children's Nutrition and Physical Activity Survey*. South Australia: Australian Government.
- Connelly, F. M., & Clandinin, D. J. (1990). Stories of experience and narrative inquiry. *Educational Researcher*, 2-14.
- Connelly, M., & Clandinin, D. J. (1999). *Shaping a professional identity: Stories of educational practice*. Western Ontario: The Althouse Press.
- Cook, S., Weitzman, M., Auinger, P., Nguyen, M., & Dietz, W. H. (2003). Prevalence of a metabolic syndrome phenotype in adolescents. *Archives of Pediatrics and Adolescent Medicine*, 157(8), 821-827.
- Coon, K. A., Goldberg, J., Rogers, B. L., & Tucker, K. L. (2001). Relationships between use of television during meals and children's food consumption patterns. *Pediatrics*, 107, E7.
- Corsaro, W. (1981). The child's world: Research strategies for field entry and data collection in a preschool setting. In J. L. Green & C. W. Wallat (Eds.), *Ethnography and language in educational settings*. Norwood: Ablet.
- Crespo, C. J., Smit, E., Troiano, R., Bartlett, S. J., Macera, C. A., & Andersen, R. E. (2001). Television watching, energy intake, and obesity in US children: Results from the Third National Health and Nutrition Examination Survey. *Archives of Pediatrics and Adolescent Medicine*, 155(3), 360-365.
- Crossman, A. F. (2005). *The influence of family environment on adolescent risk for obesity in adulthood*. Paper presented at The Annual Meeting of the American Sociological Association, Philadelphia.
- Csikszentmihalyi, K. R. (2004). Television addiction is no mere metaphor. *Scientific American*, 14(1), 48-55.
- Daly, K., & Dienhart, A. (1998). Navigating the family domain: Qualitative field dilemmas. In S. Grills (Ed.), *Doing ethnographic research* (pp. 97-120). Thousand Oaks, CA: Sage Publications.
- Daly J., Willis, K., Small, R., Green, J., Welch, N., Kealy, M., Hughes, E. (2007). A hierarchy of evidence for assessing qualitative health research. *Journal of Clinical Epidemiology*, 60, 43-49.

- Davies, P. S. (1997). Diet composition and body mass index in pre-school children. *European Journal of Clinical Nutrition*, 51, 443-448.
- Davis, S. P., David, M., Northington, L., Moll, G., & Kolar, K. (2002). Childhood obesity reduction by school based programs. *Association of Black Nursing Faculty Journal*, November-December, 145-149.
- Davison, K. K., & Birch, L. L. (2001). Childhood overweight: A contextual model and recommendations for future research. *Obesity Reviews*, 2, 159-171.
- Davison, K. K., Downs, D. S., & Birch, L. L. (2006). Pathways linking perceived athletic competence and parental support at age 9 years to girls' physical activity at age 11 years. *Research Quarterly for Exercise and Sport*, 77(1), 23-31.
- De Bourdeaudhuij, I. (1998). Behavioural factors associated with physical activity in young people. In S. J. Biddle, J. F. Sallis & N. Cavill (Eds.), *Young and active? Young people and health-enhancing physical activity: Evidence and implications* (pp. 98-118). London: Health Education Authority.
- Deheeger, M., Rolland-Cachera, M. F., & Fontvieille, A. M. (1997). Physical activity and body composition in 10 year old French children: Linkages and nutritional intake? *International Journal of Obesity and Related Metabolic Disorders*, 21, 372-379.
- Dencker, M., Thorsson, O., Karlsson, M. K., Linden, C., Eiberg, S., & Wollmer, P. (2006). Daily physical activity related to body fat in children aged 8-11 years. *Journal of Pediatrics*, 149, 38-42.
- Denney-Wilson, E., Hardy, L. L., Dobbins, T., Okely, A. D., & Baur, L. A. (2008). Body mass index, waist circumference, and chronic disease risk factors in Australian adolescents. *Archives of Pediatrics and Adolescent Medicine*, 162(6), 566-573.
- Dennison, B. A., Erb, T. A., & Jenkins, P. L. (2002). Television viewing and television in bedroom associated with overweight risk among low-income preschool children. *Pediatrics*, 109, 1028-1036.
- Denscombe, M. (2003). *The good research guide for small scale social research projects* (2nd ed.). Philadelphia: Open University Press.
- Denzin, N. K., & Lincoln, Y. K. (1994). *Handbook of qualitative research*. Thousand Oaks, CA: Sage Publications.
- Dewalt, K. M., & Dewalt, B. R. (2002). *Participant observation: A guide for fieldworkers*. Lanham, MD: Altamira Press.
- Dietz, W. H. (1996). The role of lifestyle in health: The epidemiology and consequences of inactivity. *Proceedings of the Nutrition Society*, 55, 829-840.
- Dietz, W. H. (1998). Health consequences of obesity in youth: Childhood predictors of adult disease. *Pediatrics*, 101, 518-525.
- Dobbins, A. M., & Deich, S. (2004). *Financing childhood obesity prevention programs: Federal funding sources and other strategies*. Washington: The Finance Project.
- Dowling, A. M., Steele, J. R., & Baur, L. A. (2001). Does obesity influence foot structure and plantar pressure patterns in prepubescent children? *International Journal of Obesity*, 25, 845-852.
- DuRant, R. H., Baranowski, T., Johnson, M., & Thompson, W. O. (1994). The relationship among television watching, physical activity and body composition of young children. *Pediatrics*, 94, 449-455.
- Ebbeling, C. B., Pawlak, D. B., & Ludwig, D. S. (2002). Childhood obesity: Public-health crisis, common sense cure. *The Lancet*, 360, 473-482.
- Eccles, J. S., Wigfield, A., & Schiefele, U. (1998). Motivation. In N. Elsenberg (Ed.), *Handbook of child psychology* (5th ed., Vol. 3, pp. 1017-1095). New York: Wiley.
- Economos, C. D., Hyatt, R. R., Goldberg, J. P., Must, A., Naumova, E. N., Collins, J. J., et al. (2007). A community intervention reduces BMI z-score in children: Shape Up Somerville first year results. *Obesity*, 15, 1325-1336.

- Egger, G., & Swinburn, B. A. (1997). An "ecological" approach to the obesity pandemic. *British Medical Journal*, 315(7106), 477-481.
- Egger, G., Swinburn, B. A., & Rossner, S. (2003). Dusting off the epidemiological triad: Could it work with obesity? *Obesity Reviews*, 4, 115-119.
- Eisenmann, J. C., Bartee, R. T., & Wang, M. Q. (2002). Physical activity, TV viewing, and weight in U.S. youth: 1999 Youth Risk Behaviour Survey. *Obesity Research*, 10(5), 379-385.
- Ekelund, U., Brage, S., Froberg, K., Harro, M., Andersen, S. A., & Sardinha, L. B. (2006). TV viewing and physical activity are independently associated with metabolic risk in children: The European Youth Heart Study. *PLoS Medicine*, 3(12), e488.
- Ekelund, U., Yngve, A., Brage, S., Westerterp, K., & Sjostrom, M. (2004). Body movement and physical activity energy expenditure in children and adolescents: How to adjust for differences in body size and age. *American Journal of Clinical Nutrition*, 79, 851-856.
- Elgar, F. J., Roberts, C., Moore, L. L., & Tudor-Smith, C. (2005). Sedentary behaviour, physical activity and weight problems in adolescents in Wales. *Public Health*, 119, 518-524.
- Emes, C., Velde, B., Moreau, M., Mordoch, D. D., & Trussell, R. (1990). An activity based weight control program. *Adapted Physical Activity Quarterly*, 7, 314-324.
- Eppright, E. S., Fox, H. N., Fryer, B., Lamkin, G. H., & Vivian, V. M. (1970). Nutrition knowledge and attitudes of mothers. *Journal of Home Economics*, 62, 327.
- Epstein, L. H., Myers, M. D., Raynor, H. A., & Saelens, B. E. (1998). Treatment of pediatric obesity. *Pediatrics*, 101, 554-570.
- Epstein, L. H., Paluch, R. A., Gordy, C. C., & Dorn, J. (2000). Decreasing sedentary behaviors in treating pediatric obesity. *Archives of Pediatric and Adolescent Medicine*, 154, 220-226.
- Epstein, L. H., Wing, R. R., Penner, B. C., & Kress, M. J. (1985). Effect of diet and controlled exercise on weight loss in obese children. *Journal of Pediatrics*, 107, 358-361.
- Faith, M. S., Berman, N., Heo, M., Pietrobelli, A., Gallagher, D., & Epstein, L. H. (2001). Effects of contingent television on physical activity and television viewing in obese children. *Pediatrics*, 107, 1043-1048.
- Falkner, N. H., Neumark-Sztainer, D., Story, M., Jeffery, R. W., Beuhring, T., & Resnick, M. D. (2001). Social, educational, and psychological correlates of weight status in adolescents. *Obesity Research*, 9, 32-42.
- Ferguson, M. A., Gutin, B., Le, N. A., Karp, W., Litaker, M., & Humphries, M. (1999). Effects of exercise training and its cessation on components of the insulin resistance syndrome in obese children. *International Journal of Obesity*, 23, 889-895.
- Ferreira, I., van der Horst, K., Wendle-Vos, W., Kremers, S., van Lenthe, J., & Brug, J. (2006). Environmental correlates of physical activity in youth - A review and update. *Obesity Reviews*, 8, 129-154.
- Fiates, G. M. R., Amboni, R. D. M. C., & Teixeira, E. (2007). Television use and food choices of children: Qualitative approach. *Appetite*, 50(2008), 12-18.
- Finch, M., Sutherland, R., Harrison, M., & Collins, C. (2007). Canteen purchasing practices of year 1-6 primary school children and association with SES and weight status. *Australian and New Zealand Journal of Public Health*, 30(3), 247-251.
- Fine, G. A., & Glassner, B. (1979). Participant observation with children: Promise and problems. *Urban Life*, 8, 153-174.
- Fisher, J. O., & Birch, L. L. (1995). Fat preferences and fat consumption of 3- to 5-year-old children are related to parental adiposity. *Journal of American Dietetics Association*, 95, 759-764.

- Flores, R. (1995). Dance for health: Improving fitness in African American and Hispanic Adolescents. *Public Health Reports*, 110(2), 189-193.
- Fontana, A., & Frey, J. H. (1998). Interviewing: The art of science. In N. K. Denzin & Y. K. Lincoln (Eds.), *Collecting and interpreting qualitative materials*. Thousand Oaks: Sage Publications.
- Francis, L. A., Lee, Y., & Birch, L. L. (2003). Parental weight status and girls' television viewing, snacking and body mass indexes. *Obesity Research*, 11, 143-151.
- Franklin, J., Denyer, G., Steinbeck, K., Caterson, I., & Hill, A. (2006). Obesity and risk of low self-esteem: A statewide survey of Australian children. *Pediatrics*, 118, 2481-2487.
- Freedman, D. S., Dietz, W. H., Srinivasan, S. R., & Berenson, G. S. (1999). The relation of overweight to cardiovascular risk factors among children and adolescents: The Bogalusa Heart Study. *Pediatrics*, 103(6), 1175-1182.
- Freedson, P. S., & Evenson, S. (1991). Familial aggregation in physical activity. *Research Quarterly for Exercise and Sport*, 62, 384-389.
- Friedman, M. A., & Brownell, K. D. (1995). Psychological correlates of obesity: Moving to the next research generation. *Psychological Bulletin*, 117, 3-20.
- Gallahue, D. L., & Ozmun, J. C. (2002). *Understanding motor development: Infants, children, adolescents, adults* (5th ed.). New York: McGraw-Hill.
- Gazzaniga, J. M., & Burns, T. L. (1993). Relationship between diet composition and body fatness, with adjustment for resting energy expenditure and physical activity, in preadolescent children. *American Journal of Clinical Nutrition*, 58(1), 21-28.
- Giammattei, J., Blix, G., Marshak, H. H., Wollitzer, A. O., & Pettitt, D. J. (2003). Television watching and soft drink consumption: Associations with obesity in 11- to 13-year-old school children. *Archives of Pediatrics and Adolescent Medicine*, 157(9), 882-886.
- Gilkey, M. (2007). *Perspectives on childhood obesity prevention: Recommendations from public health research and practice*. Baltimore: The John Hopkins Center for a Livable Future, Bloomberg School of Public Health.
- Gillis, L. J., Kennedy, L. C., Gillis, A. M., & Bar-Or, O. (2002). Relationship between juvenile obesity, dietary energy and fat intake and physical activity. *International Journal of Obesity and Related Metabolic Disorders*, 26(4), 458-463.
- Glaser, B., & Strauss, A. (1979). *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine.
- Glesne, C., & Peshkin, A. (1992). *Becoming qualitative researchers*. New York: Longman.
- Golan, M., Weizman, A., Apter, A., & Fainaru, M. (1998). Parents as the exclusive agents of change in the treatment of childhood obesity. *American Journal of Clinical Nutrition*, 67, 1130-1135.
- Golley, R. K., Magarey, A. M., Baur, L. A., Steinbeck, K., & Daniels, L. A. (2007). Twelve-month effectiveness of a parent led, family-focused weight-management program for prepubertal children: A randomised controlled trial. *Pediatrics*, 119(3), 517-525.
- Goran, M. I., Ball, G. D. C., & Cruz, M. L. (2003). Obesity and risk of type 2 diabetes and cardiovascular disease in children and adolescents. *The Journal of Clinical Endocrinology and Metabolism*, 88(4), 1417-1442.
- Goran, M. I., Reynolds, K. D., & Lindquist, C. H. (1999). Role of physical activity in the prevention of obesity in children. *International Journal of Obesity*, 23(3), S18-S33.
- Gordon-Larsen, P., Adair, L. S., & Popkin, B. M. (2002). Ethnic differences in physical activity and inactivity patterns and overweight status. *Obesity Research*, 10, 141-149.
- Gorely, T., Marshall, S. J., & Biddle, S. J. H. (2004). Couch kids: Correlates of television viewing among youth. *International Journal of Behavioral Medicine*, 11, 152-163.

- Gorman, G. E., & Clayton, P. (2005). *Qualitative research for the information professional* (2nd ed.). London: Facet.
- Gortmaker, S. L., Must, A., Sobol, A. M., Peterson, K. E., Colditz, S., & Dietz, W. H. (1996). Television viewing as a cause of increasing obesity among children in the United States, 1986-1990. *Archives of Pediatric and Adolescent Medicine*, 150, 356-362.
- Gortmaker, S. L., Peterson, K. E., Wiecha, J. L., Sobol, A. M., Dixit, S., Fox, M. K., et al. (1999). Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health. *Archives of Pediatrics and Adolescent Medicine*, 153, 409-418.
- Gottfredson, G. D., & Gottfredson, D. C. (2001). What schools do to prevent problem behavior and promote safe environments. *Journal of Educational and Psychological Consultation*, 12(4), 313-344.
- Granich, J., Rosenerg, M., Knuiman, M., & Timperio, A. (2008). Understanding children's sedentary behaviour: A qualitative study of the family home environment. *Health Education Research*, doi:10.1093/her/cyn1025.
- Grund, A., Krause, H., Siewers, M., Rieckert, H., & Muller, M. J. (2001). Is TV viewing an index of physical activity and fitness in overweight and normal weight children? *Public Health and Nutrition*, 4(6), 1245-1251.
- Guba, E., & Lincoln, Y. (1989). *Fourth generation evaluation*. Newbury Park: Sage Publications.
- Guba, E., & Lincoln, Y. (1994). Competing paradigms in qualitative research. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Thousand Oaks, CA: Sage Publications.
- Guba, E. G., & Lincoln, Y. S. (1987). *Naturalistic inquiry*. Oxford: Pergamon.
- Guillaume, M., Lapidus, L., & Lambert, A. (1998). Obesity and nutrition in children: The Belgian Luxembourg Child Study IV. *European Journal of Clinical Nutrition*, 52(5), 323-328.
- Guinhouya, C. B., Hubert, H., Dupont, G., & Alain, D. (2005). The recess period: A key moment of prepubescent children's daily physical activity. *The International Electronic Journal of Health Education*, 8, 126-134.
- Gutin, B., Barbeau, P., Owens, S., Lemmon, C. R., Bauman, M., & Allison, J. (2002). Effects of exercise intensity on cardiovascular fitness, total body composition, and visceral adiposity of obese adolescents. *American Journal of Clinical Nutrition*, 75, 818-826.
- Gutin, B., Owens, S., Slavens, G., Riggs, S., & Treiber, F. (1997). Effect of physical training on heart-period variability in obese children. *Journal of Pediatrics*, 130, 938-943.
- Hancox, R. J., Milne, B. J., & Poulton, R. (2004). Association between child and adolescent television viewing and adult health: A longitudinal birth cohort study. *Lancet*, 364(9430), 257-262.
- Hands, B., Parker, H., Glasson, C., Brinkman, S., & Read, H. (2004). *Physical activity and nutrition levels in Western Australian children and adolescents: Report*. Perth, Western Australia: Western Australian Government.
- Hanley, A. J., Harris, S. B., Gittelsohn, J., Wolever, T. M., Saksvig, B., & Zinman, B. (2000). Overweight among children and adolescents in a Native Canadian community: Prevalence and associated factors. *American Journal of Clinical Nutrition*, 71, 693-700.
- Hardy, L., Baur, L. A., Garnett, S. P., Crawford, D., Campbell, K. J., Shrewsbury, V. A., et al. (2006). Family and home correlates of television viewing in 12-13 year old adolescents: The Nepean Study. *International Journal of Behavioural Nutrition and Physical Activity*, 3(24), doi:10.1186/1479-5868-1183-1124.

- Harre, R., & Moghaddam, F. M. (2003). *The self and others: Positioning individuals and groups in personal, political, and cultural contexts*. Abingdon, United Kingdom: Greenwood Publishing Group.
- Harter, S. (1985). *Manual for the self-perception profile for children (revision of the perceived competence scale for children)*. Colorado: University of Denver.
- Harter, S. (1993). Causes and consequences of low self-esteem in children and adolescents. In R. F. Baumeister (Ed.), *Self-esteem: The puzzle of low-regard* (pp. 87-116). New York: Plenum Press.
- Hernandez, B., Gortmaker, S. L., Colditz, G. A., Peterson, K. E., Laird, N. M., & Parra-Cabrera, S. (1999). Association of obesity with physical activity, television programs and other forms of video viewing among children in Mexico City. *International Journal of Obesity and Related Metabolic Disorders*, 23, 845-854.
- Hersey, J. C., & Jordan, A. (2007). *Reducing children's TV - Time to reduce the risk of childhood overweight: The children's media use study*. Atlanta: Centers for Disease Control and Prevention.
- Hesketh, K., Wake, M., & Waters, E. (2004). Body mass index and parent-reported self-esteem in elementary school children: Evidence for a causal relationship. *International Journal of Obesity*, 28, 1233-1237.
- Hesketh, K., Waters, E., Green, J., Salmon, J., & Williams, J. (2005). Healthy eating, activity and obesity prevention: A qualitative study of parent and child perceptions in Australia. *Health Promotion International*, 20, 19-26.
- Hewison, J., & Tizard, J. (1980). Parental involvement and reading attainment. *British Journal of Educational Psychology*, 50, 209-215.
- Hill, A. J., Draper, E., & Stack, J. (1994). A weight on children's minds: Body shape dissatisfactions at 9-years old. *International Journal of Obesity*, 18, 383-389.
- Hill, A. J., & Silver, E. K. (1995). Fat, friendless and unhealthy: 9-year old children's perception of body shape stereotypes. *International Journal of Obesity*, 19, 423-430.
- Hillman, M., Adams, J., & Whitelegg, J. (1990). *One false move...: A study of children's independent mobility*. London: PSI Publishing.
- Hills, A. P., Hennig, E. M., Byrne, N. M., & Steele, J. R. (2002). The biomechanics of adiposity - Structural and functional limitations of obesity and implications for movement. *Obesity Reviews*, 3(1), 35-43.
- Hills, A. P., & Parker, A. W. (1988). Obesity management via diet and exercise intervention. *Child: Care, Health and Development*, 14, 409-416.
- Hitchcock, G., & Hughes, D. (1995). *Research and the teacher: A qualitative introduction to school-based research* (2nd ed.). New York: Routledge.
- Holly, M. L., & Mcloughlin, C. S. (1989). *Perspectives on teacher professional development*. East Sussex, UK: The Falmer Press.
- Horn, O. K., Paradis, G., Potvin, L., Macaulay, A. C., & Desrosiers, S. (2001). Correlates and predictors of adiposity among Mohawk children. *Preventive Medicine*, 33, 274-281.
- Jago, R., Baranowski, T., Baranowski, J., Thompson, D., & Greaves, K. A. (2005). BMI from 3-6y of age is predicted by television viewing and physical activity, not diet. *International Journal of Obesity*, 29, 557-564.
- Janz, K. F., Levy, S. M., Burns, T. L., Torner, J. C., Willing, M. C., & Warren, J. J. (2002). Fatness, physical activity, and television viewing in children during the adiposity rebound period: The Iowa Bone Development Study. *Preventive Medicine*, 35, 563-571.
- Jiang, J., Rosenqvist, U., wang, H., Greiner, T., May, Y., & Toschke, A. M. (2006). Risk factors for overweight in 2- to 6-year-old children in Beijing, China. *International Journal of Pediatric Obesity*, 1, 103-108.

- Johnson, M. S., Figueroa-Colon, R., Herd, S. L., Fields, D. A., Sun, M., & Hunter, G. R. (2000). Aerobic fitness, not energy expenditure, influences subsequent increase in adiposity in black and white children. *Pediatrics*, 106, E50-E56.
- Johnson, R. B. (1997). Examining the validity structure of qualitative research. *Education*, 118(2), 282-292.
- Johnson, S. L., McPhee, L., & Birch, L. I. (1991). Conditioned preferences: Young children prefer flavors associated with high dietary fat. *Physiology and Behavior*, 50(6), 1245-1251.
- Johnson-Down, L., O'Loughlin, J., Koski, K. G., & Gray-Donald, K. (1997). High prevalence of obesity in low income and multiethnic schoolchildren: A diet and physical activity assessment. *Journal of Nutrition*, 127(2), 2310-2315.
- Kahan, D. (2008). Recess, extracurricular activities, and active classrooms: Means for increasing elementary school students' physical activity. *Journal of Physical Education, Recreation and Dance*, 79(2), 26-39.
- Kang, T. H., Ju, Y. S., Park, K. H., Kwon, Y. J., Im, H. J., & Paek, D. M. (2006). Study on the relationship between childhood obesity and various determinants, including socioeconomic factors, in urban areas. *Journal of Preventative Medicine in Public Health*, 39(5), 371-378.
- Katch, V., Becque, M. D., Marks, C., Moorehead, C., & Rocchini, A. (1988). Basal metabolism of obese adolescents: Inconsistent diet and exercise effects. *American Journal of Clinical Nutrition*, 48, 565-569.
- Kautianinen, S., Koivusilta, L., Lintonen, T., Virtanen, S. M., & Rimpela, A. (2005). Use of information and communication technology and prevalence of overweight and obesity among adolescents. *International Journal of Obesity*, 29(8), 925-933.
- Kelder, S., Hoelscher, D. M., Barroso, C. S., Walker, J. L., Cribb, P., & Hu, S. (2004). The CATCH kids club: A pilot after-school study for improving elementary students' nutrition and physical activity. *Public Health Nutrition*, 8(2), 133-140.
- Kennedy, C. M., Strzempko, F., Danford, C., & Kools, S. (2002). Children's perceptions of TV and health behavior effects. *Journal of Nursing Scholarship*, 34, 289-294.
- Kettaneh, A., Oppert, J. M., Heude, B., Deschamps, V., Borys, J. M., Lommez, A., et al. (2005). Changes in physical activity explain paradoxical relationship between baseline physical activity and adiposity changes in adolescent girls: The FLVS II Study. *International Journal of Obesity and Related Metabolic Disorders*, 29, 586-593.
- Klesges, R. C., Coates, T. J., & Brown, G. (1986). Parental influences on children's eating behavior and relative weight. *Journal of Applied Behavior Analysis*, 16, 371-378.
- Klesges, R. C., Klesges, L. M., Eck, L. H., & Shelton, M. L. (1995). A longitudinal analysis of accelerated weight gain in preschool children. *Pediatrics*, 95, 126-130.
- Kohl, H. W., Fulton, J. E., & Caspersen, C. J. (1999). Assessment of physical activity among children and adolescents: A review and synthesis. *Preventive Medicine*, 31, S54-S76.
- Kohl, H. W., & Hobbs, K. E. (1998). Development of physical activity behaviors among children and adolescents. *Pediatrics*, 101, 549-554.
- Kyles, C., & Lounsbery, M. (2004). Project destiny: Initiating physical activity for nonathletic girls through sport. *Journal of Physical Education, Recreation and Dance*, 75(1), 37-41.
- Lamb, M. E., & Sutton-Smith, B. (1982). *Sibling relationships*. Utah: Lawrence Erlbaum Associates.
- Laskarzewski, P., Morrison, J. A., Khoury, P., Kelly, K., Glatfelter, L., Larsen, R., et al. (1980). Parent-child nutrient intake relationships in school children ages 6-19: The Princeton School District Study. *American Journal of Clinical Nutrition*, 33, 2350-2355.

- Latner, J. D., & Stunkard, A. J. (2003). Getting worse: The stigmatization of obese children. *Obesity Research*, 11(3), 452-456.
- Lazar, L., Kauli, R., Bruchis, C., Nordenberg, J., Galatzer, A., & Pertzelan, A. (1995). Early polycystic ovary-like syndrome in girls with central precocious puberty and exaggerated adrenal response. *European Journal of Endocrinology*, 133, 403-406.
- Levitsky, D. A., & Youn, T. (2004). The more food young adults are served, the more they overeat. *Journal of Nutrition* 134, 2546-2549.
- Lewin, K. (1997). *Field theory in social science: Selected theoretical papers*. Washington DC: American Psychological Association.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills: Sage Publications.
- Lincoln, Y. S., & Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. In D. Williams (Ed.), *Naturalistic evaluation* (pp. pp.73-84). San Francisco: Jossey-Bass.
- Lobstein, T., Baur, L., & Uauy, R. (2004). Obesity in children and young people: A crisis in public health. *The International Association for the Study of Obesity*, 5, 4-85.
- Lodico, M. G., Spaulding, D. T., & Voegtler, K. H. (2006). *Methods in educational research*. Singapore: John Wiley and Sons.
- Luepker, R. V., Perry, C. L., McKinlay, S. M., Nader, P. R., Parcel, G. S., Stone, E. J., et al. (1996). Outcomes of a field trial to improve children's dietary patterns and physical activity. The Child and Adolescent Trial for Cardiovascular Health. CATCH collaborative group. *Journal of the American Medical Association*, 275(10), 768-776.
- Maffeis, C., Pinelli, L., & Schutz, Y. (1996). Fat intake and adiposity in 8 to 11-year-old obese children. *International Journal of Obesity and Related Metabolic Disorders*, 20(2), 170-174.
- Maffeis, C., Talamini, G., & Tat, L. (1998). Influence of diet, physical activity and parents' obesity on children's adiposity: A four year longitudinal study. *International Journal of Obesity*, 22, 758-764.
- Magarey, A. M., Daniels, L. A., & Boulton, J. C. (2001). Prevalence of overweight and obesity in Australian children and adolescents: Reassessment of 1985 and 1995 data against new standard international definitions. *Medical Journal of Australia*, 174, 561-564.
- Mandell, N. (1988). The least-adult role in studying children. *Journal of Contemporary Ethnography*, 16(4), 433-467.
- Manios, Y., Yiannakouris, N., Papoutsakis, C., Moschonis, G., Magkos, F., Skenderi, K., et al. (2004). Behavioral and physiological indices related to BMI in a cohort of primary schoolchildren in Greece. *American Journal of Human Biology*, 16(6), 639-647.
- Manus, H., & Killeen, M. R. (1995). Maintenance of self-esteem by obese children. *Journal of Child and Adolescent Psychiatric Nursing*, 8(1), 17-27.
- Marsh, H. (1996). Construct validity of physical self-description questionnaire responses: Relations to external criteria. *Journal of Sport and Exercise Psychology*, 18, 111-131.
- Mattocks, C., Leary, S., Ness, A., Deere, K., Saunders, J., Kirkby, J., et al. (2007). Intraindividual variation of objectively measured physical activity in children. *Medicine and Science in Sports and Exercise*, 39(4), 622-629.
- McGloin, A. F., Livingstone, M. B. E., Greene, L. C., Webb, S. E., Gibson, J. M. A., Jebb, S. A., et al. (2002). Energy and fat intake in obese and lean children at varying risk of obesity. *International Journal of Obesity*, 26(2), 200-207.
- McKechnie, L. E. F. (2006). Observations of babies and toddlers in library settings. *Library Trends*, 55(1), 190-201.



- McKenry, P. C., & Price, S. J. (2000). *Families and change: Coping with stressful events and transitions*. Thousand Oaks, CA: Sage Publications.
- McLeroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly*, 15, 351-377.
- McMaster, L. E., & Wintre, M. G. (1996). The relations between perceived parental reciprocity, perceived parental approval, and adolescent substance use. *Journal of Adolescent Research*, 11, 440-460.
- McMurray, R. G., Harrell, J. S., Deng, S., Bradley, C. B., Cox, L. M., & Bangiwala, S. I. (2000). The influence of physical activity, socioeconomic status, and ethnicity on the weight status of adolescents. *Obesity Research*, 8, 130-139.
- MedicineNet. (1996-2008). MedicineNet.com. Retrieved 10 September, 2008, from <http://www.medterms.com/script/main/art.asp?articlekey=5377>
- MedicineNet. (1996-2009). MedicineNet.com. Retrieved 5 April, 2009, from <http://www.medterms.com/script/main/art.asp?articlekey=11815>
- Mertens, D. M. (1998). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches*. Thousand Oaks, CA: Sage Publications.
- Miles, M. B., & Huberman, A. M. (1994). *An expanded sourcebook: Qualitative data analysis* (2nd ed.). London: Sage Publications.
- Mo-Suwan, L., Pongprapai, S., Junjana, C., & Peutpaiboon, A. (1998). Effects of a controlled trial of a school-based exercise program on the obesity indexes of preschool children. *American Journal of Clinical Nutrition*, 68, 1006-1111.
- Moens, E., Braet, C., & Soetens, B. (2007). Observation of family functioning at mealtime: A comparison between families of children with and without overweight. *Journal of Pediatric Psychology*, 32(1), 52-63.
- Moore, L. L., Gao, D., Bradlee, M. L., Cupples, L. A., Sundarajan-Ramamurti, A., Proctor, M. H., et al. (2003). Does early physical activity predict body fat change throughout childhood? *Preventive Medicine*, 37, 10-17.
- Moore, L. L., Lombardi, D. A., White, M. J., Campbell, J. L., Oliveria, S. A., & Ellison, R. C. (1991). Influence of parents' physical activity levels on activity levels of young children. *The Journal of Pediatrics*, 118(2), 215-219.
- Moore, L. L., Nguyen, U. D. T., Rothman, K. J., Cupples, L. A., & Ellison, R. C. (1995). Preschool physical activity level and change in body fatness in young children. *American Journal of Epidemiology*, 142(9), 982-988.
- Moore, L. L., Nguyen, U. D. T., Rothman, K. J., Cupples, L. A., Sundarajan-Ramamurti, A., & Proctor, M. H. (2003). Does early physical activity predict body fat change throughout childhood? *Preventive Medicine*, 37, 10-17.
- Moreas, S. A., Seltran Rosas, J., Mondini, L., & Freitas, I. C. (2006). Prevalence of overweight and obesity, and associated factors in school children from urban area in Chilpancingo, Guerrero, Mexico, 2004. *Cadernos de Saude Publica*, 22(6), 1289-1301.
- Morris, J., Wang, F., & Lilja, L. (2001). *School children's travel patterns - A look back and a way forward*. Paper presented at the 24th Australasian Transport Research Forum, Hobart, Australia.
- National Health and Medical Research Council. (2003). *Clinical practice guidelines for the management of overweight and obesity in children and adolescents*. Canberra, Australia: Commonwealth of Australia.
- National Health and Medical Research Council. (2007). *Strategic plan 2007-2009*. Canberra, Australia: Commonwealth of Australia.
- National Institute on Media and the Family. (2002). Media's effect on girls: Body image and gender identity. *Mediawise*. Retrieved 29 October, 2008, from [http://www.mediafamily.org/facts/facts\\_mediaeffect.shtml](http://www.mediafamily.org/facts/facts_mediaeffect.shtml)

- Ness, A. R., Leary, S. D., Mattocks, C., Blair, S. N., Reilly, J. J., & Wells, J. (2007). Objectively measured physical activity and fat mass in a large cohort of children. *PLoS Medicine*, 4(3), 476-484.
- Nestle, M. (2006). Food marketing and childhood obesity - A matter of policy. *The New England Journal of Medicine*, 354, 2527-2529.
- Neumark-Sztainer, D., Story, M., Hannan, P. J., & Rex, J. (2003). New Moves: A school-based obesity prevention program for adolescent girls. *Preventive Medicine*, 37(1), 41-51.
- Neuschwander-Tetri, B. A., & Caldwell, S. H. (2003). Nonalcoholic steatohepatitis: Summary of an AASLD single topic conference. *Hepatology*, 37, 1202-1219.
- Newby, P. K. (2007). Are dietary intakes and eating behaviors related to childhood obesity? A comprehensive review of the evidence. *Journal of Law, Medicine and Ethics*, 35(1), 35-60.
- Nicklas, T. A., Baranowski, T., Cullen, K., & Berenson, G. S. (2001). Eating patterns, dietary quality and obesity. *Journal of the American College of Nutrition*, 20(6), 599-608.
- Nowak, M. (1998). Weight-conscious adolescent: Body image, food intake, and weight-related behavior. *Journal of Adolescent Health*, 23(6), 389-398.
- NSW Health. (2004). *Canteen menu planning guide*. Sydney: New South Wales Department of Health.
- O'Brien, K. S., Hunter, J. A., & Banks, M. (2007). Implicit anti-fat bias in physical educators: Physical attributes, ideology and socialization. *International Journal of Obesity*, 31, 308-314.
- O'Loughlin, J., Gray-Donald, K., Paradis, G., & Meshefedjian, G. (2000). One- and two-year predictors of excess weight gain among elementary schoolchildren in multiethnic, low-income, inner-city neighborhoods. *American Journal of Epidemiology*, 152(8), 739-746.
- Okely, A. D., Booth, M., & Chey, T. (2004). Relationships between body composition and fundamental movement skills among children and adolescents. *Research Quarterly for Exercise and Sport*, 75(3), 238-247.
- Oliveria, S. A., Ellison, R. C., Moore, L. L., Gillman, M. W., Garrahe, E. J., & Singer, M. R. (1992). Parent-child relationships in nutrient intake: The Framingham Children's Study. *American Journal of Clinical Nutrition*, 56, 593-598.
- Ong, K.K., Petry, C.J., Emmett, P.M., Sandhu, M.S., Kiess, W., Hales, N., Ness, A.R., the ALSPAC team, Dunger, D.B. (2004). Insulin sensitivity and secretion in normal children related to size at birth, postnatal growth, and plasma insulin-like growth factor-I levels. *Diabetologia*, 47(6), 1064-1070.
- Oude Luttikhuis, H., Baur, L., Jansen, H., Shrewsbury, V. A., O'Malley, C., Stolk, R. P., et al. (2009). Interventions for treating obesity in children (Review) [Electronic Version]. *Cochrane Database of Systematic Reviews*.
- Pangrazi, R. P., Beighle, A., Vehige, T., & Vack, C. (2003). Impact of Promoting Lifestyle Activity for Youth (PLAY) on children's physical activity. *Journal of School Health*, 73(8), 317-321.
- Parsons, T. J., Power, C., & Manor, O. (2005). Physical activity, television viewing and body mass index: A cross-sectional analysis from childhood to adulthood in the 1958 British cohort. *International Journal of Obesity*, 29(10), 1212-1221.
- Patock-Peckham, J. A., Cheong, J. W., Balhorn, M. E., & Nagoshi, C. T. (2001). A social learning perspective: a model of parenting styles, self regulation, perceived drinking control, and alcohol use and problems. *Alcoholism: Clinical and Experimental Research*, 25, 1284-1292.

- Patrick, H., & Nicklas, T. A. (2005). A review of family and social determinants of children's eating patterns and diet quality. *Journal of the American College of Nutrition*, 24(2), 83-92.
- Patrick, K., Norman, G. J., Calfas, K. J., Sallis, J. F., Zabinski, M. F., & Rupp, J. (2004). Diet, physical activity, and sedentary behaviors as risk factors for overweight in adolescence. *Archives of Pediatrics and Adolescent Medicine*, 158(4), 385-390.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park: Sage Publications.
- Pearson, N., Biddle, J. H., & Gorely, T. (2008). Family correlates of fruit and vegetable consumption in children and adolescents: A systematic review. *Public Health Nutrition*, 12(2), 267-283.
- Perez-Rodrigo, C., & Aranceta, J. (2003). Nutrition education in schools: Experiences and challenges. *European Journal of Clinical Nutrition*, 57(1), 82-85.
- Perusse, L., Tremblay, A., Leblanc, C., & Bouchard, C. (1986). Genetic and environmental influences on level of habitual physical activity and exercise participation. *American Journal of Epidemiology*, 129, 1012-1020.
- Perusse, L., Tremblay, A., Leblanc, C., Cloninger, R., Reich, T., Rice, J., et al. (1988). Familial resemblance in energy intake: Contribution of genetic and environmental factors. *American Journal of Clinical Nutrition*, 47, 629-635.
- Phillips, R. G., & Hill, A. J. (1998). Fat, plain, but not friendless: Self-esteem and peer acceptance of obese pre-adolescent girls. *International Journal of Obesity*, 22, 287-293.
- Piek, J. P., Baynam, G. B., & Barret, N. C. (2006). The relationship between fine and gross motor ability, self-perceptions and self-worth in children and adolescents. *Human Movement Science*, 25, 65-75.
- Pinhas-Hamiel, O., Dolan, L. M., Daniels, S. R., Standiford, D., Khoury, P. R., & Zeitler, P. (1996). Increased incidence of non-insulin-dependent diabetes mellitus among adolescents. *Journal of Pediatrics*, 128, 608-615.
- Pocock, B., & Wilson, L. (2001). *The effect of long hours on family and community life: A survey of existing literature*. Queensland: Queensland Department of Industrial Relations,.
- Polkinghorne, D. E. (1989). *Narrative knowing and the human sciences*. Albany: State University of New York Press.
- Prochaska, J. O., & Norcross, J. C. (2002). Stages of change. In J. C. Norcross (Ed.), *Psychotherapy relationships that work*. New York: Oxford University Press.
- Proctor, M. H., Moore, L. L., Gao, D., Cupples, L. A., Bradlee, M. L., Hood, M. Y., et al. (2003). Television viewing and change in body fat from preschool to early adolescence: The Framingham Children's Study. *International Journal of Obesity*, 27, 827-833.
- Puhl, R., & Brownell, K. D. (2001). Bias, discrimination, and obesity. *Obesity Research*, 9(12), 788-805.
- Quinn, E. (2007). About.com: Sports Medicine. Retrieved 17 December, 2008, from [http://sportsmedicine.about.com/od/glossary/g/cardio\\_fit\\_def.htm](http://sportsmedicine.about.com/od/glossary/g/cardio_fit_def.htm)
- Raudsepp, L., & Liblik, R. (2002). Relationship of perceived and actual motor competence in children. *Perceptual and Motor Skills*, 94, 1059-1070.
- Raynor, H., & Wing, R. R. (2007). Package unit size and amount of food: Do both influence intake? *Obesity (Silver Spring)*, 15(9), 2311-2319.
- Redline, S., Tishler, P. V., Schluchter, M., Aylor, J., Clark, K., & Graham, G. (1999). Risk factors for sleep-disordered breathing in children: Associations with obesity, race, and respiratory problems. *American Journal of Respiratory and Critical Care Medicine*, 159, 1527-1532.

- Reilly, J. J., & McDowell, C. (2003). Physical activity interventions in the prevention and treatment of paediatric obesity: A systematic review and critical appraisal. *Proceedings of the Nutrition Society*, 62, 611-619.
- Reilly, J. J., Methven, E., McDowell, Z. C., Hacking, B., Alexander, D., & Stewart, L. (2003). Health consequences of obesity. *Archives of Disease in Childhood*, 88, 748-752.
- Reilly, J. J., Wilson, M. L., Summerbell, C. D., & Wilson, D. C. (2002). Obesity: Diagnosis, prevention, and treatment: Evidence based answers to common questions. *Archives of Disease in Childhood*, 86, 392-395.
- Rey-Lopez, P. J., Vicente-Rodriguez, G., Biosca, M., & Moreno, L. A. (2008). Sedentary behaviour and obesity development in children and adolescents. *Nutrition, Metabolism and Cardiovascular Diseases*, 18, 242-251.
- Rhodes, S. K., Shimoda, K. C., Waid, L. R., Mahlen, P., Oexmann, M. J., Collop, N. A., et al. (1995). Neurocognitive deficits in morbidly obese children with obstructive sleep apnea. *Journal of Pediatrics*, 127, 741-744.
- Rice, P. L., & Ezzy, D. (1999). *Qualitative research methods: A health focus*. Melbourne: Oxford University Press.
- Richards, L. (1998). Closeness to data: The changing goals of qualitative data handling. *Qualitative Health Research*, 8(3), 319-328.
- Richardson, S. A., Hastorf, A. H., Goodman, N., & Domsbusch, S. M. (1961). Cultural uniformity in reaction to physical disabilities. *American Sociological Review*, 202, 241-247.
- Riddoch, C., Mattocks, C., Deere, K., Saunders, J., Kirkby, J., Tilling, K., et al. (2007). Objective measurement of level and patterns of physical activity. *Archives of Disease in Childhood*, 92, 963-969.
- Riley, D. J., Santiago, T., & Edelman, N. H. (1976). Complications of obesity-Hypoventilation syndrome in childhood. *American Journal of Disease in Childhood*, 130, 671-674.
- Roberts, D. F., & Foehr, U. G. (2008). Trends in media use. *The Future of Children*, 18(1), 11-37.
- Robertson, S. M., Cullen, K. W., Baranowski, J., Baranowski, T., Shaohua, H., & de Moor, C. (1999). Factors related to adiposity among children aged 3-7 years. *Journal of American Dietetic Association*, 99, 938-943.
- Robinson, T. (2001). Television viewing and childhood obesity. *Pediatric Clinics of North America*, 48(4), 1017-1025.
- Robinson, T. N. (1999). Reducing children's television to prevent obesity: A randomized controlled trial. *Journal of American Medical Association*, 282, 1561-1567.
- Robinson, T. N., Hammer, L. D., Killen, J. D., Kraemer, H. C., Wilson, D. M., Hayward, C., et al. (1993). Does television viewing increase obesity and reduce physical activity? Cross-sectional and longitudinal analyses among adolescent girls. *Pediatrics*, 91, 273-280.
- Rocchini, A., Katch, V., & Anderson, J. (1987). Insulin and blood pressure during weight loss in obese adolescents. *Hypertension*, 10(267-73).
- Rocchini, A. P., Katch, V., Anderson, J., Hinderliter, J., Becque, D., & Martin, M. (1988). Blood pressure in obese adolescents: Effect of weight loss. *Pediatrics*, 82, 16-23.
- Rolland-Cachera, M. F., Deheeger, M., Akrou, M., & Bellisle, F. (1995). Influence of micronutrients on adiposity development: A follow up study of nutrition and growth from 10 months to 8 years of age. *International Journal of Obesity*, 19, 573-578.
- Rolls, B. J. (2003). The supersizing of America: Portion size and the obesity epidemic. *Nutrition Today*, 38(2), 42-53.

- Rolls, B. J., Roe, L. S., Kral, T. V. E., Meengs, J. S., & Wall, D. E. (2004). Increasing the portion size of a packaged snack increases energy intake in men and women. *Appetite*, 42, 63-69.
- Rudisill, M. E., Mahar, M. T., & Meaney, K. S. (1993). The relationship between children's perceived and actual motor competence. *Perceptual and Motor Skills*, 76, 895-906.
- Ruiz, J. R., Rizzo, N. S., Hurtig-Wennlof, A., Ortega, F. B., Warnberg, J., & Sjostrom, M. (2006). Relations of total physical activity and intensity to fitness and fatness in children: The European Youth Heart Study. *American Journal of Clinical Nutrition*, 84, 299-303.
- Saelens, B. E., Sallis, J. F., Nader, P. R., Broyles, S. L., Berry, C. C., & Taras, H. L. (2002). Home environment influences on children's television watching from early to middle childhood. *Journal of Developmental and Behavioral Pediatrics*, 23(3), 1-8.
- Salbe, A. D., Weyer, C., Harper, I., Lindsay, R. S., Ravussin, E., & Tataranni, P. A. (2002). Assessing risk factors for obesity between childhood and adolescence: II. Energy metabolism and physical activity. *American Journal of Clinical Nutrition*, 110, 307-314.
- Sallis, J. F. (1994). Determinants of physical activity behavior in children. In R. R. Pate & R. C. Hohn (Eds.), *Health and fitness through physical education* (pp. 31-43). Champaign, IL: Human Kinetics.
- Sallis, J. F., Bauman, A., & Pratt, M. (1998). Environmental and policy interventions to promote physical activity. *American Journal of Preventive Medicine*, 15(4), 379-397.
- Sallis, J. F., McKenzie, T. L., Alcaraz, J. E., Kolody, B., Faucette, N., & Hovell, M. F. (1997). The effects of a 2-year physical education program (SPARK) on physical activity and fitness in elementary school students. *American Journal of Public Health*, 87(8), 1328-1334.
- Sallis, J. F., McKenzie, T. L., Alcaraz, J. E., Kolody, B., Hovell, M. F., & Nader, P. R. (1993). Project SPARK. Effects of physical education on adiposity in children. *Annals of the New York Academy of Sciences*, 699, 127-136.
- Sallis, J. F., Patterson, T. L., McKenzie, J., & Nader, P. R. (1988). Family variables and physical activity in preschool children. *Journal of Developmental and Behavioral Pediatrics*, 9, 57-61.
- Sallis, J. F., Prochaska, J. J., & Taylor, W. C. (2000). A review of correlates of physical activity of children and adolescents. *Medicine and Science in Sports and Exercise*, 32, 963-975.
- Sallis, J. F., Simons-Morton, B. G., Stone, E. J., Corbin, C. B., Epstein, L. H., Fauchette, N., et al. (1992). Determinants of physical activity and interventions in youth. *Medicine and Science in Sports and Exercise*, 24, S248-S257.
- Salmon, J., Ball, K., Crawford, D., Booth, M., Telford, A., Hume, C., et al. (2005). Reducing sedentary behaviour and increasing physical activity among 10-year-old children: Overview and process evaluation of the 'Switch-Play' intervention. *Health Promotion International*, 20(1), 7-17.
- Salmon, J., Ball, K., Hume, C., Booth, M., & Crawford, D. A. (2008). Outcomes of a group-randomized trial to prevent excess weight gain, reduce screen behaviours and promote physical activity in 10-year-old children: Switch-Play. *International Journal of Obesity*, 1-12.
- Salmon, J., Campbell, K. J., & Crawford, D. (2006). Television viewing habits associated with obesity risk factors: A survey of Melbourne schoolchildren. *Medical Journal of Australia*, 184, 64-67.
- Salmon, J., Telford, A., & Crawford, D. (2004). *The Children's Leisure Activities Study (CLASS): Summary report*. Melbourne: Deakin University.

- Salmon, J., Timperio, A., Telford, A., Carver, A., & Crawford, D. (2005). Association of family environment with children's television viewing and with low level of physical activity. *Obesity Research*, 13(11), 1939-1951.
- Sanigorski, A. M., Bell, A. C., Kremer, P. J., Cuttler, R., & Swinburn, B. A. (2008). Reducing unhealthy weight gain in children through community capacity-building: Results of a quasi-experimental intervention program, Be Active Eat Well. *International Journal of Obesity*, 32, 1060-1067.
- Schatzman, L., & Strauss, A. (1973). *Field research: Strategies for a natural sociology*. Englewood Cliffs NJ: Prentice Hall.
- Schwandt, T. (1994). Constructivist, interpretivist approaches to human inquiry. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (pp. pp.118-137). Thousand Oaks, CA: Sage Publications.
- Schwandt, T., & Halpern, E. (1988). *Linking auditing and metaevaluation: Enhancing quality in applied research* (Vol. 11). Newbury Park: Sage Publications.
- Schwendiman, J., & Fager, J. (1999). *After-school programs: Good for kids, good for communities*. Washington, DC: Office of Educational Research and Improvement.
- Schwimmer, J. B., Burwinkle, T. M., & Varni, J. W. (2003). Health-related quality of life of severely obese children. *Journal of American Medical Association*, 289, 1813-1819.
- Schwingshandl, J., Eibl, B., Wallner, S., & Borkenstein, M. (1999). Effect of an individualised training programme during weight reduction on body composition: A randomised trial. *Archives of Disease in Childhood*, 81, 426-428.
- Serra-Majen, L., Aranceta, J., Perez-Rodrigo, C., Ribas-Barba, L., & Delgado-Rubio, A. (2006). Prevalence and determinants of obesity in Spanish children and young people. *British Journal of Nutrition*, 96(Suppl. 1), S67-72.
- Shields, M., & Tremblay, M. S. (2008). Sedentary behaviour and obesity. *Health Reports* Retrieved 1 October, 2008, from <http://www.statcan.ca/english/freepub/82-003-XIE/2008002/article/10599-en.htm>
- Sinha, R., Fisch, G., Teague, B., Tamborlane, W. V., Banyas, B., Allen, K., et al. (2002). Prevalence of impaired glucose tolerance among children and adolescents with marked obesity. *New England Journal of Medicine*, 346, 802-810.
- Slaughter, M. H., Lohman, T. G., & Misner, J. E. (1980). Association of somatotype and body composition to physical performance in 7-12-year-old girls. *The Journal of Sports Medicine and Physical Fitness*, 20, 189-198.
- Southall, J., Okely, A. D., & Steele, J. R. (2004). Actual and perceived physical competence in overweight and nonoverweight children. *Pediatric Exercise Science*, 16, 15-24.
- Spitzer, B. L., Henderson, K. A., & Zivian, M. T. (1999). Gender differences in population versus media body sizes: A comparison over four decades. *Sex Roles*, 40, 545-565.
- Spradley, J. P. (1980). *Participant observation*. New York: Holt, Rinehart and Winston.
- Srinivasan, S. R., Bao, W., Wattigney, W. A., & Berenson, G. S. (1996). Adolescent overweight is associated with adult overweight and related multiple cardiovascular risk factors: The Bogalusa Heart Study. *Metabolism*, 45, 235-240.
- Staffieri, J. R. (1967). A study of social stereotype of body image in children. *Journal of Personal and Social Psychology*, 7(1), 204-209.
- Stake, R. E. (1994). Case studies. In N. K. Denzin & Y. K. Lincoln (Eds.), *Handbook of qualitative research* (pp. 236-247). Thousand Oaks, CA: Sage Publications.
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage Publications.
- Stefanik, P. A., & Heald, F. P. (1959). Caloric intake in relation to energy output of obese and non-obese adolescent boys. *American Journal of Clinical Nutrition*, 7(1), 55-62.
- Stettler, N., Signer, T. M., & Suter, P. M. (2004). Electronic games and environmental factors associated with childhood obesity in Switzerland. *Obesity Research*, 12(6), 896-903.

- Stevens, J., Suchindran, C., Ring, K., Bagget, C. D., Jobe, J. B., & Story, M. (2004). Physical activity as a predictor of body composition in American Indian children. *Obesity Research*, 12(12), 1974-1980.
- Stone, L. J., & Church, J. (1968). *Childhood and adolescence*. New York: Random House.
- Story, M., Neumark-Sztainer, D., & French, S. A. (2002). Individual and environmental influences on adolescent eating behaviours. *Journal of American Dietetic Association*, 102(3), S40-S51.
- Story, M., Tompkins, R. A., Bass, M. A., & Wakefield, L. M. (1986). Anthropometric measurements and dietary intakes of Cherokee Indian teenagers in North Carolina. *Journal of the American Dietetic Association*, 86(11), 1555-1560.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park: Sage Publications.
- Strauss, C. C., Smith, K., Frame, C., & Forehand, R. (1985). Personal and interpersonal characteristics associated with childhood obesity. *Journal of Pediatric Psychology*, 10(3), 337-343.
- Strauss, R. S. (2000). Childhood obesity and self-esteem. *Pediatrics*, 105(1, e15), 1-5.
- Strauss, R. S., & Pollack, H. A. (2003). Social marginalization of overweight children. *Archives of Pediatric and Adolescent Medicine*, 157, 746-752.
- Strauss, R. S., Rodzilsky, D., Burack, G., & Colin, M. (2001). Psychosocial correlates of physical activity in healthy children. *Archives of Pediatrics and Adolescent Medicine*, 155, 897-902.
- Strazdins, L., & Loughrey, B. (2007). Too busy: Why time is a health and environmental problem. *The New South Wales Public Health Bulletin*, 18, 219-221.
- Stucky-Ropp, R. C., & DiLorenzo, T. M. (1993). Determinants of exercise in children. *Preventive Medicine*, 22, 880-889.
- Stunkard, A. J., Berkowitz, R. I., Stallings, V. A., & Schoeller, D. A. (1999). Energy intake, not energy output, is a determinant of body size in infants. *American Journal of Clinical Nutrition*, 69, 524-530.
- Sturman, A. (1999). Case study methods. In J. P. Keeses & G. Lakomski (Eds.), *Issues in educational research* (pp. 113-120). Oxford, UK: Pergamon.
- Styne, D. M. (2001). Childhood and adolescent obesity: Prevalence and significance. *Pediatric Clinics of North America*, 48, 823-853.
- Summerbell, C. D., Ashton, V., Campbell, K. J., Edmunds, L. D., Kelly, S., & Waters, E. (2003). Interventions for treating obesity in children (Review). *Cochrane Database of Systematic Reviews*, 3.
- Sung, R. Y. T., Yu, C. W., So, R. C. H., Lam, P. K. W., & Hau, K. T. (2005). Self-perception of physical competences in preadolescent overweight Chinese children. *European Journal of Clinical Nutrition*, 59, 101-106.
- Swinburn, B. A., & Egger, G. (2002). Preventive strategies against weight gain and obesity. *Obesity Reviews*, 3, 289-301.
- Swinburn, B. A., Egger, G., & Raza, F. (1999). Dissecting obesogenic environments: The development and application of the framework for identifying and prioritizing environmental interventions for obesity. *Preventive Medicine*, 29, 563-570.
- Swinburn, B. A., Gill, T., & Kumanyika, S. (2005). Obesity prevention: A proposed framework for translating evidence into action. *Obesity Reviews*, 6(1), 23-33.
- Taras, H. L., Sallis, J. F., Patterson, T. L., Nader, P. R., & Nelson, J. A. (1989). Television's influence on children's diet and physical activity. *Developmental and Behavioral Pediatrics*, 10, 176-180.
- Taylor, C. (1989). *Sources of the self: The making of modern identity*. Cambridge: Cambridge University Press.
- Taylor, J. P., Evers, S., & McKenna, M. (2005). Determinants of healthy eating in children and youth. *Canadian Journal of Public Health*, 96, S20-S26.

- Taylor, W. C., Baranowski, T., & Sallis, J. F. (1994). Family determinants of childhood physical activity: A social-cognitive model. In R. K. Dishman (Ed.), *Advances in Exercise Adherence* (pp. 319-342). Champaign, IL: Human Kinestics.
- Taylor, W. C., & Sallis, J. F. (1997). Determinants of physical activity in children. In A. P. Simopolous & K. N. Pavlou (Eds.), *Nutrition and fitness: Metabolic and behavioral aspects in health and disease. World review food and nutrition* (pp. 159-167). Basel: Karger.
- Te Velde, S. J., De Bourdeaudhuij, I., Thorsdottir, I., Rasmussen, M., Hagstromer, M., & Klepp, K. L. (2007). Patterns in sedentary and exercise behaviors and associations with overweight in 9-14-year-old boys and girls - A cross sectional study. *BMC Public Health*, 7(16), doi:10.1186/1471-2458-1187-1116.
- Tesch, R. (1990). *Qualitative research: Analysis types and software tools*. Hampshire: The Falmer Press.
- Tiggemann, M., & Anesbury, T. (2000). Negative stereotyping of obesity in children: The role of controllability beliefs. *Journal of Applied Social Psychology*, 30(9), 1977-1993.
- Timperio, A., Salmon, J., Telford, A., & Crawford, D. (2004). Perceptions of local neighbourhood environments and their relationship to childhood overweight and obesity. *International Journal of Obesity*, 1-6.
- Tremblay, M. S., & Willms, J. D. (2003). Is the Canadian childhood obesity epidemic related to physical inactivity? *International Journal of Obesity and Related Metabolic Disorders*, 27, 1100-1105.
- Treuth, M. S., Hou, N., Young, D. R., & Maynard, L. M. (2005). Accelerometry-measured activity or sedentary time and overweight in rural boys and girls. *Obesity Research*, 13(9), 1606-1614.
- Trost, S. G. (2003). *Discussion paper for the development of recommendations for children's and youths' participation in health promoting physical activity*. Canberra, Australia: Australian Department of Health and Ageing, Commonwealth of Australia.
- Trost, S. G., Kerr, L. M., Ward, D. S., & Pate, R. R. (2001). Physical activity and determinants of physical activity in obese and non-obese children. *International Journal of Obesity*, 25(6), 822-829.
- Trost, S. G., Pate, R. R., & Sallis, J. F. (2002). Age and gender differences in objectively measured physical activity in youth. *Medicine and Science in Sports and Exercise*, 34, 350-355.
- Trost, S. G., Sirard, J. R., Dowda, M., Pfeiffer, K. A., & Pate, R. R. (2003). Physical activity in overweight and non-overweight preschool children. *International Journal of Obesity*, 27, 834-839.
- Tucker, L. A., Seljaas, G. T., & Hager, R. L. (1997). Body fat percentage of children varies according to their diet composition. *Journal of the American Dietetic Association*, 97(9), 981-986.
- Tyson-Martin, L. (1999). The "four Rs" of enhancing elementary games instruction: Refocus, recycle, reorganize, restructure. *The Journal of Physical Education, Recreation & Dance*, 70(7), 36.
- Ulrich, B. D. (1987). Perceptions of physical competence, motor competence and participation in organized sport: Their interrelationships in young children. *Research Quarterly for Exercise and Sport*, 58, 57-67.
- Ulrich, D. A. (2000). *Test of gross motor development* (2nd ed.). Austin, TX: PRO-ED.
- US Department of Health and Human Services. (2006). Just enough for you: About food portions. *Weight-control information network* Retrieved 14 January, 2009, from [http://www.win.niddk.nih.gov/publications/just\\_enough.htm#difference](http://www.win.niddk.nih.gov/publications/just_enough.htm#difference)



- Utter, J., Neumark-Sztainer, D., Jeffery, R. W., & Story, M. (2003). Couch potatoes or french fries: Are sedentary behaviors associated with body mass index, physical activity, and dietary behaviors among adolescents? *The American Dietetic Association*, 103(10), 1298-1305.
- Valentine, G. (1997). 'My son's a bit dizzy.' 'My wife's a bit soft': Gender, children, and cultures of parenting. *Gender, Place and Culture*, 4, 37-62.
- Van den Bulk, J., & Van den Bergh, B. (2000). The influence of perceived parental guidance patterns in children's media use: Gender differences and media displacement. *Journal of Broadcasting and Electronic Media*, 44, 329-348.
- Van Der Horst, K., Paw, M., J. Chin. A., Twisk, J. W. R., & Van Mechelen, W. (2007). A brief review on correlates of physical activity and sedentariness in youth. *Medicine and Science in Sports and Exercise*, 39(8), 1241-1250.
- Van Maanen, J. (1983). *Qualitative methodology*. Thousand Oaks, CA: Sage Publications.
- Van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. Ontario: The University of Western Ontario.
- Vandewater, E., Shim, M. S., & Caplovitz, A. G. (2004). Linking obesity and activity level with children's television and video game use. *Journal of Adolescence*, 27(1), 71-85.
- Vanhala, M., Vanhala, P., Keinänen-Kiukaanniemi, S., Kumpusalo, E., & Takala, J. (1999). Relative weight gain and obesity as a child predict metabolic syndrome as an adult. *International Journal of Obesity*, 23, 656-659.
- Vauthier, J., Lluch, A., Lecomte, E., Artur, Y., & Herberth, B. (1996). Family resemblance in energy and macronutrient intakes. The Stanislas Family Study. *International Journal of Epidemiology*, 25, 1030-1037.
- Ventura, A. K., & Birch, L. L. (2008). Does parenting affect children's eating and weight status? (Review). *The International Journal of Behavioral Nutrition and Physical Activity*, 5(15).
- Von Kries, R., Toschke, A. M., Koletzko, B., & Slikker, W. (2002). Maternal smoking during pregnancy and childhood obesity. *International Journal of Obesity and Related Metabolic Disorders*, 156, 954-961.
- Wake, M., Hesketh, K., & Waters, E. (2003). Television, computer use and body mass index in Australian primary school children. *Paediatric Child Health*, 39, 130-134.
- Walcott, H. (1994). *Transforming qualitative data: Description analysis and interpretation*. Thousand Oaks, CA.: Sage Publications.
- Wallace, W. J., Sheslow, D., & Hessink, S. (1993). Obesity in children: A risk for depression. In C. L. Williams & S. Y. S. Kimm (Eds.), *Annals of the New York Academy of Science*, 699: *Prevention and treatment of childhood obesity* (pp. 301-302). New York: The New York Academy of Sciences.
- Wang, C. K. J., Chatzisarantis, N. L. D., Spray, C. M., & Biddle, S. J. H. (2002). Achievement goal profiles in school physical education: Differences in self-determination, sport ability beliefs, and physical activity. *British Journal of Educational Psychology*, 72, 433-445.
- Wansink, B., Painter, J. E., & North, J. (2005). Bottomless bowls: Why visual cues of portion size may influence intake. *Obesity Research*, 13, 93-100.
- Wardle, J., Guthrie, C., Sanderson, S., Birch, L. L., & Plomin, R. (2001). Food and activity preferences in children of lean and obese parents. *International Journal of Obesity*, 25(7), 971-977.
- Watson, A. W. S. (1988). Quantification of the influence of the body fat content on selected physical performance variables in adolescent boys. *Irish Journal of Medicine and Science*, 157, 383-384.
- Waxman, M., & Stunkard, A. J. (1980). Caloric intake and expenditure in obese boys. *The Journal of Pediatrics*, 96, 187-193.

- Weir, L. A., Etelson, D., & Brand, D. A. (2006). Parents' perceptions of neighbourhood safety and children's physical activity. *Preventive Medicine*, 43(3), 212-217.
- Weiss, M. R. (2000). Motivating kids in physical activity. *The President's Council on Physical Fitness and Sports Research Digest*, 3(11), 1-8.
- Weiss, M. R., & Ebbeck, V. (1996). Self-esteem and perceptions of competence in youth sport: Theory, research, and enhancement strategies. In O. Bar-Or (Ed.), *The child and adolescent athlete* (pp. 364-382). London: Blackwell Science.
- Weiss, R., Dziura, J., Burgert, T. S., Tamborlane, W. V., Taksali, S., Yeckel, C. W., et al. (2004). Obesity and the metabolic syndrome in children and adolescents. *New England Journal of Medicine*, 350, 2362-2374.
- Welk, G. J., Wood, K., & Morss, G. (2003). Parental influences on physical activity in children: An exploration of potential mechanisms. *Pediatric Exercise Science*, 15, 19-33.
- Williams, J., Wake, M., Hesketh, K., Maher, E., & Waters, E. (2005). Health-related quality of life of overweight and obese children. *Journal of American Medical Association*, 293, 70-76.
- Wold, B., & Hendry, L. (1998). Social and environmental factors associated with physical activity in young people. In S. J. Biddle, J. F. Sallis & N. Cavill (Eds.), *Young and active? Young people and health-enhancing physical activity: Evidence and implications* (pp. 119-132). London: Health Education Authority.
- Wolf, A. M., Gortmaker, S. L., Cheung, L., Gray, H. M., Herzog, D. B., & Colditz, G. A. (1993). Activity, inactivity, and obesity: Racial, ethnic, and age differences among schoolgirls. *American Journal of Public Health*, 83, 1625-1627.
- Woo, K. S., Chook, P., Yu, C. W., Sung, R. Y., Qiao, M., & Leung, S. S. (2004). Effects of diet and exercise on obesity-related vascular dysfunction in children. *Circulation*, 109, 1981-1986.
- Yin, Z., Hanes, J., Moore, J. B., Humbles, P., Barbeau, P., & Gutin, B. (2005). An after school physical activity program for obesity prevention in children. *Evaluation and The Health Professions*, 28(1), 67-89.
- Zabinski, M. F., Saelens, B. E., Stein, R. I., Hayden-Wade, H. A., & Wilfley, D. E. (2003). Overweight children's barriers to and support for physical activity. *Obesity Research*, 11, 238-246.
- Zask, A., van Beurden, E., Barnett, L., Brooks, L. O., & Dietrich, u. C. (2001). Active school playgrounds - Myth or reality? Results of the "Move It Groove It" Project. *Preventive Medicine*, 33(5), 402-408.
- Zive, M. M., Frank-Spophor, G. C., Sallis, J. F., McKenzie, T. L., Elder, J. P., Berry, C. C., et al. (1998). Determinants of dietary intake in a sample of white and Mexican-American children. *Journal of American Dietetic Association*, 98, 1282-1289.

## APPENDICES

### APPENDIX A: INFORMATION SHEETS AND CONSENT FORMS FOR PARENTS AND CHILDREN



#### A Naturalistic Inquiry into the Lives of Children

##### INFORMATION SHEET FOR PARENTS

Thank you for your interest in the Hunter and Illawarra Kid's Challenge Using Parent Support (HIKCUPS) Study. We are sorry that you and your child could not be involved. A number of parents indicated that they would like to be contacted about further research being conducted by the Child Obesity Research Centre (COrE) and there is now an opportunity to be involved in an exciting research project in 2007. Full details about the project, its purpose, the researchers involved and what is required of you and your child, should you agree to be involved, are provided in this information sheet.

##### **What is the purpose of this study?**

Last year I conducted a study, which looked at issues surrounding barriers overweight children faced in increasing physical activity and decreasing sedentary behaviours. This study aims to take this one step further and would help us to learn about the day-to-day life of your child. This will provide us with information on factors affecting the behaviours of your child and what could be done to modify these behaviours. This study in no way seeks to assess or pass judgment on any individual. Please be assured that the project aims to glean understandings of the relationships between children and their environment and not to examine or criticise any individual.

Many programs have been developed to treat and prevent weight problems in children, however, thorough research into what influences certain behaviours among these children has not been done. This is an opportunity for us to find out everything we can about this adverse health issue in order to prevent this problem from continuing to rise.

##### **What will you be asked to do?**

You will be asked to consent to your child's height and weight being measured. You will also be asked to allow me (Lauren Puglisi) to spend days at a time observing your child and their different behaviours in their regular environments. This will take place from when your child gets up in the morning until they go to bed at night. This will be their usual settings and will involve time spent in your home with your family and also time in your child's school. I will not be interacting with your family, allowing for you to participate in activities that are the norm for your family. If you consent to this study, I will be looking at spending 6 days (3 days in summer and 3 days in winter) observing your child. I will also conduct six short interviews with you and your child, which will involve you answering questions relating to some of my observations.

I (Lauren Puglisi) will carry out observations and will ask your child to wear a digital recorder for the purpose of transcribing later. This will only need to be worn in your home when I am present. You will have the opportunity to read over the transcripts and field notes. Recordings will then be destroyed and transcripts will contain no information to identify yourself or your child. I will ask for your permission to take

photos of parts of your environment but these photos will not capture you or any family member and will be shown to your family for approval to be used in publications and presentations.

You will also be asked to consent to allowing me to observe your child in their school environment for a total of 4 days. Your child will not be required to wear their digital recorder during school hours and I will not interact with your child.

**What your child will be asked to do?**

Your child will be asked to allow me (Lauren) to measure their height and weight and to spend days at a time observing them while they participate in their regular day-to-day activities. They will be asked to wear a digital recorder in the home environment while I am present. They may also be asked to answer some questions on six occasions relating to different things I observe.

**What are the risks of the study?**

By consenting to be involved in this study it needs to be acknowledged that this may draw negative attention to your child from other children in the school environment. I will, however, aim to minimise this by observing your child's entire class, not singling out your child and keeping my distance from your child. If my presence in the school environment is causing problems I will discontinue observations in the school setting.

**Participation in the study.**

You are free to discontinue participation at any time. Discontinuation of your involvement will not jeopardise your current or future relationship with the University of Wollongong.

**What will happen to the information you provide?**

All the information collected during this study will be kept strictly confidential and be stored in a locked office. The information provided will only be seen by the researchers involved in the study. The information collected through observations will form part of Lauren Puglisi's Doctor of Philosophy degree and the information may be used in publications, presentations and theses. The information collected by Lauren will be unable to be traced back to you, your family or any other person associated with your family.

**Who is conducting the study?**

The researchers involved in the study are:

Lauren Puglisi

PhD candidate, Child Obesity Research Centre, Faculty of Education, University of Wollongong.

Dr Tony Okely

Director of the Child Obesity Research Centre, Senior Lecturer, Faculty of Education, University of Wollongong.

Dr Phil Pearson

Lecturer, Child Obesity Research Centre, Faculty of Education, University of Wollongong.

A/Pr Wilma Vialle

Associate Professor, Faculty of Education, University of Wollongong.

**A Tailored Program for Your Child**

For your participation in this study, CORE would like to offer you a tailored program based on the observations made. Trained dietitians and physical activity professionals will work with our research centre to develop this individualised program for your child and family. This would provide you with a number of recommendations in a variety of

areas, including physical activity and nutrition. This would be our way of thanking you for your time and assistance with this study.

If you agree to participate in the study, please fill out and return the consent form to Lauren Puglisi. If you have any questions regarding the study, please contact Lauren Puglisi (02) 4221 5551. If you have any concerns or complaints regarding the way the research is or has been conducted, you can contact the Ethics Officer, Human Research Ethics Committee, University of Wollongong on (02) 4221 4457.

Your co-operation in this project will be greatly appreciated.



## A Naturalistic Inquiry into the Lives of Children

### INFORMATION SHEET FOR CHILDREN

Thank you for having interest in this new project being done at the Child Obesity Research Centre at the University of Wollongong.

#### **What is the purpose of this project?**

This project aims to look at what things you do on a normal day and how different things change what you do.

#### **What will you be asked to do?**

You will be asked to allow me (Lauren Puglisi) to measure how tall you are and how much you weigh. I will spend time with you to watch you and your family during the day. If you would like to be in this project, I will spend 6 days with you and your family, from the time you get up in the morning until you go to bed at night. You will be asked to wear a small machine that records what you say when I am in your home so that I am able to write down what you and your family say. I may also ask you and your family questions at 6 different times about some of the things I saw you do.

I will ask for you to let me take photos of parts of your home and other places. These photos will not include you or any person in your family and will be shown to your family before I use these. You will also be asked to let me watch you at school on 4 days. You will not have to wear your recording machine at school.

You can read my notes to see if they are right. The tapes from the recording machine will be destroyed and whatever is written will not have your name or details in it.

#### **What are the possible worries about the project?**

If you agree to be in this project other children may wonder why you are being watched by me and may say things to you about this. I will try my hardest to stop this from happening by watching your whole class and not just you. I will not be close-by all the time so your friends and others should not be able to tell that I am only watching

you. If me being at your school causes problems I will stop watching you at school.

**Being in the project.**

You can stop being in the project any time you want. Deciding you do not want to be in the project will not change your relationship with the University now or in the future.

**What will happen to the information collected?**

All the information I collect in this project from you will be private and locked away. The information will only be seen by myself and 3 other people working with me on this project. The information will be used as part of my University course and this information may be used in some other things I write. The information collected by me will not include your name or other people's names so no one will be able to tell it is you and your family I am talking about.

**Who is in the project?**

The people in the project are:

**Lauren Puglisi**

PhD candidate, Child Obesity Research Centre, Faculty of Education, University of Wollongong.

**Dr Tony Okely**

Director of the Child Obesity Research Centre, Senior Lecturer, Faculty of Education, University of Wollongong.

**Dr Phil Pearson**

Lecturer, Child Obesity Research Centre, Faculty of Education, University of Wollongong.

**A/Pr Wilma Vialle**

Associate Professor, Faculty of Education, University of Wollongong.

If you agree to be in this project, please fill out and return the form to Lauren Puglisi.

If you have questions about the project, please call or ask your parents to call Lauren (02) 4221 5551. If you have any worries or complaints about the way the project is being done or has been done, you or your parents can call the Ethics Officer, Human Research Ethics Committee, University of Wollongong on (02) 4221 4457.

Your help with this project will be greatly appreciated.



## A Naturalistic Inquiry into the Lives of Children

### CONSENT FORM FOR PARENTS

Lauren Puglisi, Dr Tony Okely, Dr Phil Pearson, A/Pr Wilma Vialle

I have been given information about the study titled “A naturalistic inquiry into the lives of children”. I have had the opportunity to discuss this with Lauren Puglisi who is conducting the study in the Child Obesity Research Centre, University of Wollongong.

I understand that, if I consent to participating I will be asked to:

- allow Lauren Puglisi to measure my child’s height and weight in my home.
- discuss suitable days for observations to take place.
- allow Lauren Puglisi to observe my child in my home environment and other day-to-day settings for six full days from when my child wakes up in the morning until when they go to bed at night (three during summer and three during winter).
- allow my child to wear a digital recorder in the home environment during observations.
- allow my child to be observed in the school environment for 4 days.
- answer some questions asked by Lauren on six different occasions.
- allow Lauren Puglisi to take photos of some surroundings (please tick the box below if you consent to Lauren taking photos).

I understand that by being involved in this study it may draw negative attention to my child from other children in the school setting. I know that Lauren will employ strategies to minimise the chances of this happening. If Lauren’s presence in the school environment is causing problems I know that she will discontinue observing my child in the school environment.

I understand that my participation in this research is voluntary. I am free to refuse my participation and I am free to withdraw from the research at any time. Withdrawal from the study will not affect my relationship with the University of Wollongong now or in the future.

If I have enquiries about the research, I can contact Lauren Puglisi on (02) 4221 5551, or if I have any concerns or complaints regarding the way the research is or has been conducted, I can contact the Ethics Officer, Human Ethics Committee, University of Wollongong on (02) 4221 4457.



By signing below I am indicating my consent to participate in the research “A naturalistic inquiry into the lives of children” conducted by Lauren Puglisi, Dr Tony Okely, Dr Phil Pearson and A/Pr Wilma Vialle, as it has been described to me in the information sheet and discussion with Lauren Puglisi. I understand that the data collected from me through observations may be used in an academic thesis, journal publications and conference presentations, and I consent for it to be used in that manner. I understand that the information collected by Lauren will not be traced back to myself, my family or any other person or place.

---

**Consent**

I, (Parent’s/Guardian’s Name) ....., agree for my child (Child’s Name)..... and I to take part in the study titled:

*A naturalistic inquiry into the lives of children.*

Address: .....

Phone: ..... Child’s DOB: .....

Parent’s/Guardian’s Signature: .....

Date:.....

Name and Phone Number of contact person in case of an emergency:

Name: ..... Phone: .....

I consent to Lauren observing my child at school (Please tick): Yes ☐ No ☐

I consent to Lauren taking photos of our surroundings (Please tick): Yes ☐ No ☐



## A Naturalistic Inquiry into the Lives of Children

### CONSENT FORM FOR CHILDREN

Lauren Puglisi, Dr Tony Okely, Dr Phil Pearson, A/Pr Wilma Vialle

I have been given information about the project called “A naturalistic inquiry into the lives of children”. I have had the chance to talk about this with Lauren Puglisi.

I understand that, if I agree to be in this project I will be asked to:

- be measured for how tall I am and how much I weigh.
- wear a small machine that records what I say when Lauren is watching me and my family in my home.
- let Lauren watch me at home and other places for 6 days from when I wake up in the morning until when I go to bed at night (3 days in summer and 3 days in winter).
- let Lauren watch me at my school on 4 days.
- answer questions Lauren asks me about things she has seen at 6 different times.
- let Lauren take photos of different things

If I agree to be in this project I understand that other children may say things to me about being watched by Lauren. I know Lauren will try to stop this from happening by doing different things to make sure it does not look like she is only watching me at school. If Lauren being at my school is causing problems I know she will stop watching me at school.

I understand that I can stop being in this project at any time. This will not change my relationship with the University of Wollongong now or in the future.

If I have questions about the project, I can call or get my parents to call Lauren on (02) 4221 5551, or if I am worried about the way the project is being done or has been done, my parents can call the Ethics Officer, Human Ethics Committee, University of Wollongong on (02) 4221 4457.

By signing below I am saying that I will be a part of the project called “A naturalistic inquiry into the lives of children” which has been explained in

the information sheet and by Lauren. This is being done by Lauren Puglisi, Dr Tony Okely, Dr Phil Pearson and A/Pr Wilma Vialle. I know that the information Lauren collects from me might be used in different things that Lauren writes and talks about, and I am ok for it to be used in that way. I understand that the information collected by Lauren will not include my name or other people's names so no one will know it is me and my family that Lauren is talking about.

---

**Consent**

I, (Your Name)..... agree to be in the project titled:  
A naturalistic inquiry into the lives of children

Child's Signature: .....

Date:.....

I agree to Lauren watching me at school (Please tick below):

Yes ☐ No ☐

I agree to Lauren taking photos of different things (Please tick below):

Yes ☐ No ☐

## **APPENDIX B: LETTER TO SCHOOL PRINCIPAL AND SCHOOL INFORMATION SHEET**



Dear Principal,

Obesity is now one of the most common health problems facing Australian children with 1 in 5 children being either overweight or obese. While we know that it is a serious problem affecting a child's physical, social and emotional health, the best way to help children achieve a healthy weight remains unclear. Many programs have been developed to prevent and treat weight problems in children, however, these have had little success. This inquiry is not looking at one particular aspect of child obesity but taking a holistic approach to investigating the day-to-day lives of obese children. Understanding the experiences and behaviours of obese children will help us to develop effective prevention and treatment programs for these children.

I (Lauren Puglisi) along with my supervisors Dr Tony Okely, Dr Phil Pearson and A/Pr Wilma Vialle from the Child Obesity Research Centre at the University of Wollongong have recruited five children and their families to participate in a study addressing this issue. This involves observing the behaviours of these five children to determine what happens in the day-to-day life of an obese child. Six observations days will take place with each child (from the time they get up in the morning until they go to bed at night). Four of these days will be school days (two days in February and two days in July). After all observations take place the researchers on this project will work with dietitians and physical activity experts to develop an individualised program for each of these children.

One of the five children who have consented to this study attends your school and we are asking for your assistance by allowing me to come into your school and observe this child in their class and other settings within the school on four separate days. Before we conduct this study in your school we will organise to meet with you and the classroom teacher to discuss the project further. We will also work with you to organise suitable observation days for your school.

I (Lauren) will conduct all observations in your school. I completed my Bachelor of Education degree with First Class Honours in 2005 and received the University Medal in the Faculty of Education. For my honours project in 2005 I conducted a similar study with families from the Illawarra. This involved working with overweight children to determine what barriers prevented them from being more active and less sedentary.

**Enclosed is an information sheet for your school and also an information and consent form for the teacher of this child.**

Please do not hesitate to contact Lauren Puglisi (Ph: 4221 5551) with any queries or for further information. The Human Research Ethics Committee at the University of Wollongong and the Department of Education and Training have approved this study.

Thank you in anticipation for your assistance with this important matter.

Kind Regards,

Lauren Puglisi  
PhD Candidate and Professional Officer  
Child Obesity Research Centre



## **A naturalistic inquiry into the day-to-day lives of obese children**

### **School Information Sheet**

#### **Background**

Child obesity is one of the major global public health problems today due to its prevalence and related adverse health consequences. Approximately 10% of the world's school-age children are estimated to be overweight, with a quarter of these children being obese. This can lead to a range of short-term and long-term implications, which are detrimental to an individual's physical, psychological, emotional and social health. The significance of this inquiry is not looking at one particular aspect of child obesity but taking a holistic approach to investigating the day-to-day lives of obese children. The apparent lack of naturalistic based research in looking at the day-to-day lives and behaviours of obese children in different settings makes this study not only valuable but extremely overdue.

#### **The study**

The study is being completed as part of a Doctor of Philosophy (Education) degree by Lauren Puglisi from the Faculty of Education at the University of Wollongong. Dr Tony Okely, Dr Phil Pearson and A/Pr Wilma Vialle are supervising the project. Lauren Puglisi completed her Bachelor of Education degree with First Class Honours in 2005. For her honours project in 2005, Lauren studied families from the Illawarra with overweight children to determine what barriers prevented them from being more active and less sedentary. Lauren will be using five of these children and their families again to gain a holistic picture of the day-to-day lives of obese children, aiming to reduce the prevalence of obesity in Australia. We therefore will require the participation of your school in this study as one of these six children attends your school.

The purpose of this study is to identify and understand relationships between obese children and their environment in order to understand why certain clusters of behaviours, knowledge, and attitudes occur and work the way they do. A great proportion of a child's day is spent in school and it is therefore critical to this study that participating children are observed in schools in order to gain a better understanding of what behaviours are adopted in this setting. Within the school setting the researcher will act as a non-participant observer and although the participating child will know that the researcher is observing them, the other children will not be told. This is to ensure that the participating child is not the target of any teasing within the school or is not asked any questions related to why they are being observed. The researcher will aim to ensure that the target child is not singled out and that she keeps distance from this child. As the researcher has completed her Bachelor of Education degree and is a fully qualified teacher, she is very familiar with the rights, responsibilities and activities occurring in the school environment.

**When will the study be conducted?**

Two observation days will take place in the school in February/March and two days will take place in July/August. The observations will begin in February 2007. The exact observation days will be decided between the researcher and participating families. Your school will be contacted in advance to ensure that the observation days will be convenient for you and the child's classroom teacher. Before observations take place Lauren Puglisi will meet with you to discuss her study and any other questions you may have.

**What is required of schools?**

Your school would be required to allow Lauren Puglisi to spend four separate observation days in your school where she will observe the participating child in their classroom setting as well as the playground. Fieldnotes will be taken by the researcher throughout these observation days.

**Consent and Confidentiality**

Participation in the study is voluntary for schools, teachers, parents, and students. Only research staff at the University of Wollongong will have access to the information obtained. Any information that identifies the records of a particular participant or school will be stored securely and held in strict confidence. The results will be published in aggregate form, from which the records of any participant or school will not be identifiable.

Participants will be able to decline to participate in the study or to withdraw at any time and this will have no affect on their current or future relationship with the University of Wollongong. The only condition for participation will be having written student and parental permission.

**Well-being of students**

Ethics approval has been obtained from the University of Wollongong Human Research Ethics Committee and the Department of Education and Training. The observations will be carried out by a primary school teacher and she will aim to protect the safety and self-esteem of the students.

If you have any questions regarding the study please call Lauren Puglisi on (02) 4221-5551.

If there are any concerns or complaints regarding the way the research is or has been conducted, you can contact the Complaints Officer, Human Research Ethics Committee, University of Wollongong on 4221 4457.

Your cooperation would be greatly appreciated.

## **APPENDIX C: INFORMATION SHEET AND CONSENT FORM FOR TEACHERS**



### **A Naturalistic Study into the Lives of Obese Children**

#### **INFORMATION SHEET FOR TEACHERS**

##### **Background**

Child obesity is one of the major global public health problems today due to its prevalence and related adverse health consequences. Approximately 10% of the world's school-age children are estimated to be overweight, with a quarter of these children being obese. This can lead to a range of short-term and long-term implications, which are detrimental to an individual's physical, psychological, emotional and social health. The significance of this inquiry is not looking at one particular aspect of child obesity but taking a holistic approach to investigating the day-to-day lives of obese children. The apparent lack of naturalistic based research in looking at the day-to-day lives and behaviours of obese children in different settings makes this study not only valuable but extremely overdue.

##### **The study**

The study is being completed as part of a Doctor of Philosophy (Education) degree by Lauren Puglisi from the Faculty of Education at the University of Wollongong. Dr Tony Okely, Dr Phil Pearson and A/Pr Wilma Vialle are supervising the project. Lauren Puglisi completed her Bachelor of Education degree with First Class Honours in 2005. For her honours project in 2005, Lauren studied families from the Illawarra with overweight children to determine what barriers prevented them from being more active and less sedentary. Lauren will be using five of these children and their families again to gain a holistic picture of the day-to-day lives of obese children, aiming to reduce the prevalence of obesity in Australia. We therefore will require your participation in this study as one of these five children is in your class.

The purpose of this study is to identify and understand relationships between obese children and their environment in order to understand why certain clusters of behaviours, knowledge, and attitudes occur and work the way they do. A great proportion of a child's day is spent in school and it is therefore critical to this study that participating children are observed in schools in order to gain a better understanding of what behaviours are adopted in this setting and how the school environment shapes a child's behaviours. Within the classroom and playground settings the researcher will act as an observer and although the participating child will know that the researcher is observing them, the other children will not be told. This is to ensure that the participating child is not the target of any teasing within the school or is not asked any questions related to why they are being observed. The researcher will aim to ensure that the target child is not singled out and that she keeps her distance from this child. As the researcher has completed her Bachelor of Education degree and is a fully qualified teacher, she is very familiar with the rights, responsibilities and activities occurring in the school environment.



**When will the study be conducted?**

The observations will begin in February 2007. The exact observation days will be decided between the researcher and participating families. Your school will be contacted in advance to ensure that the observation days will be convenient for the Principal and yourself. Before observations take place Lauren Puglisi will meet with you and the Principal at your school to discuss her study and any other questions you may have.

**What is required of you?**

You would be required to allow Lauren Puglisi to spend four separate observation days in your classroom where she will observe the participating child in your classroom setting as well as the playground. Fieldnotes will be taken by the researcher throughout these observation days.

**Consent and Confidentiality**

Participation in the study is voluntary for schools, teachers, parents, and students. Only research staff at the University of Wollongong will have access to the information obtained. Any information that identifies the records of a particular participant or school will be stored securely and held in strict confidence. The results will be published in aggregate form, from which the records of any participant or school will not be identifiable.

Participants will be able to decline to participate in the study or to withdraw at any time and this will have no affect on their current or future relationship with the University of Wollongong. The only condition for participation will be having written student and parental permission.

**Well-being of students**

Ethics approval has been obtained from the University of Wollongong Human Research Ethics Committee and the Department of Education and Training. The observations will be carried out by a primary school teacher and she will protect the safety and self-esteem of the students.

If you have any questions regarding the study please call Lauren Puglisi on (02) 4221-5551. Your cooperation would be greatly appreciated. If there are any concerns or complaints regarding the way the research is or has been conducted, you can contact the Complaints Officer, Human Research Ethics Committee, University of Wollongong on 4221 4457.



**A Naturalistic Study into the Lives of Obese Children**  
**CONSENT FORM FOR TEACHERS**

Lauren Puglisi, Dr Tony Okely, Dr Phil Pearson, A/Pr Wilma Vialle

I have been given information about the study titled “A Naturalistic Study into the Lives of Obese Children”. I have had the opportunity to discuss the research with Lauren Puglisi who is conducting the study in the Child Obesity Research Centre, University of Wollongong.

I understand that, if I consent to participating I will be asked to:

- discuss days for observations in my classroom and school to take place.
- allow Lauren to observe the specified child in my class for four full days in 2007 (two days during February and two days during July).

I understand that my participation in this research is voluntary. If Lauren’s presence in my classroom is becoming distracting then I understand that I can ask her to discontinue observing in the classroom. I understand that I can refuse my participation and I am free to withdraw from the research at any time. Withdrawal from the study will not affect my relationship with the University of Wollongong now or in the future.

If I have enquiries about the research, I can contact Lauren Puglisi on (02) 4221 5551, or if I have any concerns or complaints regarding the way research is or has been conducted, I can contact the Ethics Officer, Human Ethics Committee, University of Wollongong on (02) 4221 4457.

By signing below I am indicating my consent to participate in the research “A naturalistic inquiry into the lives of obese children” conducted by Lauren Puglisi, Dr Tony Okely, Dr Phil Pearson and A/Pr Wilma Vialle as it has been described to me in the information sheet and discussion with Lauren Puglisi. I understand that the data collected through observations may be used in an academic thesis, journal publications and conference presentations, and I consent for it to be used in that manner. I

understand that the information collected by Lauren will not be traced back to myself, the school, the child or any other person or place.

.....

**Consent**

I, (Teacher's name) ....., agree to take part in the study titled:

*A Naturalistic Inquiry into the Lives of Obese Children.*

This involves me allowing Lauren Puglisi to observe ..... (Child's Name) in my class environment.

Teacher's Signature: ..... Date: .....

## **APPENDIX D: EXAMPLE OF FIELD NOTES**

Monday 19<sup>th</sup> February  
Observation Day 1 – Andrew Brown

Weather – Sunny, 27 degrees

Location- Lives in a quiet street down the road from a beach in the Wollongong area. Jacqui's best friend who has similar aged children lives up the road and also her sister and their children. Andy plays with his cousin Ben quite often.

- They are looking at extending their house and are going to knock it down in April/May and rent while it is being built.

Dad (Glenn) – Works very long hours at the mines, five days a week. Has been there 20 years and really wants to quit it.

Mum (Jacqui) – Works four days as school librarian at Cedar Public School. Has Fridays off.

- Sister (Ella) – Is three years old. Goes to pre-school Wednesday and Thursday and Grandma comes over Monday and Tuesday.

- Andy and Ella don't spend much time together due to their different interests and different ages.

Class – 2L

Teacher – Jill Levis. She has been at the school since 2006 and has lupus. She has a weight problem and is convinced that it is related to that. She doesn't agree with all the fitness and sport the children do in school because it takes up too much of her teaching time and the crowded curriculum makes it hard to fit that in as well as fitness. The school does fitness three times a week for half an hour in the morning.

- The Browns have a big backyard and when they rebuild they are going to put in a pool but still have a spacious backyard.

- While they build they are going to live in a small unit a couple of houses up from their current house.

- Andy gets along well with quite a few children. Has a few main best friends but also is starting footy and does nippers.

- Andy gets along very well with his mum and his dad. Glenn enjoys spending time with Andy but isn't home during the week to play with him. Does some physical activity with him on the weekend.

- Glenn is fairly active on the weekend and his job is very physically demanding during the week.

- Jacqui walks at 7:30pm every night with a group of friends from her street.

- Both Glenn and Jacqui are quite slim, however Jacqui talks about wanting to lose one or two kilos.

- The family is very social with families who live in the street who also have children similar ages to Ella and Andy.

- A lot of Jacqui's time is taken up with Ella who is still at quite a demanding age. She also spends a bit of time preparing for school.

Coding	Observations	Notes
PA – Type – Home-organised	<b>HOME</b> - 6:30am – Arrive at the Brown's and Jacqui informs me they had a street party last night so the kids are very tired. Andy had nippers on Sunday too.	
SB – Type – SSR	- 6:55am – Andy gets up. Tells me he got a new playstation game yesterday but can't beat a monster in it. PUT ON DIGITAL RECORDER	
DB – Parent – Choice	- Jacqui asks Andy what he wants for breakfast and he says "honey toast".	
DB – Content	- Jacqui gives him one piece of toast with butter and honey and a glass of orange juice.	
DB- Eats slowly (pattern)	- Watches TV intently as he eats his breakfast very slowly.	Does his eating pattern change at all when he isn't watching TV?
SB – Type of SSR	- Andy watches the sport highlights on TV	
DB – Energy-dense/ high-sugar	- Andy changes the channel to ABC Kids - Jacqui explains that Andy isn't a big breakfast eater. Andy likes a cooked warm breakfast but they only usually have that on the weekend. They usually have pancakes one morning on the weekend. - 7:25am – Andy finishes breakfast but continues to watch TV.	
DB – Lunch content	- Andy explains he used to have peanut butter sandwiches for lunch but he got sick of them so then had a lunch order everyday and got chicken wedges. Now he only has a lunch order on a Wednesday.	
DB – Choice and encouragement	- Jacqui asks if Andy wants something else for breakfast and Andy says "no." - 7:30am – Ella gets up and asks for a drink of Milo and Jacqui gets it for her. Jackie explains she usually has this first and then will have breakfast later on.	
	TAKE OFF DIGITAL RECORDER FOR ANDY TO GET CHANGED.	
	- Andy gets changed behind the lounge in front of the TV. - Jacqui explains Andy always gets changed in front of the TV.	
DB – content – a lot of food taken, high-sugar/energy-dense snacks	- Jacqui puts up lunch and shows me. Andy has a tuna sandwich with butter, a banana, a orange, two Cruskits with butter and honey and a piece of chocolate slice that Jacqui made. Jacqui fills up his water bottle.	
DB – Parent – Beliefs	- Jacqui explains that she doesn't want to deprive her children of certain foods because she thinks then they will want those types of foods more and binge on them.	
PA – Type – Home – Organised	- Jacqui explains that Andy has swimming on a Monday afternoon, piano on Tuesday afternoon and nippers on a Sunday.	
SB – Type not SSR	- Andy and Jacqui talk about his home reading and Jacqui explains they need to start doing more reading. - 7:30am – Andy says "I'm not feeling well."	
PA – barriers to PA	- Jacqui puts paint on Andy's plantar warts and says she thinks they're getting better. Andy says that if he hops on his left foot then he has to hop on his tippy toes because it hurts. - Andy explains that when he goes swimming the salt water	Is this just an excuse?

<p>SB – SSR</p>	<p>gets into his warts and it hurts.  - 7:50am – Andy continues to watch cartoons.  - 8:00am – Andy walks out the door to get in the car but Jacqui makes him come back in so she can do his hair properly.  - 8:02am – Jacqui and Andy leave for school. Andy sings to Johnny Cash the whole way.</p>	
<p>SB – Type – inactive  PA – type – school – non-organised  PA – Type – School – Organised  PA – Physical difficulties  PA – Inexperienced instructors  PA – Physical difficulties</p>	<p><b>SCHOOL</b>  - 8:20am – Andy puts his bag down and is one of the first children at school. Sits on a chair for 20mins.  - 8:45am – When Andy’s friends arrive at school they start to play some handball.  - 9:00am – lines up for assembly.  - 9:05am – does fitness in the school hall, which is instructed by 5 Year 6 girls. They do stretches and are then instructed to do movements such as jumping, twisting, squats, kicking, kicking their butts, high knees etc. Andy does the movements but is a little bit slower with his movements. Seems to find it hard to bend all the way down.  - Andy continues to do the movements even when the other kids around him aren’t.  - Andy doesn’t do the running on the spot and finds it hard hopping (maybe due to his plantar warts).  - Andy stops doing the movements (as do the other children) because they seem to be getting confused by the instructions of the Year 6 girls.  - Andy likes the YMCA dance.  - 9:30am – Fitness finishes and Andy gets a drink from the bubbler along with the other children and then sits in his line.  - Andy talks to two boys in the line and then enters the classroom with a friend.</p>	
<p>Social – friends  Social – slim friends</p>	<p>- 9:35am – Sits with a friend on the floor while Mrs Levis goes through admin issues. His friends are all fairly slim  - 9:40am – Mrs Levis goes through the behaviour sheet and asks “if you end up with five ticks next to a broken rule what do you do?”. Andy puts up his hand but doesn’t know the answer.  - 9:42am – Spelling. Children are asked to write spelling words from booklet for Week 4 then put one word in a sentence.  - 9:45am – Andy tries to find his spelling book in his tray. He then takes his seat on the ‘Slytherin’ table.  - Andy is the last person to start on his spelling words.</p>	
<p>Distracted</p>	<p>9:50am - Mrs Levis asks for the silver spelling group to sit on the floor. Andy sits on the floor with a boy either side of him.  - Mrs Levis asks what Europe is and Andy puts up his hand and says “I think it’s in India”. Mrs Levis says “Good try”. Andy appears to be listening well.  - Mrs Levis asks “what does motive mean?” and Andy puts up his hand and says “why you did it.”  - Mrs Levis asks “put your hand up if one of your parents migrated here?” Andy answers “My dad moved here from Scotland”.  - 10:00am – Andy’s spelling group walks back to their desks.</p>	

Ability	<ul style="list-style-type: none"> <li>- 10:10am – Mrs Levis tells children to shut spelling books if they have written the words. Most children shut their books but Andy hasn't finished his words so starts to rush his words and then shuts his book.</li> <li>- 10:12am – Mrs Levis asks class to sing 3 times tables and Andy sings very confidently.</li> <li>- 10:13am – Mrs Levis asks reading group monitor to put up their hand and Andy puts his hand up. He then goes to get the reading books and moves to his reading group table.</li> <li>- 10:15am – The class is instructed to silent read for 10 mins. Andy's group reads 'Bill's New Frock'. Andy reads silently next to Sam</li> <li>- 10:25am – Andy goes on with cloze activity. He helps his group members with some of the missing words.</li> <li>- 10:45am – Andy is asked to pack away the reading material and another girl at his table helps him.</li> <li>- 10:45am – Andy is the last to sit on the floor after he puts away the reading material.</li> <li>- 10:50am – Children go back to their desks and have their handwriting books handed out. Andy starts working as soon as he gets his book.</li> </ul>	
Ability	<ul style="list-style-type: none"> <li>- Andy copies the words very neatly. Mrs Levis sits with Andy and tells him to slope his writing. She says "your work is beautiful but I just need you to write a bit faster."</li> </ul>	
DB – Eating style	<p>RECESS</p> <ul style="list-style-type: none"> <li>- 11am – Andy gets hat and lunchbox out of bag and goes outside.</li> <li>- Andy sits and eats his Cruskits with a friend. Takes a long time to eat his recess. Then eats some of his orange wedges.</li> <li>- Most of Andy's friends finish their recess and go and play but Andy keeps eating by himself. Another boy comes and sits with him while he eats.</li> </ul>	
DB – Content – fruit	<ul style="list-style-type: none"> <li>- Andy wipes his mouth on his hat. He puts his unfinished orange wedges back in his lunchbox.</li> </ul>	
DB – Eating style and pace	<ul style="list-style-type: none"> <li>- Andy sits and talks to a friend. His friend then leaves.</li> <li>- Andy sits by himself and then eats his other Cruskit.</li> <li>- 11:25am – The bell rings and children line up on the floor. Andy is still eating his Cruskit in the line. He sits by himself in the line as his other friends are still returning from playing in the playground.</li> </ul>	
Social – friends	<ul style="list-style-type: none"> <li>- Sam walks with him to the classroom.</li> </ul>	
Work ethic Ability	<p>CLASS</p> <ul style="list-style-type: none"> <li>- Andy sits with Sam and another boy on the floor.</li> <li>- Mrs Levis asks what ascending means. Andy answers "counting by ones." Andy is really focused.</li> <li>- Mrs Levis asks a number of q's including "what comes after 99 when counting by 10." Andy answers 109.</li> <li>- The class does actual jumping around the room. Andy enjoys this.</li> <li>- 11:45am – Andy goes back to his desk and works quietly on his maths work.</li> <li>- 12:00pm – Mrs Brown (Andy's mum) comes in and children line up outside for library.</li> </ul>	

<p>DB – Content and style DB – Eating style</p> <p>DB – Content – energy-dense, high-sugar DB – Eating style</p> <p>PA – Active friends – Physical difficulties PA – Difficulties</p> <p>PA – Difficulties</p> <p>SB – Inactive DB – Content – Energy-dense DB – Eating style</p>	<ul style="list-style-type: none"> <li>- Andy asks Mrs Brown where his library bag is and she sends him to her office.</li> <li>- Mrs Brown talks about her skin cancer and Andy puts up his hand and says “I have little circles on my head.” Mrs Brown says “yes that’s right, we got Andy very sunburnt the other day. Naughty Mrs Brown.”</li> <li>- Andy sits by himself while Mrs Brown shows the class a number of books by Graham Base.</li> <li>- Andy starts making faces to his friends on the floor.</li> <li>- 12:15pm – Andy chooses 2 dinosaur books and borrows them.</li> <li>- 12:30pm – Andy goes to class and gets his mat for assembly along with the other children. He seems more confident with his mum teaching instead of Mrs Levis.</li> <li>- 1:00 – assembly ends and Andy waits until last to put his mat away.</li> </ul> <p>LUNCH</p> <ul style="list-style-type: none"> <li>-1:05 – Eats tuna sandwich at desk and really enjoys this. His sandwich is cut into quarters. He eats very slowly again.</li> <li>- 1:20pm – Andy starts talking to Nathan (boy sitting next to him) and stops eating.</li> <li>- 1:25pm – Mrs Levis tells people to go outside if they have finished eating but Andy starts eating his chocolate slice.</li> <li>- Most of the class have gone outside but Andy is still inside eating.</li> <li>- 1:28pm – Andy puts away his lunchbox and is the last child to leave the classroom.</li> <li>- 1:30pm – Andy sits on the hill by himself while his friends play soccer.</li> <li>- 1:40pm – Runs down to play cricket but gets puffed along the way so starts walking.</li> <li>- Runs to get a cricket ball and throws it to a boy.</li> <li>- Andy walks over to a tree and leans against it for a couple of minutes. Looks really tired. Andy then strolls away from the tree and his friend walks over to him.</li> <li>- Sits down at table with two friends.</li> <li>- 1:45pm – Buys a packet of corn chips from the canteen and sits in the shade by himself to eat them.</li> <li>- 1:48pm – Nathan comes to sit with Andy while he eats his chips. The friends sit behind him. Andy doesn’t talk to him and looks really tired.</li> <li>- Two other boys come over to try and get Andy to play but he continues to eat his chips.</li> <li>- 1:50pm – Nathan leaves Andy and Andy continues eating his chips.</li> <li>- 1:52pm – Licks fingers and goes to sit down on the step with his friends.</li> <li>- 1:55pm – Bell rings and Andy goes into the classroom.</li> <li>- 2:05pm – Andy is finishing off handwriting but looks very hot and sweaty.</li> <li>- 2:10pm – SRC rep comes in to ask what things they might want changed in the school. Andy says “softer playground cause there might be glass in it.”</li> <li>- 2:25pm – Children are asked to stand up and stretch. Andy</li> </ul>	<p>Where did he get the money for this?</p>
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PA – Difficulties, uncomfortable	finds it harder to get up than the other children. Mrs Levis tells the children to touch their toes and most children can but Andy can't.	
Ability, confidence	- Sam sits down next to Andy. - Mrs Levis asks a number of questions in relation to their descriptive writing and Andy puts his hand up for every question. Mrs Levis asks for a good describing word and Andy answers 'petite'.	
Work ethic	- 2:35pm – Andy is asked to hand out writing books so they can write three interesting descriptive sentences. - 2:40pm – Andy looks up some words in his thesaurus. - 2:47pm – Andy finally starts to write. - 2:50pm – Mrs Levis asks some children to share their sentences but Andy hasn't finished any so he starts to pack up while other children are sharing. - 3:00pm – Notes are given out. Andy has a drink before he leaves the classroom. - Waits for mum to finish in the school library.	
SB – type – SSR – enjoyment	- 4pm – get home from school. Andy talks about wanting to play his new PS2 game. Explains he's had the PS2 since he was two years old and tells me about all the games he has.	
SB – SSR – Rules	- 4:10pm – Andy starts playing PS2. Jacqui says "you can have half an hour on it and then we'll get ready for swimming." Andy plays Smackdown.	
DB – Parents – Provide Choice	- 4:15pm – Jacqui asks Andy if he wants some grapes and watermelon put on a plate but Andy says "No thanks." Jacqui says normally Andy will ask for something to eat after school but she thinks that maybe because I'm here he didn't. - 4:35pm – Leave for swim school and pick up Andy's cousin, Ben.	
PA – Home – Organised	- Swims non-stop laps from 5 until 5:30pm. Seems to find the laps hard, particularly freestyle and butterfly.	
PA – Difficulties	- Jacqui explains that Andy has been very conscious of what he looks like. She has noticed he gets puffed and red very easily but she remembered being like that so thinks that it is pretty normal. A lot of his teachers have commented on his weight.	
DB – Convenience food	- Jacqui explains they used to get maccas once a week but now it's about once every three weeks for Andy's sake. She said that Andy loves maccas.	
DB – Business	- Jacqui says that she thinks they're starting to develop healthier habits because Ella has been less of a handful this year. She finds it hard because Glenn works very long hours and it is difficult to get the children to their afternoon activities as well as cook a healthy dinner.	
DB – Content – energy-dense, high-sugar foods	- Andy's grandma has always given Andy junk food and lots of it. Jacqui thinks that's where Andy has acquired a taste for certain types of foods.	
- young age	- Andy asks if he can play the PS2 and Jacqui says yes because he's had a big day.	
SB – reward	- 6:15pm – Jacqui tells Andy to get off the PS2 so they can do his spelling words.	
SB – Rules	- Andy plays the PS2 until tea is ready even though both his mum and dad kept telling him to get off it.	
SB – Rules	- Andy plays the PS2 until tea is ready even though both his mum and dad kept telling him to get off it.	
DB – Content	- 7pm – Dinner is ready (chicken breast, 2 potato halves,	

DB – Portion size	broccoli, carrot and gravy).	
DB – Content	- Jacqui thinks that Andy’s portion size at dinner is a major problem because he eats a big meal and then asks for a treat because he’s always been allowed a treat.	
SB – Rule enforcement	- Normal dinners at the Browns’ house include spaghetti bolognese, tacos, curry and rice, schnitzel. They sometimes have pizza from Dominos as a treat because Andy loves pizza.	Why have they started having light milk?
DB – Content	- Jacqui says to Andy that they have to make a rule about the Playstation because it has been on too much.	
SB – Rules	- Andy doesn’t finish his chicken and leaves the table to play the PS2. Glenn gets annoyed and tells Andy to turn it off so he does.	Andy didn’t ask for a treat tonight, Jacqui offered him one. Is it like that all the time?
DB – Parent – choice – encouragement – energy-dense/high-sugar	- 7:15pm – Jacqui asks if Andy had enough for tea and he says “No I’m still hungry.” Jacqui says “what do you want then, maybe some choc slice and a glass of milk?” Andy says “Yep” and Jacqui says “light milk?”. Andy asks if that’s what he normally has and Jacqui explains to him that she’s only just started giving him that cause he never used to like it.	
SB – Non SSR	- 7:20pm – Andy goes to read on his bed. - 7:45pm – Andy comes out of his room and tries to find a different book.	
	TAKES OFF DIGITAL RECORDER	
	- 7:55pm – Glenn puts paint on Andy’s warts. - 8:00pm – Andy starts to play with his juggling balls. Glenn tells him “It’s 8’o’clock, time for bed.” Andy goes to bed straight away but you can hear him playing with his juggling balls.	

## APPENDIX E: THEMES GRIDS

Physical Activity Themes Grid

Theme	Andy	Ben	Cam	David	Erin	Felicity
Physical Difficulties	√	√	√	√	√	√
No one to play with	√	√	√	√	√	√
Unsafe environment	X	√	X	√	X	√
Small backyard	X	√	√	√	√	√
Large playing space at school	X	√	√	√	X	√
Inappropriate school sport/fitness	√	√	√	√	√	√
Busy parents	√	√	√	X	√	X
Lack of parental role models	X	X	√	√	√	√
Lack of sibling role models	√	√	√	√	√	√
Teacher role models	X	X	√	√	√	√
No parental encouragement	X	√	√	√	√	√
Participation in activities good at	X	X	√	X	√	√
Moderate/High SES	√	X	√	X	√	√
Facing other issues	X	√	X	X	X	X

Time to sit and eat before play	✓	✓	✓	✓	✓	✓
Organised activity at home low-intensity or no participation	X	X	✓	X	✓	✓
No participation or low-intensity activity during recess and lunch	✓	✓	✓	✓	✓	✓
Enjoyment of physical activity	✓	✓	✓	✓	X	X
Not very active friends	X	✓	✓	X	✓	✓
Poor perceived competence	✓	✓	X	✓	✓	✓
Access to recreational facilities	X	X	X	✓	X	X
Limited physical activity of an afternoon or weekend	✓	✓	✓	✓	✓	✓

Eating Behaviour Themes Grid

Theme	Andy	Ben	Cam	David	Erin	Felicity
Eat in front of TV regularly	√	√	√	√	X	√
Eats quickly	X	√	√	√	X	√
High-sugar or energy-dense breakfast	√	√	√	X	√	√
High-sugar or energy-dense snacks	√	√	√	√	√	√
Energy-dense lunch	√	X	X	X	X	X
Energy-dense dinner	X	√	X	√	√	√
Large portion sizes	√	√	√	√	√	√
Often provided with a choice	√	√	√	√	√	√
Parents did not regularly restrict intake of high-sugar and energy-dense foods	√	√	√	√	√	√
Moderate/High SES	√	X	√	X	√	√
Parents encouraged intake of high-sugar and energy-dense foods	X	X	√	X	√	√
Limited time for food preparation	√	√	√	X	√	X

Take-away more than once a week	X	✓	✓	✓	✓	X
Fruit break in school	X	X	✓	✓	✓	X
At least one overweight parent	X	X	✓	X	✓	✓
At least one overweight sibling	X	✓	✓	X	✓	✓
Poor parental role models	X	✓	✓	✓	✓	✓
Access to unhealthy foods at school canteen	✓	✓	✓	✓	✓	✓
Poor sibling eating patterns and behaviours	✓	✓	✓	X	X	✓
Regular requests for food	✓	✓	✓	✓	✓	✓
Lack of self-control	✓	✓	✓	✓	✓	✓
Permissive Feeding Style	✓	✓	✓	✓	✓	✓

Sedentary Behaviour Themes Grid

Theme	Andy	Ben	Cam	David	Erin	Felicity
2 or more TVs	√	√	√	√	√	√
TV in bedroom	X	X	X	√	X	√
Exceeded recommended time in screen related activities	√	√	√	√	X	√
Exceeded recommended time in non-screen related activities	X	X	X	X	√	√
Parental SB patterns	√	X	√	√	√	√
Proxy babysitter	√	√	√	√	√	√
Lack of restrictions or rules	√	√	√	√	√	√
Enjoyment in SBs	√	√	√	√	√	√
Parents did not use SBs as rewards	X	√	√	√	√	√
Friends enjoying SBs	√	√	√	√	√	X
Siblings enjoying SBs	X	√	√	X	X	√
No set bedtime	X	√	X	√	X	X
Regularly reads books	√	√	√	√	X	√

Personal Factors Themes Grid

Theme	Andy	Ben	Cam	David	Erin	Felicity
Plays games (above age)	√	X	X	X	X	X
Watches movies (above age)	X	√	√	√	X	X
Watches documentaries	X	X	√	X	X	X
Reads non-fiction	√	√	√	X	X	X
Reads advanced non-fiction	√	X	√	X	X	X
Concentrates for long periods	√	√	X	√	√	X
Applies themselves in school work	√	√	X	√	√	X
Has adult conversations	X	X	√	√	X	X
Positive, happy personality	√	X	X	√	X	√
Good scholastic self-concept	√	X	√	√	X	√
Poor physical appearance self-concept	√	√	√	√	√	√



Good peer acceptance self- concept	✓	✓	✓	✓	X	✓
Good behavioural self- concept	✓	✓	✓	✓	✓	✓
Self-esteem	✓	X	✓	✓	X	X

Social Factors Themes Grid

Theme	Andy	Ben	Cam	David	Erin	Felicity
Good relationship with teacher	√	X	X	√	X	X
Has some close friends	√	√	√	√	X	X
Is liked by peers	√	√	X	√	X	X
Has close relationship with Mother	√	√	X	√	X	√
Poor behaviour and adherence to rules and instructions at school	X	X	√	X	X	√
Poor behaviour and adherence to rules and instructions at home	X	√	√	√	√	X
Not a close relationship with Father	X	√	√	√	√	√
Not a close relationship with siblings	X	√	√	√	√	√

**APPENDIX F: NSW HEALTHY SCHOOL CANTEEN STRATEGIES**

Please see print copy for image

