2016

The Meaning of Involvement in an Exercise and Health Promotion Program for People with Diabetes

Rebekkah Jane Middleton
UOW, rmiddle@uow.edu.au

UNIVERSITY OF WOLLONGONG
COPYRIGHT WARNING

You may print or download ONE copy of this document for the purpose of your own research or study. The University does not authorise you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site. You are reminded of the following:

This work is copyright. Apart from any use permitted under the Copyright Act 1968, no part of this work may be reproduced by any process, nor may any other exclusive right be exercised, without the permision of the author.

Copyright owners are entitled to take legal action against persons who infringe their copyright. A reproduction of material that is protected by copyright may be a copyright infringement. A court may impose penalties and award damages in relation to offences and infringements relating to copyright material. Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

Unless otherwise indicated, the views expressed in this thesis are those of the author and do not necessarily represent the views of the University of Wollongong.

Recommended Citation

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au
The Meaning of Involvement in an Exercise and Health Promotion Program for People with Diabetes

A thesis submitted in fulfillment of requirements for the degree of

Doctor of Philosophy

from

University of Wollongong

by

Rebekkah Jane Middleton, RN, BN, MN(Res)

School of Nursing, Faculty of Science, Medicine and Health

2016
Abstract

The aim of this study was to explore and understand the meaning that people with diabetes attribute to being involved in a specialised program involving exercise and health promotion. Diabetes is a prevalent and chronic disease both in Australia and internationally with known benefits and outcomes from involvement in physical activity. However, there is still a lack of commitment and sustaining of exercise regimens by people with diabetes.

In order to understand and interpret the meaning behind the reasons why the 15 participants chose to engage in an exercise and health promotion program, a phenomenological approach was used. More specifically, an approach using Heideggerian interpretive phenomenology, using van Manen’s (1990) methodological framework provided a structure and a guide to the inquiry into the lived experiences of the participants who had diabetes and were participating in a program called Beat It.

The research study was designed in a way so as to answer the question: ‘What does it mean for people with diabetes to be part of a therapeutic recreation program involving exercise and health promotion?’ Participants were invited to share their stories and uncover meanings in their experiences, and to facilitate this, data collection occurred in two phases. First, semi-structured, conversational individual interviews occurred, and then, once preliminary analysis of themes had occurred, a focus group was held to member check. Data analysis conformed to van Manen’s Six Step Methodical Structure (1990), which uses a Heideggerian hermeneutical research methodology and enabled identification of thematic statements.
Within the participants’ story-telling, the meaning of the program *Beat It*, for people with diabetes, emerged through methodical synthesis of participant voices in interviews and a focus group. The meaning that participants’ ascribed to their experience was revealed in two themes: *people* and *structure*. Within the themes, elements were identified. The theme, *People*, entailed three elements: *motivation*, *connectedness* and *psychological benefits*. The theme, *Structure*, consisted of two elements: *physical benefits* and *instructor*. Embedded within the participants voices and stories was the essence of their experiences – the meaning that each participant attributed to their experiences of undertaking the exercise and health promotion program. This essence was found to be *person-centred program efficacy* that gave meaning to the experience.

Understanding the meaning that people with diabetes attribute to being involved in a specialised exercise and health promotion program, facilitates the development of more tailored programs that can better enhance health and wellbeing in this population of people. The development of person centred diabetes programs can then help to minimise preventable health conditions associated with the disease. Implications for researchers and diabetes service providers are centred on the need for further research exploring the subjective views of people with diabetes, with a focus on partnering with and engaging those with diabetes in designing and planning programs that facilitate commitment.
Certificate of Authorship and Originality of Thesis

I, Rebekkah Jane Middleton, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Nursing, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Rebekkah Middleton

Date: 20 March 2017
Copyright Statement

Copyright © Rebekkah Jane Middleton 2017

All rights reserved.
# Table of Contents

Abstract......................................................................................................................................................II  
Certificate of Authorship and Originality of Thesis................................................................. IV  
Copyright Statement ............................................................................................................. V  
Acknowledgements .................................................................................................................... X  
Publications and presentations emanating from this research ........................................ XI  
Conferences presented ............................................................................................................... XI  
Manuscripts published ............................................................................................................. XI  
Manuscripts submitted under review ........................................................................................ XII  
Conference presentations ........................................................................................................ XII  
Definition of Key Terms ........................................................................................................ XIII  

## Chapter 1 – Research Overview ....................................................................................... 1  
Introduction .............................................................................................................................. 1  
Research aim ............................................................................................................................ 4  
Research question .................................................................................................................. 4  
Rationale and significance of the research study ..................................................................... 5  
Organisation of the thesis ........................................................................................................ 5  
Conventions within the thesis .................................................................................................. 6  

## Chapter 2 – Background and Context ............................................................................. 8  
Introduction .............................................................................................................................. 8  
Diabetes ........................................................................................................................................ 11  
  *Etiology* ................................................................................................................................... 12  
  *Prevalence and associated mortality* .................................................................................... 13  
Diabetes and exercise/physical activity .................................................................................... 16  
  *Physiological benefits of exercise on diabetes* .................................................................. 18  
  *Diabetes and required levels of exercise* ........................................................................... 25  
  *Diabetes management, self-management and maintaining a healthy lifestyle* ............... 27  
  *Psychological benefits of exercise* ...................................................................................... 36  
  *Diabetes and engagement in exercise programs and interventions* ............................... 38  
Therapeutic Recreation ............................................................................................................ 43  
  *History and Definition of Therapeutic Recreation (TR)* .................................................. 43  
  *The contribution of Therapeutic Recreation to diabetes health promotion* .................... 45  
Diabetes and Therapeutic Recreation .................................................................................... 50  
Beat It ......................................................................................................................................... 53  
  *The Illawarra* ...................................................................................................................... 57  
  *Beat It and older adults* ...................................................................................................... 59  
  *Programs supported by professionals* .............................................................................. 60  
Diabetes, Therapeutic Recreation and Meaning .................................................................... 61  
Summary ..................................................................................................................................... 70  
Contributions of this research study ....................................................................................... 73  

## Chapter 3 – Research Design .......................................................................................... 75  
Introduction .............................................................................................................................. 75  
Research aim ............................................................................................................................ 76  
Role of the researcher ............................................................................................................. 76  
Methodology ............................................................................................................................. 78  
  *Research paradigm* ............................................................................................................. 78  
  *Phenomenology* ............................................................................................................... 84  
Methods ...................................................................................................................................... 92
## List of Figures

| Figure 1: | Prevalence, potential impact and associated mortality of diabetes worldwide 2005-2015 | 14 |
| Figure 2: | Prevalence, potential impact and associated mortality of diabetes in Australia 2005-2015 | 15 |
| Figure 3: | The Beat It program | 56 |
| Figure 4: | The Illawarra region | 58 |
| Figure 5: | Location of Illawarra region in NSW, Australia | 103 |
| Figure 6: | Screen shot taken from journal | 113 |
| Figure 7: | Screen shot taken from NVivo™ | 117 |
| Figure 8: | Funnel design of the discussion guide | 120 |
| Figure 9: | Essence of meaning informed by themes and elements | 145 |
| Figure 10: | Themes and elements that emerged from the data | 150 |
| Figure 11: | Elements of People theme | 151 |
| Figure 12: | Motivation as element of theme People | 152 |
| Figure 13: | Connectedness as element of theme People | 171 |
| Figure 14: | Psychological benefits as element of theme People | 184 |
| Figure 15: | Summary of elements of theme People | 190 |
| Figure 16: | Elements of Structure theme | 191 |
| Figure 17: | Physical benefits as element of theme Structure | 192 |
| Figure 18: | Instructor as element of theme Structure | 200 |
| Figure 19: | Summary of elements of theme Structure | 213 |
| Figure 20: | The meaning of the TR program Beat It for participants | 214 |
| Figure 21: | People theme and elements | 219 |
| Figure 22: | Motivation element | 220 |
| Figure 23: | Free bus route | 225 |
| Figure 24: | Motivation to commit to the Beat It program | 230 |
| Figure 25: | Connectedness element | 237 |
Figure 26: Psychological benefits element.................................................................244
Figure 27: Structure theme and elements....................................................................251
Figure 28: Physical benefits element...........................................................................252
Figure 29: Instructor element.......................................................................................259
Figure 30: The SDT model of health behaviour change adapted from Ryan, Deci and Williams (2008).................................................................278
Figure 31: TR opportunities for people with diabetes..................................................286
Figure 32: Essence of meaning....................................................................................296

List of Tables

Table 1: Recommended physical activity guidelines for people with diabetes compared to people without diabetes.................................................................19
Table 2: Benefits of participation in TR services............................................................47
Table 3: Summary of TR model...................................................................................48
Table 4: Beat It program fulfilling the requirements of a TR model..............................55
Table 5: Six step methodical structure........................................................................94
Table 6: Interview questions and prompts.................................................................107
Table 7: Focus group questions, phrases and prompts.................................................121
Table 8: Participant information regarding participation in interviews and focus group........................................................................................................148
Table 9: Payment rates for age pension......................................................................222
Table 10: Similarities between SDT and person-centredness.....................................287
Acknowledgements

I would like to thank my two supervisors, Professor Lorna Moxham and A/Prof Dominique Parrish. Their ongoing support, encouragement and guidance throughout my PhD candidature has enabled me to remain focused and keep my eye on the target ahead. The learning I have gleaned from them has helped shape me as a researcher and be committed to completing this thesis in a timely manner. Lorna thankyou for your honesty, encouragement and realism throughout this journey – you have made this a great learning opportunity and have exemplified supervision leadership. Dominique, your eye has ensured things make sense, thankyou!

Thankyou to the people who encouraged me through the more challenging times and assured me this journey would be worth the effort.

I am grateful to the people who willingly shared their stories and lived experience with me, making this thesis possible.

Finally I want to thank my husband Mark for being patient with me and loving me unconditionally as I went through the ups and downs of completing this research. This would not have been possible without his support, listening ear, and love.
Publications and presentations emanating from this research

Manuscripts published


Manuscripts submitted under review

Conference presentations


## Definition of Key Terms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aerobic exercise</td>
<td>Exercise that gets large muscles moving and increases heart rate, blood flow and metabolic demand for oxygen, promoting cardiovascular fitness</td>
</tr>
<tr>
<td></td>
<td>Australian Diabetes Council</td>
<td>Formed in 1983, Australia’s oldest and largest not-for-profit organisation, helping those with and at risk of diabetes, along with their carers</td>
</tr>
<tr>
<td></td>
<td>Beat It</td>
<td>A 12-week program for adults over the age of eighteen diagnosed with any form of diabetes, and not working. Established by the Australian Diabetes Council and delivered across Australia by accredited providers. An evidence-based exercise and lifestyle education/modification program involving physical activity training and lifestyle education (disease prevention, treatment, management), nutrition and goal setting sessions. The term is always italicised in the thesis</td>
</tr>
<tr>
<td>Cert.IV</td>
<td>Certificate IV</td>
<td>A qualification at level 4 in the Australian Qualifications Framework (AQF) that qualifies individuals who apply a broad range of specialised knowledge and skills in varied contexts to undertake skilled work and as a pathway for further learning. Graduates achieve learning outcomes at level 4. The maximum AQF level is level 10 (Doctoral degree)</td>
</tr>
<tr>
<td>Developed country</td>
<td>Not an established convention by the United Nations; however, the following countries are referred to as ‘developed’ in common practice by the United Nations, the International Monetary Fund and the World Bank: Japan, Canada, the United States, Europe (including the United Kingdom), Australia and New Zealand</td>
<td></td>
</tr>
<tr>
<td>Diabetes NSW</td>
<td>The peak consumer body for diabetes in New South Wales</td>
<td></td>
</tr>
<tr>
<td>DM</td>
<td>Diabetes Mellitus</td>
<td>Commonly called diabetes. A chronic metabolic disease where there is reduced ability of the body to manage blood glucose. There are two main forms – Type I and Type II</td>
</tr>
<tr>
<td>Glycaemic control</td>
<td>The medical term used to describe the typical levels of blood glucose in a person with diabetes</td>
<td></td>
</tr>
<tr>
<td>Illawarra region</td>
<td>A region within New South Wales, Australia covering 1128 square kilometres with a population of approximately 285000. This is the region in which the study was undertaken</td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td>In this study the term refers to personal trainers with a Certificate IV in Fitness who completed specific training with the Diabetes Council of Australia and successfully undertook a practical, oral and written exam to be accredited to work with this population of people in the Beat It program</td>
<td></td>
</tr>
<tr>
<td>Leisure programs</td>
<td>Used as a term for therapeutic recreation programs, particularly in the United States of</td>
<td></td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Medicare</td>
<td>A publically funded universal health care scheme providing access to medical and hospital services for all Australian citizens and permanent residents. It is the primary funder of health care in Australia, administering payment of benefits on behalf of the Department of Health</td>
<td></td>
</tr>
<tr>
<td>Older adults</td>
<td>In this study the term refers to people over the age of 55</td>
<td></td>
</tr>
<tr>
<td>Participant</td>
<td>In this research the term ‘participant’ means a person with diabetes who participated in the Beat It program and contributed to the study. In this thesis, direct quotes from transcripts are italicised and if those quotes are more than 20 words in length, the quotes are also indented and in a separate paragraph. All quotes are identified by a participant pseudonym, for example, May. This is further refined to include an identifier as to whether the quote is taken from the interview (Int) with the participant or from the focus group (FG) the participant contributed to, for example (May, FG)</td>
<td></td>
</tr>
<tr>
<td>Physical activity</td>
<td>Bodily movement produced as an outcome of skeletal muscle contraction resulting in energy expenditure, can be informal or formal. Formal physical activity is referred to as exercise in this thesis</td>
<td></td>
</tr>
<tr>
<td><strong>Postprandial glycaemia</strong></td>
<td>Postprandial refers to after a meal. Postprandial glycaemia indicates glucose concentrations in the blood plasma after eating</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Resistance exercise</strong></td>
<td>Strength training activity that makes muscles work against resistance, for example by using machines or bodyweight to build strength and increase bone mineral density</td>
<td></td>
</tr>
<tr>
<td><strong>TR</strong></td>
<td><strong>Therapeutic Recreation</strong> outlined in detail in Chapter 2. A process of immersing an individual or group of people in recreation and experiential activities, or interventions, to promote, improve or maintain health status, functional ability and/or quality of life</td>
<td></td>
</tr>
<tr>
<td><strong>Therapeutic Recreation – Associated terms</strong></td>
<td>Terms used in the literature as an alternative to therapeutic recreation. These include:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Recreation therapy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Action therapies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Occupational therapy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Activity therapy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inclusive recreation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Leisure program/therapy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Special recreation</td>
<td></td>
</tr>
<tr>
<td><strong>WHO</strong></td>
<td><strong>World Health Organization</strong> The United Nations unit to promote health</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 1 – Research Overview

Introduction

Australian healthcare statistics reveal that 1.2 million people are diagnosed with diabetes, and a projected further 500,000 people have the disease but are undiagnosed (Diabetes Australia 2015a). Diabetes is a prevalent and chronic disease both in Australia and internationally, affecting 347 million people worldwide (World Health Organization (WHO) 2015). Estimates indicate that diabetes will be the 7th leading cause of death by 2030 (WHO 2015). There is strong evidence to suggest that physical activity improves diabetes outcomes by assisting glucose control, promoting weight management and preventing related complications (Hu et al. 2014), as well as improving an individual’s overall health and wellness (Law et al. 2013). Despite the evidence, there is reportedly still a lack of commitment and sustaining of exercise regimens by people with diabetes (Jennings et al. 2013).

Interest in this research topic arose from clinical, personal, recreational and research interests. I have been a registered nurse for over twenty years, although no longer work as a clinician, and had many interactions with people with diabetes. I perceived that they could enhance their experience of their disease by incorporating exercise and better nutrition into their lives. Being a personal trainer as well, I have a strong connection with the importance of exercise, nutrition and health promotion for healthier living and management of health conditions. I provide personal training for older people with chronic conditions and appreciate that exercise and healthy living is essential to improve management of the condition(s) and to increase life satisfaction.
and engagement. Although I am a registered nurse, this research study has not been conducted through the lens of that discipline. The conceptual basis underpinning this research is a search for meaning through the participants’ eyes and stories.

Therapeutic recreation (TR) is as a process of immersing an individual or group of people in recreation and experiential activities, or interventions, to promote, improve or maintain health status, functional ability and/or quality of life. These goals are achieved by using existing skills and interests as well as developing new skills (Hawkins et al. 2012; American Therapeutic Recreation Association (ATRA) 2009). The aim of TR is to improve the “physical, physiological and psychological functioning and well-being in an individual” or a group (Regan, Banks & Beran 1993, p.196). TR seeks to work holistically with people and support them with the intention of value adding to their life amidst challenges and limitations (Carruthers & Hood 2007). Generally TR programs aim to produce modifications to lifestyle and behaviour (Gassaway et al. 2011) by using purposeful interventions that “generate social, emotional, physical, psychological, or spiritual change to improve independent functioning, health status, and quality of life” (Hawkins et al. 2012, p.131). Most TR programs focus on changing behaviours or habits with a goal to improve health (Wise 2002). When TR programs use intentional and theoretical structures, they have demonstrated effectiveness in meeting desired outcomes (Hill & Sibthorp 2006; Garcia-Villamisar & Dattilo 2010). TR is an appropriate intervention for a health promotion program aimed at people with diabetes. The TR program Beat It, established by the Australian Diabetes Council (2011) is the program that is central within this research study.
TR is often described in literature as being a leisure program, but one will often encounter other associated terms such as a functional intervention, wellness program, or recreation participation service (Stumbo & Peterson 2009), (see Key Terms). TR programs seek to enable the person to experience physical, psychological and social benefits that contribute to wellbeing and health (Hebblethwaite 2013).

Therapeutic Recreation programs facilitate increases in physical activity and higher levels of activity/exercise in people with diabetes, and contribute to lower rates of mortality (Sluik et al. 2012). The literature has an abundance of published research regarding clinical outcomes of people with diabetes undertaking exercise. As such, the value of being involved in exercise and health promotion is well established. Physical benefits are then, known. But what is not known is the lived experience for people with diabetes undertaking such programs. It is apparent from a critical examination of the literature, that what is lacking is research into why people with diabetes choose to join exercise and health promotion leisure programs or do not.

Little TR research has focused on TR interventions in diabetes populations. In addition to the dearth of literature regarding TR and diabetes there is a distinct lack of research and literature about the meaning of the TR program to the person and why they choose to engage (or not) in such a program. This is in terms of both TR research and diabetes research. A gap had therefore been established.

Meaning in the context of this thesis refers to describing ‘what is it like’ to experience a phenomena, with the phenomena being the exercise and health promotion TR program Beat It. Therefore meaning in this thesis is about “giving voice to words” (van Manen 2014, p.237), about gleaning understanding of the lived experience (Heidegger
1962), of the underlying reasons that people with diabetes choose to engage in and maintain participation in the TR program.

This thesis presents a study using a Heideggarian hermeneutic phenomenological approach that explored the experiences of people who had diabetes involvement in a therapeutic recreation program. A TR program specifically designed for people with diabetes, called Beat It. The research findings and discourse have the potential to inform and guide the design, promotion and delivery of future TR programs in a specific, targeted, person centred and disease appropriate manner.

Several specific terms utilised throughout this thesis were defined in the section preceding this chapter but this chapter will now present the research aim, research question, rationale and significance of the study.

**Research aim**

Using a hermeneutic phenomenological inquiry approach, the aim of this research is to understand the essence of meaning that people with diabetes attribute to being involved in a specialised therapeutic recreation (TR) program.

**Research question**

The research question that guided this research study was:

What does it mean for people with diabetes to be part of a therapeutic recreation program involving exercise and health promotion?
Rationale and significance of the research study

It is anticipated that the results of this research will enhance understanding in relation to what the lived experience of people with diabetes is, for those who undertake such programs. This will help establish why people with diabetes join TR programs so that future programs can be more effectively promoted and delivered. This research study filled this identified knowledge gap by examining a TR program for people with diabetes specifically a focused on the meaning the TR activity has for the participant group. Understanding how and why people with diabetes choose to engage in exercise and health promotion programs is important.

Through this understanding, future programs:

- Will enable participants to be actively involved in the process and take some control of their disease and its potential implications;
- Will ensure participant voices are heard so that programs will be based on their perspectives and experiences (person-centred);
- Will be better directed to ensure the most benefit for participants; and
- Support participants to create a life of meaning, despite their disease.

Organisation of the thesis

This chapter provides an overview of the study and also includes the research aim, research question, rationale and significance of the research study. Chapter One also outlines what to expect in the five chapters that follow. Chapter Two presents the
background information in relation to diabetes and therapeutic recreation. In addition, it provides a review of the examined literature to confirm that a significant gap existed regarding the meaning of involvement in an exercise and health promotion program for people with diabetes. Chapter Three then invites the reader to explore the chosen design and methodology. This exploration incorporates detailed discussion regarding the chosen methodology, that is, an approach using Heideggarian hermeneutic phenomenology and the process of undertaking the study, that is, the methods. Chapter Four continues to contribute to building the thesis by presenting the findings of the study. The findings chapter necessarily and appropriately includes extensive use of participant voices to illustrate the key concepts identified through thematic analysis using van Manen’s method for isolating thematic statements. Chapter Five, an interesting, important but simultaneously challenging chapter for a novice researcher such as myself, discusses the findings and explores these in the context of existing literature. Chapter Six completes the thesis with recommendations for consideration by those involved in designing TR programs for people with diabetes or potentially any other chronic disease. It also makes suggestions for further research and work, and concludes with a personal reflection.

**Conventions within the thesis**

The Harvard Referencing System has been used throughout this thesis. This style cites ‘et al.’ in-text when there are four (4) or more authors. Where there are three (3) or less authors, all will be cited in text. All authors are cited in the reference list.
Where quotes are used in this thesis, the following conventions are used:

- Participant voice/quote(s) are identified by single quotation marks and italicised font, for example, ‘our generation’.

- Longer participant voice/quote(s) are identified to the person and context (interview or focus group) and are noted by single quotation marks and italicised smaller font, for example:

  ‘I liked the group of people, it was nice being in a similar age group... I got positive reinforcement, talking to others and getting positive feedback from them. I felt good, it made me feel ready to face the day and any problems you come across didn’t seem quite so bad’ (Bruce, FG)

- At the end of a quote a number and letters appear in brackets. See (Bruce, FG) above as an example. These indicate the participant pseudonym and the means of data collection. That is: Bruce = Participant; FG = Focus Group

- Quotes from literature are identified by double quotation marks within the reference, for example, “experience and origin of lived meaning, and the meaning of meaning in human life” (van Manen 2014, p.213).

Where emphasis is used in the thesis, the word or phrase is underlined, for example, hard working.

The TR program Beat It is always italicised to recognise it as the program the participants were involved in, that is, Beat It.
Chapter 2 – Background and Context

Introduction

This chapter has been structured to provide a background and in-depth explanation about the impact of diabetes on a global, national, societal and individual level. The significance of diabetes and exercise is explored, as well as the impact of exercise and health promotion programs in relation to diabetes. An overview of Therapeutic Recreation (TR) is provided, along with the contribution of TR to diabetes health promotion. An outline of the TR intervention in this study, Beat It, is presented. There is also a specific section focused on the experiences of people with diabetes, including TR program engagement.

A comprehensive review of the literature on diabetes and TR was undertaken to better understand the significance of engagement in TR programs focusing on exercise and health promotion (Aveyard 2010). However, this topic was found to be an under-researched area. A small number of studies, which examined people with diabetes engaging in TR programs from the perspectives of the participants were found, but of these, very few considered program engagement and maintenance.

The paucity in the literature, in particular of participant’s voices, highlights the contribution made by this research. This study, which examined the meaning that people with diabetes attribute to being involved in a specialised therapeutic recreation (TR) program, will significantly add to the body of knowledge in this health promotion area.
The exploration of identified meaning of perspectives, both theoretical and conceptual, are presented in this chapter.

A review of literature on diabetes, exercise and therapeutic recreation (TR) (and associated terms as outlined in Definition of Key Terms) was undertaken to determine relevant information that could contribute to understanding this topic (Davies 2004).

Search terms were identified as a result of immersion in the literature. These included: diabetes, health promotion, therapeutic recreation, recreation therapy, exercise, physical activity, leisure and meaning. These terms were considered across a range of multidisciplinary health and health promotion databases including Web of Science, Scopus, Academic Search Complete, ProQuest and Wiley. No date or country restriction was enforced on any of the searches, however only those published in English were retrieved and used. Setting up direct alert notifications from databases using the key words was helpful across the duration of the study to stay abreast of current and emerging information. A range of grey literature was also accessed throughout the study including website excerpts, newspaper articles and professional journals relating to therapeutic recreation and health promotion. The abstracts from a large volume of literature within the last ten years were scanned for applicability to the search terms with relevant papers being stored in hard and electronic form. The software Endnote was used to manage citations and to format references for the thesis.

The literature explored and reviewed, deemed exercise and health promotion activities essential for people with diabetes. Emergent themes from the literature included:

- diabetes is prevalent
• exercise is crucial for people with diabetes

• health promotion assists people with diabetes to establish and maintain a healthy lifestyle

• therapeutic recreation is highly effective as an intervention

• people with diabetes generally do not engage in exercise and health promotion programs

• programs supported by professionals contribute to success in implementing and maintaining adequate levels of exercise in people living in the community

Whilst engaging with the literature, it became obvious that there was a plethora of information and research regarding diabetes as a disease, and also diabetes and the benefits of exercise. Despite the magnitude of research discourse in the areas identified above, very little could be found about diabetes and any form of TR program or leisure activity. No research was found that examined the meaning behind the reasons people with diabetes chose to undertake a TR program involving exercise and health promotion. This highlighted a significant gap in the literature and indicated that knowledge gleaned through this inquiry could contribute to the topic. Thus the aim of this research which was to provide understanding of the essence of meaning that people with diabetes attribute to being involved in a specialised TR program, was found to be a topic that would contribute new knowledge and go some way to filling this gap. This contribution to knowledge fulfils a criteria for a PhD (Bambale 2014), and it is through this thesis that narrative regarding the topic is presented.
This chapter provides the research study’s background and context by discussing the concepts of diabetes and TR and the connection between these two, as evidenced in literature. Through a deep engagement with the literature, the purpose of this chapter, guided by the methodological approach, is to present an analysis of the existing literature related to diabetes, TR and the relationship between these two. This will enhance the reader’s appreciation of the gap present within the research literature, and to aid in understanding how this study seeks to address this gap. The literature analysis also illustrates the significance of diabetes, how this disease can be prevented and the role that exercise plays in both preventing the disease, but also in managing it once the person has been diagnosed.

The discussion in this chapter begins with an elucidation of diabetes, including the epidemiology, the global impact and economic burden of diabetes.

**Diabetes**

Diabetes is a prevalent and chronic disease both globally and in Australia (Australian Diabetes Council (ADC) 2014a; World Health Organization (WHO) 2015; Adebayo & Willis 2014; Jennings et al 2013). It is an endocrine disorder that causes a dysfunction in insulin production and sensitivity, and impairs glucose control (Adebayo & Willis 2014; ADC 2014c; Diabetes-Australia 2011). There are two main types of diabetes – type 1 and type 2, with a further subset - gestational diabetes that can occur in pregnancy. This research study only considers the two main forms of diabetes, types 1 and 2 as no pregnant women participated in the *Beat It* program, which was the
intervention for the research. As a result and in order to remain within the parameters of the research study design, gestational diabetes is not relevant and as such will not be discussed.

**Etiology**

Insulin is a hormone produced in the pancreas that regulates carbohydrate metabolism. That is, insulin is required to convert sugar, carbohydrates and other foods into energy for an individuals’ daily use (Lemone et al. 2014). Type 1 diabetes, which has an autoimmune etiology, occurs when the pancreas no longer produces insulin. The cells producing insulin in the pancreas are destroyed and hence there is a complete lack of circulating insulin (Adebayo & Willis 2014; Lemone et al. 2014). Type 1 diabetes is not caused by lifestyle factors, but is considered to have a genetic predisposition that is triggered at some point, thought to be due to genetic markers (Lemone et al. 2014). People with type 1 diabetes represent approximately 10 percent of all cases of diabetes, with type 1 being the most common form diagnosed in children or adolescents (Adebayo & Willis 2014; American Diabetes Association (ADA) 2014a; ADC 2014a).

Type 2 diabetes occurs when the pancreas does not produce sufficient insulin and the manufactured insulin does not work effectively (ADC 2014c; Diabetes-Australia 2011; ADA 2014c). Type 2 diabetes is the most common form of diabetes (ADA 2014c; ADC 2014a). It is thought to be the result of a combination of genetic and environmental factors (Lemone et al. 2014) and research suggests that it can often be managed by diet and exercise alone (Australian Institute of Health and Welfare (AIHW) 2014a). Of note however, is that people with type 2 diabetes may progress to needing medication
or insulin to effectively manage the disease (ADA 2014c; ADC 2014c; Diabetes-Australia 2011). It is projected that up to 60 percent of type 2 diabetes can be prevented by following a healthy lifestyle (Diabetes-Australia 2011; WHO 2009).

Prevalence and associated mortality

Worldwide it is estimated that diabetes will be the seventh leading cause of death by 2030, with a rise of more than 50 percent in total deaths from diabetes predicted over the next ten years (WHO 2015). Diabetes is the fastest growing chronic disease in all countries around the globe, affecting 387 million people or nine percent of the world's population (Diabetes-Australia 2015b; WHO 2015). The impact of diabetes internationally can be seen in the projected rise in diagnosed numbers of people thought to be 592 million people affected by 2035 (Diabetes-Australia 2015b; WHO 2015). It is estimated that 179 million people worldwide have undiagnosed diabetes (Diabetes-Australia 2015b). The worldwide mortality rate due to diabetes and its complications is 4.9 million deaths annually (WHO 2015; Diabetes-Australia 2015b).

In Australia, over 1.2 million people are registered with the National Diabetes Services Scheme (NDSS) as having diabetes type 1 or 2 (Diabetes-Australia 2015a). This number increased by 101,500 people in the twelve months from 2014-2015, amounting to approximately 277 new registrants each day (Diabetes-Australia 2015a). When people who have not registered with the NDSS or those who are at risk of developing diabetes are included in the statistics (pre-diabetes according to risk factors), estimates increase to 2 million Australians affected by the disease (Diabetes-Australia 2015c; Colagiuri 2014). Annually, Australia has 15,095 deaths due to diabetes and its complications (Australian Institute of Welfare (AIHW) 2015a). Australia only has a population of
23,781,200 (as of 30 June 2015) (Australian Bureau of Statistics (ABS) 2015), so these numbers represent a significant proportion of the population.

The prevalence, potential impact, and associated mortality of diabetes internationally over the last ten years is demonstrated below in Figure 1. This is compared to the prevalence, potential impact and associated mortality of diabetes in Australia, over the last ten years in Figure 2.

---

Figure 1: Prevalence, potential impact and associated mortality of diabetes worldwide 2005-2015
Physical inactivity and obesity are concomitant with increased risk of diabetes (WHO 2015; AIHW 2015b; Balducci et al. 2014a; Carson, Williams & Hill 2014; Rousseau 2014; Foster, Hillsdon & Thorgood 2013). Despite the documented health benefits of exercise and physical activity, research suggests that most people with type 2 diabetes do not engage in regular physical activity (Boudreau & Godin 2014; Brouwer et al. 2010). This lack of engagement in physical activity occurs despite strong evidence that a healthy diet and undertaking physical exercise can improve diabetes outcomes (Hu et al. 2014). In fact, estimates are that up to 80 percent of diabetes is potentially preventable through improved modifiable risk factors such as unhealthy diet and sedentary habits (Annuzzi et al. 2014; Carson, Williams & Hill 2014; Centis et al. 2014).

The figures presented above and discussion regarding diabetes prevention and management, and in particular the role of exercise, contribute to demonstrating the
importance of this research study. Evidence and concern about the growth in numbers of people with diabetes highlights the importance of the study and why it is critical to understand the meaning people with diabetes ascribe to a TR program involving exercise. Such an understanding as reported in this thesis can contribute to the development of relevant and meaningful programs that people with diabetes will want to engage in. This research seeks to consider a population of people with diabetes as they undertake an exercise and health promotion TR program. The benefits of exercise and health promotion strategies for people with diabetes has already been alluded to, but only briefly. It will therefore be discussed in greater detail in the next section. Despite evidence to suggest people with diabetes benefit from engagement in exercise, a noticeable absence is the meaning of their engagement. Such an understanding has not been adequately explored previously despite the fact that an appreciation of lived experience may facilitate exercise engagement.

**Diabetes and exercise/physical activity**

Physical activity is described as bodily movement produced as an outcome of skeletal muscle contraction resulting in energy expenditure (Balducci et al. 2014a; Howe & Skelton 2012). Physical activity can include all manner of things in daily living such as walking, climbing stairs and gardening, along with leisure activities, such as swimming, and deliberate exercise, such as running. It can be informal or can also occur as part of a formal exercise training program. Whether the physical activity is informal or formal, considerable energy is disbursed, but durations and intensity can vary greatly (Balducci et al. 2014a). Physical activity can be associated with leisure time, intensity or
occupational aspects of exercise (de Swardt 2007). Leisure time physical activity is that which is undertaken in one’s free time and is based on interests and/or needs (de Swardt 2007), for example, gardening or hiking.

Exercise is an element of physical activity that is intentional, structured, and involves the execution of planned repetitive bodily movements to achieve an improvement or at least maintenance in physical fitness, whether that be cardiorespiratory, strength or flexibility (Foster, Hillsdon & Thorogood 2013; Balducci et al. 2014a). It can include structured and guided exercise classes like aqua aerobics, a cycle class, or weight training or again can be less structured and include jogging or walking the dog. Despite the many documented benefits of physical activity the World Health Organization (WHO) states that physical inactivity is the fourth leading risk factor of global mortality and causes an estimated 3.2 million (annual) deaths globally (WHO, 2014). This suggests that irrespective of country or nationality, physical inactivity is a burden of risk to quality of life. In addition, Li (2014) says there is also a large financial implication associated with the consequences of increased sedentary behaviours. Physical inactivity is a growing public concern and is a contributing factor for chronic disease and health complications, a major one being diabetes (Hankonen et al. 2014; Law et al. 2013; Sone et al. 2013).

The clinical relevance of exercise interventions in treating people with diabetes is well established (Jennings et al., 2014; Law et al., 2013; Montesi et al., 2013; Wisse et al., 2010). There is a substantial body of literature existing that affirms the clinical benefits of physical activity on the disease (Boudreau & Godin 2014; Brown et al. 2014; Carson, Williams & Hill 2014; Desveaux et al. 2013; Ferrer et al. 2014; Huang et al. 2013;
Montesi et al. 2013; Schneider et al. 2014). Partaking in exercise is even more relevant for older people with diabetes as muscle mass, muscle quality and therefore strength, is significantly reduced in this population (Park et al. 2007; Park et al. 2006; Rahi et al. 2014). Indeed, undertaking exercise, according to Darawad et al. (2016), is known to have positive benefits on all of those areas.

It is evident within the literature that sedentary lifestyles and obesity are strongly and independently associated with diabetes and diabetes related comorbidities (Delahanty et al. 2006; Moe, Eilertsen & Nilsen 2013). The importance of exercise is imperative in managing diabetes, and will now be discussed in greater detail.

**Physiological benefits of exercise on diabetes**

Physical activity improves insulin sensitivity and glucose tolerance (Balducci et al. 2014a). Being physically active reduces blood pressure and cardiovascular risk factors, contributes to weight loss and fat accretion, which in turn contributes to preventing and managing diabetes (Brunet et al. 2005; Brouwer et al. 2010; Carral et al. 2013; Bergström, Behre & Schmidt 2012; Moe, Eilertsen & Nilsen 2013). Aerobic and resistance type exercise alone, without any dietary modifications, significantly reduce insulin resistance and therefore are beneficial activities for people with diabetes (Kim & Park 2013). Current guidelines from the Australian Diabetes Council and the American Diabetes Association (ADC 2014b; ADA 2014a) recommend that people with diabetes need to participate in an even higher level of physical activity than the general population in order to ensure optimal health benefits (Moe, Eilertsen & Nilsen 2013; Colberg et al. 2010). Recommended levels of physical activity are seen in Table 1.
below and will be discussed further in the section diabetes and required levels of exercise.

Table 1: Recommended physical activity guidelines for people with diabetes compared to people without diabetes

<table>
<thead>
<tr>
<th>People with diabetes:</th>
<th>People without diabetes:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aerobic</strong></td>
<td><strong>Resistance</strong></td>
</tr>
<tr>
<td>Days/week</td>
<td>7</td>
</tr>
<tr>
<td>2-3</td>
<td>150 minutes/week</td>
</tr>
<tr>
<td>Time each session</td>
<td>30</td>
</tr>
<tr>
<td>8-10 exercises</td>
<td>Not prescribed</td>
</tr>
<tr>
<td>8-12 repetitions</td>
<td>Not prescribed</td>
</tr>
<tr>
<td>Considerations</td>
<td>Increase unstructured</td>
</tr>
<tr>
<td></td>
<td>(informal) physical activity</td>
</tr>
<tr>
<td></td>
<td>Combine with aerobic for additional benefits</td>
</tr>
<tr>
<td></td>
<td>If vigorous exercise, 75 minutes/week</td>
</tr>
<tr>
<td></td>
<td>If intensity is lower may require up to 300 minutes/week</td>
</tr>
<tr>
<td>Additional consideration</td>
<td>Supervised exercise may offer additional benefits for people with diabetes</td>
</tr>
</tbody>
</table>

(ADA 2015, 2016; ADC 2014b; Colberg et al. 2010; Department of Health 2014)

Current documented international research examining diabetes and exercise is prolific in terms of describing physical benefits. Despite the known physical and psychological health (discussed later) benefits of exercise, it is thought that many people with diabetes do not participate in physical activity to the recommended level outlined above (Barrett et al. 2007; Jennings et al. 2014; Porter, Shank & Iwasaki 2012). Sedentary behaviours and lifestyles increase the risk of associated complications developing and also increase mortality, and yet these behaviours and lifestyles are progressively more prevalent in contemporary culture (Lakerveld et al. 2013;
Wimalawansa 2013; Sluik et al. 2012). The need for people with diabetes to be engaged in exercise, particularly exercise programs that are therapeutic in nature is well supported (Carson, Williams & Hill 2014; Annucci et al. 2014; Balducci et al. 2014a; Brunet et al. 2005; Centis et al. 2014; Hu et al. 2014; Lakerveld et al. 2013; van der Heijden et al. 2013). So the question needs to be asked: Why aren’t people with diabetes engaging and maintaining involvement in such programs?

Physical activity is reported to be an important foundation of diabetes management, contributing to reduced complications and consequently mortality (Sluik et al. 2012; Carson, Williams & Hill 2014). Sluik et al. (2012) investigated the link between physical activity and mortality in 5859 people with diabetes, aged between thirty five and seventy years, across ten European countries. Using a self-reported questionnaire consisting of a four item Likert scale and quantitative analysis by regression model, the authors found that moderate levels of exercise were associated with lower risk of cardiovascular disease and total mortality, providing empirical evidence of the value of physical exercise for people with diabetes (Sluik et al. 2012). Tudor-Locke and Schuna (2012) conducted a systematic review that considered the impact on diabetes of walking more, sitting less, and exercising. The authors advocate that in addition to incorporating exercise into an individuals’ week, deliberate acts of walking more than 7500 steps per day at a pace of greater than 100 steps per minute should be advocated along with sitting less. The authors stressed that these lifestyle shifts should be actively undertaken to decrease associated risks of diabetes such as uncontrolled blood glucose levels and hypertension.
A randomised control study was conducted by Annuzzi et al. (2014) with 5145 overweight or obese people with type 2 diabetes in sixteen centres across the USA. The participants were randomly assigned to participate in an intensive lifestyle and exercise intervention group or into one that only received education. The researchers compared the groups over ten years using chi-square testing, Fisher’s exact test and regression. They found that by integrating diet modifications and physical activity (no frequency reported) numerous benefits resulted. These benefits included:

- weight loss,
- increased cardiorespiratory fitness,
- better glycaemic control,
- reduced use of diabetes medication,
- decreased blood pressure,
- improved physical function,
- improved health-related quality of life,

and in addition, the spouse also lost weight (Annuzzi et al. 2014).

Brouwer et al. (2010) undertook a study in the Netherlands that investigated leisure time physical activity and type 2 diabetes. The researchers used a self-reported questionnaire to estimate the hours per week of physical exercise that participants undertook. Results were then translated into metabolic equivalent units to determine the level of activity and exercise being performed by each participant. These results were then reported in terms of either sufficient or insufficient levels of physical
exercise. Cox proportional hazard analysis was used to estimate the independent effect of physical activity on the incidence of diabetes. Results were expressed as hazard ratios with 95% confidence intervals. The research team found that of their 3940 participants, 65 percent were inactive, 12 percent were insufficiently physically active and the remaining 23 percent were adequately physically active. Significantly, the 23 percent who did sufficient levels of physical activity had a lower incidence of diabetes related complications, with a hazard ratio of 0.55, 95 percent confidence interval at 0.37-0.83. The results of the study demonstrated that physical activity increases insulin sensitivity and hence is a key modifiable factor in managing type 2 diabetes, with or without weight loss (Brouwer et al. 2010).

Barrett et al. (2007) also conducted a study that examined people with type 2 diabetes and their responses to leisure time physical activity. Quantitative measures in the form of a modified Godin Leisure-Time Exercise Questionnaire was administered to 1614 people with diabetes to self-report their perceived physical activity. The questionnaire was also used to assess demographic differences. The responses were converted to metabolic equivalent units, which were then analysed, using ANOVA, to determine effects of gender and income on leisure time physical activity. This revealed a significant main effect for gender, \( P < .01 \), with men being more active than women. The results also discovered significance of income, \( P < .01 \), where higher income individuals participated in more physical activity than middle and lower income individuals.

The study followed up the initial questionnaires with twenty telephone interviews to expand upon the quantitative data. This analysis utilised a content analysis approach to search for themes and patterns. A Priori codes were developed based on Social
Cognitive Theory constructs. Emerging codes also arose based on themes found within the constructs. Coding occurred until saturation occurred and then themes were explored across gender and income groups to confirm commonalities and/or differences. Barrett et al. (2007) in their study described on the previous page, found that qualitative results matched quantitative results, that is, men participated in more leisure time physical activity than women. Similarly, those with a higher income spent more time in physical activity than those with a middle or low income. The research team also found that most participants reported that their social environment was an important factor in their participation in exercise, particularly for women who generally responded that they relied on a supportive social environment to engage in physical exercise. General responses from the participants in the Barrett et al. (2007) study affirmed the claim that physical activity benefits both physical and psychological health.

Strength (or resistance) training is well reported to lead to improved glycaemic control (Wozniak et al. 2015). It also assists in maintaining functional competence, which involves independence and competence in activities of daily living (Law et al. 2014), as well as increasing bone mineral density, which aids in the prevention of osteoporosis (Law et al. 2013). In addition, when resistance training was undertaken, Minges et al. (2013) and Colberg et al. (2010) noted that blood pressure and cardiovascular disease were reduced, as were the risk of falls. Minges et al. (2013) noted that physical changes such as decreased weight, hip and waist circumference and Blood Glucose Levels (BGL) occurred in participants who met the American College of Sports Medicine (ACSM) and American Diabetes Association (ADA) recommended guidelines for exercise. Despite these multiple health benefits, Minges et al. (2013) assert that
resistance training in the diabetes community in Australia is low, with only 20.5 percent of their 5831 study participants reporting to be undertaking resistance training one or more times per week. These findings concurred with other studies conducted previously in Australia (Humphries, Duncan & Mummery 2010) and also in the USA (Winnett & Carpinelli 2001), particularly in populations of older people with diabetes which also found low exercise participation rates.

Jefferis et al. (2012), in the United Kingdom, in a longitudinal study over four years, tested whether exercise or any level of physical activity was beneficial in 4254 older men (over 60 years) living in the community, to manage their diabetes more effectively. Jefferis et al. (2012) acknowledged that physical exercise assisted in managing diabetes, but wanted to determine how much exercise was required to impact men with diabetes. Using linear regression analysis of levels of physical activity associated with changes in blood pressure, body mass index and waist circumference, the authors found a significant ($P < 0.001$) trend across all categories of reduced heart rate, and decreased weight and BMI. The authors found that even light levels of exercise, for example fast walking, made a difference to glycaemic control and reduced risks of potential complications associated with diabetes.

The recent studies reported above, are but a relatively small sample of what is available in the literature, that suggest physical activity provides positive physiological improvements in people with diabetes that can positively impact on the medical care required.
Diabetes and required levels of exercise

Given the physiological benefits of physical exercise for people with diabetes, it is important to understand how much exercise is actually required. National and international diabetes organisations suggest that people with diabetes need to exercise a minimum of 150 minutes per week (see Table 1, p.17) using both aerobic and resistance training to assist with glucose control, weight loss, and to minimise diabetes related complications (ADA 2014b; ADC 2014b; Hu et al. 2014; Montesi et al. 2013; Schneider et al. 2014). In fact, this recommendation is documented as level I evidence (ADA 2014a) which means it resulted from a systematic review of level II studies (randomised controlled trials) (NHMRC 2009).

A recent study by Balducci et al. (2014a) concurred with the recommendations from current guidelines (ADA 2014a; WHO 2014; ADC 2014b) of the need for a minimum of 150 minutes per week of moderate intensity exercise. This research team found in their one-year study of supervised exercise in 606 people with diabetes in Italy that the amount of exercise required for this population to maintain good health and have control of their diabetes was 150 minutes per week, with focus on resistance training. Huang et al. (2013) also contributed to this evidence with their research when they conducted a study of 210 older adults with diabetes (over 65 years) in rural Taiwan to identify recommended levels of exercise for older adults. Biometric markers were examined, including biochemical analysis, anthropometric measurements, physical activity levels and dietary assessment. Results of the research indicated that older adults in Taiwan also require physical activity levels of 150 minutes per week, to effectively manage their diabetes.
A Spanish study conducted by Carral et al. (2013) investigating the association between physical activity and type 1 diabetes addressed a dearth in research studies because most clinical investigations focus on type 2 diabetes (Chimen et al. 2012). Carral et al. (2013) used a quantitative study design, using an observational, cross-sectional study examining 130 people with type 1 diabetes to determine correlation between exercise frequency and metabolic glycaemic control. The researchers used a validated questionnaire adapted from the Minnesota Leisure Time Physical Activity Questionnaire, to assess the amount and type of physical activity performed during leisure time in the previous week and month. The researchers determined, using the 2-tailed test, that statistical significance occurred when $P < 0.05$. Despite some limitations in the study design as a result of over fifty percent of participants not participating in any physical exercise at all during the study (which in itself is an important discovery), the findings demonstrated significance of results in participants who engaged in more than 150 minutes of intense physical activity each week. It is therefore suggested that more than the recommended 150 minutes per week of intense physical activity is required to improve metabolic control in people with type 1 diabetes (Carral et al. 2013). Brown et al. (2014) also used glycaemic control as the measure to determine the impact of exercise on people with diabetes. Although less than the recommended levels of physical activity outlined earlier, their research found that exercising a minimum of once a week still positively impacted on glycaemic control and consequently on mortality.
Diabetes management, self-management and maintaining a healthy lifestyle

It is generally accepted by people with diabetes that healthy diet and physical activity are beneficial for the maintenance of a healthy lifestyle (Centis et al. 2014). If this is so, the question again arises as to why the incidence of sedentary behaviour is so high for many people with diabetes? (Boudreau & Godin 2014; Centis et al. 2014; Nicolucci et al. 2012; Sluik et al. 2012; Wisse et al. 2010). Centis et al. (2014) assert that people with diabetes find it difficult to commence exercise. In an attempt to prove this hypothesis, Centis et al. (2014) administered an eighteen item questionnaire to 1353 adults with type 2 diabetes, who presented for diabetes management to fourteen tertiary centres in Italy. Using logistic regression analysis, the researchers identified that propensity for changing diet was significantly higher than engagement in regular physical activity. Further, the research team found that people with longer-term diabetes were less prone to change their diet or level of physical activity than those who were more recently diagnosed (within the previous ten years). They also found that people with higher body mass indexes (BMI) were more resistant to changing their diet and their activity habits. The authors concluded that people with type 2 diabetes had low perceptions of the need to increase physical activity or to improve diet, or to better control and manage their diabetes (Centis et al. 2014). Similar findings had previously been reported by others (Vähäsarja et al. 2012; Centis et al. 2013).

An important aspect of diabetes management and maintaining a healthy lifestyle is diabetes self-management. This continuing process of facilitating knowledge, skill and ability for self-care of diabetes is widely discussed in the literature, being guided by
evidence-based standards (Funnell et al 2010; Haas et al 2012). The theory of diabetes self-management espouses it is necessary for all people with diabetes to improve their outcomes, by supporting them to make independent decisions about their disease and associated lifestyle behaviours and how they choose to engage with health care services (Funnell et al 2010).

The American Diabetes Association requires that all people with diabetes receive self-management education at diagnosis and as needed later (Haas et al 2012). They have developed five principles to inform diabetes self-management education, these being; diabetes education improves clinical outcomes, theoretically based empowerment strategies should be employed, behavioural and psychological strategies improve outcomes in conjunction with age appropriate group education, ongoing support is essential and, goal setting supports self-management (Haas et al 2012; Powers et al 2015). For these principles to be practiced effectively there are requirements for program structure (both internal and external), access, program coordination, staffing, curriculum, individualisation, ongoing support, participant progression and quality improvement (Powers et al 2015). When these are implemented, the American Diabetes Association espouse that the end point will be a more informed and engaged person with diabetes (Powers et al 2015).

To achieve this desired outcome, that is, an engaged and informed person who is living with diabetes, various models have been implemented, particularly in North America. The Chronic Care Model, a systematic approach to rethinking and arranging medical care, to form collaborations between health systems and communities is one such model that has been developed to promote diabetes self-management skills (Baptista
Stellefson, Dipnarine and Stopka (2013) undertook a literature review of articles between January 1999 and October 2011 using search terms “chronic care model” and “diabet*”. Their findings of sixteen studies from the United States all demonstrated the effective use of the Chronic Care Model in managing diabetes. The studies were all focused on people with diabetes between the ages of 50 and 70. The literature review explored the six elements of the model (organisation of health care, self-management support, decision support, delivery system design, information systems and, community resources) and outlined key findings. Important conclusions outlined that diabetes self-management in chronic care improves physical, psychological and behavioural outcomes when supported by healthcare professionals in the community (Stellefson, Dipnarine & Stopka 2013). Stellefson, Dipnarine and Stopka (2013) also propose from their findings in the literature that “more personalized, patient-centered interactions” (p.6) are helpful. This is relevant to my research, which studies what it means to people with diabetes to undertake a therapeutic recreation program involving exercise and health promotion. The work of Stellefson, Dipnarine and Stopka (2013) does not reflect consideration of personal meaning. In this regard though, they recommend that future studies should investigate how different applications of the Chronic Care Model components could impact changes to diabetes care in community settings to promote the individual and their needs.

Baptista et al (2016) also explored the Chronic Care Model, performing a systematic review to examine the influence of the Chronic Care Model on clinical outcomes in people with type 2 diabetes. The authors used broader search terms than Stellefson, Dipnarine and Stopka (2013), but limited their results to randomised controlled trials.
only. The timeframe was unlimited before May 2014. Across the settings of primary care clinics or outpatient units and a participant age range of 52 to 69 years, 12 articles were located. Analysis of the articles indicated that clinical outcomes improved using the Chronic Care Model, but were limited when focus was on individual components. The authors concluded that combining all six components led to greater clinical benefits. This systematic review again highlighted that models are useful in promoting self-management of diabetes, but also demonstrated that there is a gap in the literature around personal meaning of being involved in programs and how that can influence engagement and personal responsibility for managing the disease. A gap which this research study addresses.

In practice, diabetes self-management focuses on individual capacity to make behavioural change(s) (Henderson et al. 2014). To conceptualise the process of intentional behaviour change, “arguably the dominant model of health behaviour change” (Armitage 2009, p.195) must be considered. The transtheoretical model of change (Prochaska & DiClemente 1983) assesses an individual’s readiness to act on a new behaviour and provides strategies to guide the individual through the process until they have actioned and are able to maintain the change. This established model for change has been used in a number of settings, including adherence to medications, weight management and smoking cessation. However, it has not been reported in relation to exercise.

Brug et al. (2005) suggest the model is not applicable to physical activity due to the complexity associated with physical activity. A myriad of aspects surround physical activity, such as transport, work, home life, leisure, sport. Perceptions of physical
activity and its place in a person’s life are associated with behaviours and lifestyle. Physical activity cannot be given a “gold standard” (Brug et al 2005, p.246), as it will vary for each individual and their capacity and desire. Brug et al (2005) argue that effective and long-term physical activity promotion and sustainability needs to be more than providing health education and incorporating change strategies.

Fritz (2015) states that people need to change lifestyle behaviours and integrate new tasks into their daily activities, which can be challenging due to life patterns and barriers. When diabetes self-management education is implemented it produces clinical outcomes, but these positive results seem to diminish after approximately six months (Fritz 2015). Fritz (2015) investigated why this occurs in low-income women, using a grounded theory approach. After interviewing ten women who met her criteria for low income, Fritz (2015) asked the participants to take photographs of things they associated with diabetes self-management over a two week period. She then conducted a second interview using these photos from daily life so participants could choose photos they wanted to discuss. Time geographic diaries were the final piece of data collected. Using these three methods of data collection, Fritz (2015) analysed the data and developed a model that explored diabetes self-management integration. Her model suggests that people with diabetes accept aspects of diabetes education and training that fit with their circumstances, and choose to integrate these into their daily life.

With this in mind, the application to this current research is that although awareness of requirements (such as exercise levels), and potential barriers to engagement is important, it is not enough since people will choose to engage in a way that suits them
and is congruent with their lifestyle. What is needed is a clear understanding of how individuals choose to engage in, and then sustain engagement in, health promoting behaviours in a constantly shifting milieu of personal, physical and environmental circumstances. Given the egocentric nature of physical activity, it is vital to consider personal meaning and the ongoing shift that occurs in individuals relative to their disease and perception of illness and wellness.

Paterson (2001) discusses this movement or shift in her Shifting Perspectives Model of Chronic Illness. This is an important consideration of any diabetes management and self-management strategy implementation. As diabetes is a chronic illness, the model is most apposite to consider. Paterson (2001) performed a metasynthesis of 292 qualitative research reports between January 1980 and January 1996, concerning chronic physical illness. This entailed meta-data-analysis, metamethod and metatheory, and then synthesis to generate new knowledge surrounding chronic physical illness.

Paterson (2001) proposed that living with chronic illness is a continuous process of shifting between perspectives of illness and wellness, depending on context. Two elements of the model emerged as important – illness in the foreground, and wellness in the foreground. When illness is foremost, the perspective centres on “sickness, suffering, loss, and burden associated with living with a chronic illness” (Paterson 2001, p.23). This perspective is contrasted with the wellness in the foreground perspective. This perspective includes seeing the “chronic illness as an opportunity for meaningful change in relationships with the environment and others” (Paterson 2001, p.23), where self-identity is more considered than the diseased body. This creates
appreciation rather than feeling like a victim of the illness. The shift between the two states is dependent, says Paterson (2001), on whether the person feels a sense of control over their disease.

Paterson (2001) states that despite the shifting state of people with chronic illness, resources can be sourced to deal with situations, thus attempting to maintain a focus on wellness. However, she states that there is limited evidence to support health care professionals, and others, being of assistance in this process or shift to a wellness perspective. Is this the right perspective to have? Paterson (2001) claims that the model declares that perspectives of chronic illness are not right or wrong, but are only reflective of people’s needs and situations. Therefore, those involved with people with chronic illness need to listen and not assume, but rather individualise approaches. This speaks well to this current research, where the participant voice is heard so as to inform future direction with programs for people with diabetes.

Diabetes self-management requires support from health professionals as well as the person being actively engaged and participating in maintaining a healthy lifestyle (Clarke et al 2014). Crotty et al (2015) agree, claiming that often people with diabetes are reliant on professional health care workers to ensure they self-manage their diabetes effectively, that is, they have an external locus of control. Crotty et al (2015) conducted a qualitative study involving interviews of twenty nine people with type 2 diabetes living in the community receiving professional support to self-manage their diabetes. Thematic analysis of the interview data demonstrated that people with social support and connection were more likely to have successful adoption of lifestyle change.
Much literature around self-management of diabetes has found that social support and connection facilitates better self-management (Henderson et al. 2014; Ku et al. 2015; Luo et al. 2015; Tang et al. 2015). Interestingly, when social connection was limited or absent, self-management of diabetes was not prioritised nor did it occur, even when supported by health professionals (Henderson et al. 2014; Shah et al. 2015; Tang et al. 2015; Wu et al. 2014).

Another factor that has been found to inhibit self-management of diabetes is a lower level of income. A lack of social capital can restrict access to health information and to programs that can supplement self-management strategies (Mackee 2016; Henderson et al. 2014). This is often associated with being an older person with diabetes. This additional factor of increasing age, was identified in the literature as impacting self-management of the disease, with older people being less likely to self-manage and thereby engage in physical activity and healthy eating (O’Neil et al. 2014; Shah et al. 2015). Literature that discusses self-management of diabetes generally suggests that social connections and higher levels of income appear to improve diabetes self-management practice. They indicate that knowledge of concepts alone is insufficient to deliver a successful health program (Wu et al. 2014). In addition, Majeed-Ariss et al. (2015) suggest that recognition of the views and needs of people with diabetes is vital for designing and delivering patient-centred care.

Piatt and Chiasson (2016) note that a number of previous studies have indicated that people who receive comprehensive diabetes education and are skilled in self-management continue to have difficulty supporting ideal management of their disease when there is no ongoing reinforcement of behavioural change. This may be due to an
external locus of control rather than an internal locus of control in relation to
behaviour change (Piatt & Chiasson 2016), this is discussed in relation to my research
later in the Chapter 5.

Strengths based focus in TR is considered essential by Piatt and Chiasson (2016). The
aim of TR programs is to enable people undertaking them to find meaning and to add
value to their lives. Participant motivation must be present for any TR program to be
effective, to improve engagement and ultimately self-care and responsibility (Piatt &
Chiasson 2016). This is particularly important as diabetes outcomes are not improving
and health care costs are spiralling (Mackee 2016).

It is therefore imperative that consideration is given as to how diabetes impacts
peoples’ lives and how they feel about the disease. Education is available for people
with diabetes, but it can be quite varied as to what kind of education people are
actually getting about living with diabetes – particularly in Australia where there is no
national, evidence-based structural program (Mackee 2016). Behaviour change has
long been recognised as critical in both prevention and management of diabetes, but
more focus is needed on translational research (Mackee 2016). That is, using research
and applying it to enhance human health and wellbeing.

These are important considerations in the context of the therapeutic intervention,
Beat It, being presented in this thesis. Part of self-management can indeed be
participation in physical activity and exercise. Discovering the essence of meaning that
people with diabetes attribute to being involved in a specialised TR program has a
connection to improving self-management.
Psychological benefits of exercise

Reported studies generally discuss physiological benefits for people with diabetes engaging in physical exercise. As elucidated above, it is widely accepted that physical activity plays an important role in contributing to the physiological aspect of diabetes, evidenced by better management and glycaemic control in people (Hu et al. 2014; WHO 2014; ADA 2014a; ADC 2014b). But what about psychological benefits related to engaging in physical exercise?

Psychological benefits of exercise are generally thought to include enhanced self-esteem, wellbeing and quality of life, that is, emotional and mental benefits (Brunet et al. 2005; Carral et al. 2013). Given these benefits occur in the general population, can it be assumed then that these psychological benefits of exercise would be present in people with diabetes also?

Nicolucci et al. (2012), conducted a one year multicentre randomised controlled trial in Italy of a supervised, facility-based aerobic and resistance exercise program that was facilitated twice weekly for 606 sedentary people with diabetes. Participants were assessed using a health related quality of life survey, the 36-item Short Form Health Survey (SF-36). Results were analysed using ANCOVA and reported as beta variables with an associated $p$ value. The researchers reported that supervised exercise produced significant improvements in HbA1C ($p<0.001$), and physical capacity ($\beta=0.24; p<0.0001$). Quality of life also showed significant reported improvement ($\beta=0.12; p=0.01$). Overall, the study found that not only did improvements in physical benefits occur, but so too did psychological related quality of life parameters such as confidence and feeling comfortable in new surroundings.
Outcomes such as increased confidence and comfort in one’s environment was also identified in a large Italian study by Centis et al. (2014). Centis et al. (2014) used an eighteen-item Likert scale questionnaire to determine self-efficacy along with motivation when assuming physical activity. People with type 2 diabetes numbering 1353 completed the questionnaire that was then analysed using logistic regression. Centis et al. (2014) found that motivation to adopt a healthy lifestyle and increase physical activity were low in a large percentage of participants. The researchers found that motivation and self-efficacy were crucial in making lifestyle choices and changes. Lower self-efficacy was related to poor involvement in physical activity and increased self-efficacy was linked to higher levels of self-care of an individual’s diabetes in relation to diet and exercise. These researchers affirmed the role of self-efficacy, which can be defined as the “personal belief that an individual can exercise some control over his or her own functioning... to reach some desired end” (Stumbo & Peterson 2009, p.18). Centis et al. (2014) found self-efficacy to be an important determinant of desire and capacity for changing habits and lifestyles to ensure higher levels of personal care of diabetes in relation to appropriate diet and sufficient exercise. They acknowledged that lower levels of self-efficacy were linked to less value being placed on exercise as an essential remedy in the treatment of diabetes. Self efficacy is essential for an individual to believe their choices and actions will affect the outcome of a situation (Stumbo & Peterson 2009) and as such is an important element to consider when designing programs to engage people with diabetes.

Self-efficacy is an important consideration in my research study as individuals experience different degrees of self-efficacy and hence will engage with a TR program accordingly. This concept is explored and reported in the Findings chapter.
An opposing perspective to the positive psychological benefits of physical activity was illuminated in a recent systematic review by van der Heijden et al. (2013). This review incorporated databases that were targeted to medical officers (MEDLINE, Embase, Clinical-Trials.gov), were quantitatively oriented, and only considered randomised controlled trials (RCTs). Using these criteria, the authors found inconclusive evidence of the positive psychological benefits for people with type 2 diabetes undertaking regular exercise. They recommended that further research that specifically examines the qualitative aspect of engagement in exercise for people with diabetes be undertaken. The research reported in this thesis does just that.

**Diabetes and engagement in exercise programs and interventions**

It is clear from the discussion presented above that physical exercise is both desirable and necessary for people with diabetes to effectively manage their disease and to assist in maintaining muscle mass and strength and to also potentially enhance psychological health.

The vast majority of research about people with diabetes and exercise mostly examines physiological benefits of physical activity. Personal implications and meaning that exercise has for people with diabetes is lacking in the qualitative space, and particularly studies that utilise a phenomenological approach.

Qualitative research generates different views from people that are not easily attained through quantitative methods. It allows for examination of lived experiences that highlight discovery, description and meaning. Quantitative research methods emphasise prediction, control and measurement (Laverty 2003), and do not allow the human interaction or experience of the individual to be truly represented and
described (Polkinghorne 2007).

This is evident in the work of Peel et al. (2010) who examined the ways in which people living with type 2 diabetes talk about effecting and continuing increased levels of physical activity. By undertaking three repeat interviews with 40 people over 40 years of age across the duration of one year, the authors sought to explore perceptions, experiences and adjustments made to levels of exercise, education and support requirements, by the participants. The analysed data revealed exercise was not appreciated for its potential impact on their diabetes and symptoms and was also not widely performed by the participants. Those who were walking regularly attributed it to owning or having access to a dog. Walking with a dog almost mandated a pattern of walking (Peel et al. 2010). The study stresses the value of talking to people and gathering qualitative data that reveals impetus and meaning, for engagement in exercise, as this research does.

van der Heijden et al. (2013) suggest that understanding what it means for people (qualitatively) can help promote exercise and physical activity in people with diabetes. As van Manen (1990, p.36) states, lived experience is the “breathing of meaning” and as such should be used to glean meaning. Engaging in this way may contribute to better involving this population in a health intervention strategy known to be beneficial to the condition with which they live.

Schneider et al. (2014) researched a group of postmenopausal women in the United States of America who were over the age of fifty with diabetes to explore whether a diagnosis of diabetes motivated exercise participation. Using a database from a USA national longitudinal study called Women’s Health Initiative, 84300 women across the
USA participated in the study over a six-year period. Participants completed a self-reported questionnaire as part of a pre-test, post-test intervention study where the program was the intervention to determine their usual levels of exercise engagement. The results suggested that a diagnosis of diabetes prompted an increase in exercise, suggesting diabetes may be a trigger for participation in physical exercise in older adults.

This is especially important since it has been reported that older adults levels of exercise is poor and that any level of physical activity decreases with age (Buchman et al. 2014; Chen, Chang & Lan 2014; Rydeskog, Frändin & Hansson Scherman 2005). This is of note for the research study being reported in this thesis, as the participants of the Beat It program were older people with diabetes. Given that exercise is crucial to physical wellbeing in older people, understanding how to engage this population in ways that are meaningful is essential to ensure active, meaningful and sustainable participation.

Ackermann and Marrero (2007) discuss applying a diabetes prevention program into a community setting as a way of encouraging program sustainability. The 16 lesson approach with groups of 10 to 12 people with diabetes was implemented into a YMCA facility with a YMCA instructor to enhance exercise strategies in a low cost setting. The primary goal of the program was weight loss and healthy behaviours to prevent diabetes in high risk people. The principles of the program resonate with this current research, but the application is very limited due to the pre-diabetes population. The research does, however, highlight the implications of cost associated with participating in programs.
The discussion above identified that physical activity is vital in providing positive health improvements in people with diabetes (Nicolucci et al. 2012; Barrett et al. 2007). Balducci et al. (2014a, p.13) states however, that medical officers and/or general practitioners rarely prescribe exercise as a “therapy” for people with diabetes. Given that pharmacological and dietary interventions are regularly prescribed as tailored aspects of care and treatment for people with diabetes (Zanetti et al. 2014), so too, a physical activity program could be prescribed. Schneider et al. (2014) found in their research in the United States with older women diagnosed with diabetes, that the women had regular follow up with their general practitioner and were exposed to opportunities to discuss the role of physical activity. Schneider et al. (2014) conclude that general practitioners need to be capitalising on these opportunities to encourage engagement in physical activity programs.

In an Australian study by Laws et al. (2012), the authors researched people with diabetes aged 50-65 years who were invited by their general practitioner to participate in a lifestyle program involving exercise and health behaviour coaching sessions. They found that the invitation to exercise was not enough, with one third of the 1821 people invited to participate declining. They propose that if the program was “prescribed” it may be accessed by more people, but acknowledged that a better understanding of the influencing factors of engagement needed to be explored and understood.

Grandes et al. (2011) conducted research with general practitioners in Spain over two years. General practitioners prescribed exercise for people they assessed as not meeting the minimum physical activity recommendations. They prescribed exercise to
2248 people and concurrently monitored and compared results with a control group of 2069 people. In this longitudinal study, spanning four years, the research team found significant differences in engagement in exercise for those for whom it was “prescribed”. They concluded that general practitioners have capacity and influence to increase the level of physical activity among their patients.

These studies highlight that “prescription” of exercise by general practitioners would be particularly beneficial given that exercise has been shown to have the greatest impact on glycaemic control, along with benefits to blood pressure and cardiovascular risk (Balducci et al. 2014a; Dorsey & Songer 2011). Balducci et al. (2014a) assert that exercise programs are also not likely to lead to adverse medication effects, which pharmacological interventions could, and hence could be potentially more cost effective than drug interventions.

Lack of commitment by people with diabetes in adhering to exercise programs is an issue internationally, not just in Australia (Balducci et al. 2014a; Barrett et al. 2007; Zanetti et al. 2014). However, with supervision from exercise professionals, higher commitment has been attained (Balducci et al. 2014a). This finding compliments that found in the study being reported in this thesis, as the usefulness of a TR program in terms of engaging people with diabetes in exercise is central to the research. This discourse also highlights why it is important to examine what TR is, and how it can be applied.
History and Definition of Therapeutic Recreation (TR)

Therapeutic Recreation is not a new concept. TR has been implemented for over fifty years in various ways. TR originated in the United States of America post World War II during the 1940s and 1950s as a means of providing recreation for hospitalised soldiers (Austin 2004; Johnson 2000). Following this time, the first TR body – the American Recreation Society (ARS) was established in 1948. The ARS was made up of military personnel and veterans, with the goal being to provide recreation to all, with no other purpose than for the sake of recreation (Austin 2004). The actual term – therapeutic recreation – originated in the early 1960s with the establishment of an organisation by Beatrice Hill that was devoted to the cause of TR. This was claimed to be social rehabilitation. Ms Hill changed the focus of TR from recreation for all, to recreation being used as a tool for treatment and rehabilitation. The National Therapeutic Recreation Society (NTRS) was then formed in 1966 in the USA, in an attempt to represent both schools of thought. This amalgamation resulted in the TR profession and service industry struggling for identity and focused definition until the 1980s when the American Therapeutic Recreation Association (ATRA) was established (ATRA 2009; Austin 2004; Johnson 2000). Both the NTRS and ATRA remain active today, with the NTRS promoting a broad approach to TR and ATRA focusing on clinical practice in populations of disability, illness and/or special needs (Austin 2004). ATRA is the largest and most influential professional body for TR in the USA (Austin 2004; Fullagar & Darcy 2004), and is seen as the expert body for TR internationally (Robertson & Long 2008).
Therapeutic Recreation is a process of immersing an individual or group of people in recreation and experiential activities, or interventions, to promote, improve or maintain health status, functional ability and/or quality of life (Stumbo et al. 2015). These goals are achieved by using existing skills and interests as well as developing new skills (ATRA 2009; Hawkins et al. 2012; NTRS 2014). TR purports that individuals participate in appropriate and meaningful independent leisure lifestyle activities that promote and lead to improved health, quality of life and wellbeing (Stumbo & Peterson 2009; Regan, Banks & Beran 1993), therein setting it apart from recreation (Kunstler & Stavola 2010). TR is also commonly referred to as leisure therapy or leisure services in the United States of America (Evans, Hartman & Anderson 2013; García-Villamisar & Dattilo 2010; Henderson, Presley & Bialeschki 2004; Stumbo & Peterson 2009). TR though, as its name suggests, includes the element of being therapeutic. This element ensures integration of theory, education and recreation to generate the necessary situations for a person to experience leisure to promote, improve or maintain health status, functional ability and possibly quality of life (Kunstler & Stavola 2010; Hawkins et al. 2012).

Therapeutic Recreation approaches, given that they originated in the United States of America, have an underlying affinity with North American culture, health care and professionalised history (Austin 2004; Robertson & Long 2008; Stumbo & Peterson 2009). Therefore, it begs the question of whether TR is appropriate for the Australian milieu. Some do not believe it fits the Australian context, judging it to reinforce medical notions of disability that potentially hinder individual freedom (Fullagar & Darcy 2004). TR is more often though, considered an appropriate approach for
exercise and health promotion programs (Zanetti et al. 2014), such as the one being reported in this study (Beat It). The TR approach provides a systematic method of assessment, planning, implementation, and evaluation to improve individuals’ functioning through a leisure activity, which can be easily applied to ensure that the integrated program is theory based and appropriate for the individual with a chronic disease such as diabetes (Charters & Murray 2006; Hawkins et al. 2012).

The TR characteristics identified above, prompt an important philosophical question to consider for the research study being reported in this thesis. If it is desirous that individuals participate in meaningful activities, then who is it that should assert the meaning? If people are to engage, then the individual must be part of the process of ascertaining what constitutes meaning (Tulle & Dorrer 2012). This research study explores this, through a methodological process of hermeneutic phenomenology (elucidated in Chapter 3), in individuals with diabetes participating in a TR program called Beat It.

**The contribution of Therapeutic Recreation to diabetes health promotion**

TR programs are based on peoples needs, taking into account what will be of most benefit to the individual (Allsop, Negley & Sibthorp 2013; Porter, Shank & Iwasaki 2012; Stumbo & Peterson 2009). The overall aim of TR is to enhance participant’s freedom of choice and cultivate and sustain an enjoyable leisure arrangement that fits into their lifestyle. This is done with the goal of increasing physical, psychological and social benefits that positively impact health and wellbeing (Stumbo & Peterson 2009). Since TR focuses on abilities of people with disabilities, illnesses, and/or special needs, the aspect of choice of participating in a program is particularly important so that the
TR program can contribute to the health and wellbeing of the individual (Stumbo & Peterson 2009). The TR program does therefore need to be meaningful to the individual and of their choosing (Siegenthaler 1997).

As indicated above, numerous benefits of TR have been outlined in literature. These are summarised below in Table 2.
Table 2: Benefits of participation in TR services (Stumbo & Peterson 2009, pp.12-13)

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased emotional control</td>
<td>(Hawkins et al. 2012; Iwasaki et al. 2006; Sylvester 2011)</td>
</tr>
<tr>
<td>Improved physical condition</td>
<td>(Ashworth et al. 2005; Johnston et al. 2012; Porter, Shank &amp; Iwasaki 2012)</td>
</tr>
<tr>
<td>Improved short and long term memory</td>
<td>(ATRA 2009; Hutchinson 2011)</td>
</tr>
<tr>
<td>Decreased symptoms of anxiety and depression</td>
<td>(Johnson 2000; McCormick &amp; Iwasaki 2008; Stumbo et al. 2015)</td>
</tr>
<tr>
<td>Improved mobility in community environments and situations</td>
<td>(Johnston et al. 2012; Mobily 2013; Stumbo et al. 2015; Tulle &amp; Dorrer 2012)</td>
</tr>
<tr>
<td>Improved health indicators, such as bone density, heart rate, and joint mobility</td>
<td>(Greaves et al. 2011; Stumbo et al. 2015)</td>
</tr>
<tr>
<td>Improved coping and adaptation skills</td>
<td>(Iwasaki et al. 2006; Johnston et al. 2012)</td>
</tr>
<tr>
<td>Increased awareness to barriers to leisure</td>
<td>(Stumbo &amp; Peterson 1998; Sylvester 2011)</td>
</tr>
<tr>
<td>Improved ability to prevent, manage, and cope with stress</td>
<td>(Ahola et al. 2012; Cogswell &amp; Negley 2011; García – Villamisar &amp; Dattilo 2010)</td>
</tr>
<tr>
<td>Improved adjustment to disability and illness</td>
<td>(Allsop, Negley &amp; Sibthorp 2013; Hill &amp; Sibthorp 2006; Stumbo et al. 2015; Walker &amp; Pearman 2009; Zabriskie, Lundberg &amp; Groff 2005)</td>
</tr>
<tr>
<td>Improved understanding of importance of leisure to balanced lifestyle</td>
<td>(Charters &amp; Murray 2006; Cogswell &amp; Negley 2011; King, Curran &amp; McPherson 2013)</td>
</tr>
<tr>
<td>Improved intrinsic motivation to participate in meaningful leisure activities</td>
<td>(Hebblethwaite 2013; Janiszewski, O’Brien &amp; Lipman 2015; Porter, Shank &amp; Iwasaki 2012)</td>
</tr>
<tr>
<td>Increased life and leisure satisfaction</td>
<td>(Allsop, Negley &amp; Sibthorp 2013; Delaney, Crandell &amp; Barfield 2014; Stumbo &amp; Peterson 1998)</td>
</tr>
<tr>
<td>Increased ability to develop and maintain social support networks</td>
<td>(Garcia – Villamisar &amp; Dattilo 2010; Hutchinson 2011; Porter, Shank &amp; Iwasaki 2012; Sylvester 2011)</td>
</tr>
</tbody>
</table>

The benefits, identified above, highlight the therapeutic nature as well as the valuable, positive and beneficial aspects of TR. These characteristics form the essence of TR, and these outcomes or benefits are said to occur in individuals undertaking TR programs.
(ATRA 2009; Békési et al. 2011; Charters & Murray 2006; García-Villamisar & Dattilo 2010; Johnson 2000; Mobily 2013; Moxham et al. 2015; Sanchez et al. 2014; Tulle & Dorrer 2012). For any of these benefits to occur, TR programs and services must follow a clear outcome oriented model (Allsop, Negley & Sibthorp 2013; Békési et al. 2011; Charters & Murray 2006; King, Curran & McPherson 2013). The model should include assessment of client needs and abilities, planning the intervention, implementing the intervention, and evaluating the program to confirm the outcomes have been achieved (Hawkins et al. 2012). A summary of a TR model is provided below Table 3.

Table 3: Summary of TR model (Stumbo & Peterson 2009, p.33)

<table>
<thead>
<tr>
<th>Purpose</th>
<th>To facilitate the development, maintenance, and expression of an appropriate leisure lifestyle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultimate Outcomes</td>
<td>Improved health, wellbeing, and quality of life through the psychological, physical, social, and other benefits received from an appropriate leisure lifestyle</td>
</tr>
<tr>
<td>Populations</td>
<td>Individuals with physical, mental, social, or emotional limitations</td>
</tr>
<tr>
<td>Process</td>
<td>Selection, development, implementation, and evaluation of goal-oriented services</td>
</tr>
<tr>
<td></td>
<td>Functional intervention</td>
</tr>
<tr>
<td></td>
<td>Recreation participation</td>
</tr>
<tr>
<td>Settings</td>
<td>Treatment, residential, and community-based health and human service centers and recreation agencies</td>
</tr>
</tbody>
</table>

Irrespective of the target group or the recreation activity, a systematic or structured TR model is followed. Therapeutic Recreation seeks to work holistically with people and support them with the intention of value adding to their life amidst challenges and limitations (Carruthers & Hood 2007).
Generally, TR programs aim to produce modifications to lifestyle and behaviour (Gassaway et al. 2011) by using purposeful interventions that “generate social, emotional, physical, psychological, or spiritual change to improve independent functioning, health status, and quality of life” (Hawkins et al. 2012, p.131). Most TR programs focus on changing behaviours or habits with a goal to improve health (Wise 2002). When TR programs use intentional strategies and theoretical frameworks, they have demonstrated effectiveness in meeting desired outcomes (García-Villamisar & Dattilo 2010; Hill & Sibthorp 2006). TR programs require a professional trained in the specific TR program to ensure the program suits the individual and that the established goal(s) can be achieved and maintained (Hillsdon 2013; Kemeny & Arnhold 2012; Tulle & Dorrer 2012). This may also entail counselling by the TR professional to the participant (Lin et al. 2010; King et al. 2006). TR programs have been found to be very effective when implemented in community settings outside the home environment, such as local halls or gyms (Ashworth et al. 2005; King, Curran & McPherson 2013; Desveaux et al. 2013). The Beat It program was conducted in a leisure centre.

Lifestyle changes incorporating healthy diets and physical activity are key therapeutic interventions in the treatment of diabetes (Centis et al. 2014; Malpass, Andrews & Turner 2009). Malpass, Andrews and Turner (2009) conducted a qualitative study interviewing thirty participants with diabetes to determine the effect of diet and physical activity on type 2 diabetes. Results indicated that diet and physical activity information should be given concurrently to people with diabetes as it encourages multiple lifestyle changes which were reported as helpful by participants, rather than individual and progressive information. Education and information giving were an
integral component of the *Beat It* program where diet and lifestyle information were given in parallel to the implementation of exercise sessions.

The use of exercise along with health promotion, in a TR program for people with diabetes, is important and appropriate if the intervention is to meet the previously identified generic outcomes of improved health, wellbeing and quality of life (Stumbo & Peterson 2009). It is valuable to consider what the exercise, or physical activity, as it is often referred to in the literature, actually entails.

**Diabetes and Therapeutic Recreation**

The benefits of a TR program, involving exercise, for people with diabetes, are evident in the literature. Of particular importance are TR programs in terms of promoting exercise to prevent a sedentary lifestyle and its associated risks and complications. Some studies though, that specifically examined exercise adherence and commitment after undertaking a TR program, showed little effect in changing the lifestyle of those who completed the program (Finkelstein, Caldwell & Demers, 2003; Wisse et al., 2010). In order to motivate and sustainably engage TR participants, a person-centred approach, which fulfils individual needs, may be more appropriate (Hebblethwaite 2013).

Many of the TR programs for people with diabetes described in the literature involved TR camping programs (Allsop, Negley & Sibthorp 2013; Békési et al. 2011; Hill & Sibthorp 2006; Török et al. 2006; Walker & Pearman 2009). These types of TR interventions isolate time periods in an artificial environment and as such cannot be
compared to the TR program that was undertaken in this research study, which involves twice weekly sessions over twelve weeks.

Hu et al. (2014) conducted a quasi-experimental, 1-group longitudinal study centred on Hispanic adults with diabetes and their family. Data were collected at baseline, post intervention and at 1 month follow up for participants. Data were collected from family members at baseline and post intervention. Seventy-three participants (thirty six people with diabetes and thirty seven family members) completed an eight week tailored diabetes educational program taught in Spanish in North Carolina, United States of America. The study collected quantitative data about physical changes, diet, knowledge and self-efficacy. The study included a family member in the program for the purpose of determining social and cultural influences on the management of diabetes. The research team found, using growth curve analysis, significant improvements over time in systolic blood pressure \((P=0.0124)\), in diabetes self-efficacy \((P < 0.0001)\), in dietary choices \((P < 0.0001)\), in knowledge \((P < 0.0001)\), in physical activity \((P=0.0134)\), and in blood glucose testing scores \((P=0.0265)\). The study also found significant improvements in family members BMI \((P=0.0234)\) and diabetes knowledge \((P < 0.0001)\). The researchers asserted that family member involvement had positive effects on the person with diabetes physically, in knowledge growth, in diet changes and in quality of life. In light of these results, Hu et al. (2014) recommended that family members should be included in interventions for people with diabetes, as a means of more effectively engaging them in behaviour change. This is also recommended by other authors who report that family members can provide emotional and psychological support to people with diabetes generally, not just Hispanic populations, and hence assist them in understanding their diabetes and developing healthy habits.
and behaviours that have a positive life effect (Denham et al. 2011; Rosal et al. 2011; King et al. 2010). The study reported in this thesis also found support to be a motivating factor in engaging in a diabetes TR program. As with other findings, this will be explored in chapter 5.

Delahanty et al. (2006) used a randomisation method to recruit 274 participants into a lifestyle intervention study in the USA conducted over a three-year period. Participants completed a validated questionnaire assessing stage of change for physical activity levels, exercise self-efficacy, perceived stress, depression, and anxiety. This was done at recruitment, after one year and then after three years. Statistical analysis of the questionnaires was performed using correlations and multiple regression analyses. Findings revealed that women and people with higher Body Mass Index at the beginning of the study did not take up physical activity over the course of the study ($r^2=0.35; P < 0.001$). Men had significantly higher levels of leisure time physical activity than women ($r^2=0.08; P=0.003$). The study also found that an initial level of self-efficacy was associated with higher levels of leisure physical activity, which strengthened over the course of the three years ($r=-0.36; P < 0.001$). The researchers recommended the continuation of programs for women who are overweight, have lower self-efficacy and/or perceive their stress levels to be elevated.

An Australian study involving 436 people with type 2 diabetes in a web-based exercise program conducted by Jennings et al. (2013) found that physical activity increased significantly by the completion of the twelve-week program. Participants were allocated to be a part of the web-based program or to a control group. Maintenance of exercise by the study participants six months after the conclusion of the program was
poor. Others who have performed similar studies report analogous outcomes of good levels of engagement during the program (Connelly et al. 2013; King et al. 2006; Liebreich et al. 2009), and difficulty maintaining increased levels of physical activity post the intervention program (Carr et al. 2013; Davies et al. 2012).

The studies reported in the literature are important in highlighting aspects for consideration that can be significant for various populations with diabetes undertaking TR exercise programs. But… they all focus on physical benefits. No studies could be identified that consider the meaning of TR programs to participants with diabetes. This concept will be examined in the following section. The research being reported in this thesis addresses these identified deficiencies and serves to highlight the originality of this current study.

**Beat It**

*Beat It* is a TR program, established by the Australian Diabetes Council and delivered across Australia by accredited providers. *Beat It* is an evidence-based exercise and lifestyle education/modification program that involved twice weekly individualised physical activity training and fortnightly lifestyle education (disease prevention, treatment, management), nutrition and goal setting sessions. The 12-week program was offered to men and women over the age of eighteen diagnosed with any form of diabetes, and not working. As a result of these criteria, it predominantly attracted an older population. The *Beat It* program was designed to assist people living with diabetes to improve and manage their disease and increase their physical functioning
thereby enhancing their quality of life. This aim is achieved through education and physical activity conducted in a safe and supportive community environment (ADC 2011; ADC 2013; Department of Health 2013).

*Beat It* commenced in Australia in mid 2010 as a pilot in twelve Local Government Areas following government funding. This was extended to an additional 35 Local Government Areas at the end of 2011, with Wollongong City Council being one of the chosen Local Government Areas. Programs commenced in 2012, with six programs being run over 2012-2013. In this time, 150 people with diabetes attended a program, 49 percent being male and 51 percent female. All participants were over the age of 55.

As demonstrated in Table 3 (p.47), TR programs follow a plan. Table 4 below illustrates how the *Beat It* program follows the principles of a TR model, adopting a clear outcome oriented approach including assessment, planning, implementing and evaluating (Hawkins et al. 2012; ATRA 2009). Figure 3 (below) provides a model of the *Beat It* program to provide context.
Table 4: *Beat It* program fulfilling the requirements of a TR model (Stumbo & Peterson 2009, p.33; ADC 2011)

<table>
<thead>
<tr>
<th><strong>Program elements</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To provide people with diabetes a safe, evidence based, cost effective, community based physical activity and lifestyle program</td>
</tr>
<tr>
<td><strong>Ultimate Outcomes</strong></td>
<td>Improved physical activity levels; reduced risk factors for developing complications associated with diabetes; improved healthy eating habits; improved cardiovascular health, musculoskeletal strength, balance, coordination and endurance; improved quality of life and functional capacity; promotion and support of long term behaviour change through participation in the program</td>
</tr>
<tr>
<td><strong>Populations</strong></td>
<td>Individuals with diabetes who are relatively free of compounding complications, who are middle aged or older adults</td>
</tr>
</tbody>
</table>
| **Process**           | Selection and development of instructors  
Recruitment of participants  
Implementation and evaluation of program services  
Functional intervention through exercise and lifestyle education sessions  
Program participation  
(See model below in Figure 3) |
| **Settings**          | Two community-based recreation centres in the Illawarra |
Beat It Program Flow Chart

Set information day date and advertise to possible interested participants
The BEAT IT team can send you generic flyers and templates for promoting the event

Allow 4 weeks for interested participants to reply

Information Day held and participants register for the BEAT IT program

Initial Consultations (One-on-One) to take place within one to two weeks following Information Day

INITIAL GROUP ASSESSMENT
Week 1 – Session 1

PHYSICAL ACTIVITY SESSION
Week 1 – Session 2

PHYSICAL ACTIVITY SESSION
Two weekly sessions to be held in weeks 1-12

LIFESTYLE EDUCATION SESSIONS X 6
Fortnightly sessions to be held throughout program

FINAL GROUP ASSESSMENT
Week 12 – Session 24

Discuss if individual participants would like to continue into Maintenance Program

Yes
Set up Maintenance Program
Plan next BEAT IT program for new participants

No
Set up Home Based Program
Plan next BEAT IT program for new participants

SIX MONTH POST PROGRAM REASSESSMENT

Figure 3: The Beat It program (ADC 2011, p.16)
As shown, the *Beat It* program aligns with TR principles and practices. Although a national initiative in Australia, the purpose of this research study is to focus on the intervention program conducted in the Illawarra region in New South Wales, Australia.

Information regarding the *Beat It* program and the region in which the research study was conducted are provided below to afford the reader an understanding of the research context.

**The Illawarra**

The *Beat It* program was offered to people with diabetes and who were not working, in the Illawarra region, NSW, Australia, and as such this is the locale in which participants resided. This region covers 1,128 square kilometres, with a population of approximately 285,000 (Regional Development Australia 2014) and is seen below in Figure 4.
According to the National Diabetes Service Scheme, part of Diabetes Australia, 15.6 percent of the population in the Illawarra region is registered with the Scheme as having diabetes. These rates are higher than the national estimate of 12.3 percent (Diabetes Australia, 2016).

It is estimated that 63 percent of the Illawarra population are overweight or obese (Ghosh, McDonald & Marshall 2013). This is higher than the NSW state estimate of 61 percent and equal to the national estimate of 63 percent (AIHW 2015b; National Health Performance Authority (NHPA) 2013). Being overweight and/or obese
contributes significantly to chronic diseases such as diabetes, and these impacts of being overweight and/or obese then consequently become a cost burden to the health care system, society and the individual (Li 2014).

Recommended levels of physical activity are estimated to be achieved in only 58 percent of the population of the Illawarra (Ghosh, McDonald & Marshall 2013). Habitual physical activity reduces the risk of cardiovascular disease and other potential complications of diabetes, along with improving quality of life (Vähäsrja et al. 2015). Physical inactivity has been noted as the fourth largest risk factor for mortality in the world (Wasenius et al. 2014; WHO 2009). It is imperative that individuals undertake physical activity and exercise, particularly when it can further reduce complications associated with the chronic disease diabetes. Not only are physical activity levels inadequate in the Illawarra region, it is reported worldwide that many adults (and children) do not participate in adequate levels of exercise and physical activity to maintain good health (Hallal et al. 2012b). It is suggested that over one third of adults internationally do not meet the minimum recommended levels (Aggarwal, Liao & Mosca 2010; Martin et al. 2009; Buchholz et al. 2012), or are not undertaking any form of exercise (Hallal et al. 2012a). An even greater number of people in developed countries do not participate in exercise or meet the recommended guidelines of 150 minutes per week (Buchholz et al. 2012).

**Beat It and older adults**

The *Beat It* TR program focused on physical activity sessions that incorporated resistance and aerobic training. In addition to exercise, lifestyle education and modification sessions that focused on healthy active living including an emphasis on
maintaining motivation, nutrition and goal setting, were offered and included (ADC 2011). The target population for the Beat It TR program was adults over eighteen who were not working, which by default attracted middle and/or older aged adults (over 50 years). As previously mentioned, for older people physical exercise is important in improving mobility and functional capacity (Yorston et al. 2012), increasing muscle strength and endurance, and optimising aerobic capacity (Angevaren et al. 2008). Exercise also assists in reducing pain, building bone mineral density, and improving or maintaining quality of life (Howe & Skelton 2012; Conn, Hafdahl & Mehr 2011; Stanton, Reaburn & Happell 2013). The value of exercise, particularly as people age, is clear. However, it is generally more effectively implemented when accompanied by behavioural interventions, as Conn, Hafdahl and Mehr (2011) found in their meta-analysis of 358 studies to determine what interventions increase physical activity in adults. This general overview of adults living in the community found that specific physical activity interventions can be effective, but are more so when behavioural interventions accompany the program.

Programs supported by professionals

In addition to behavioural strategies, studies such as those undertaken by Grafigna et al. (2014) and Grandes et al. (2011) suggest that support by professionals has been attributed to success in implementing and maintaining physical activity and adequate levels of exercise in people living in the community. A recent review of randomised control trials comparing various strategies to encourage physical activity in community dwelling adults over the age of sixteen was examined by Foster, Hillsdon and Thorogood (2013). The review found that interventions involving exercise provided
and supported by professionals might be effective in promoting and maintaining exercise habits in adults. Nothing was found in the review about the role or quality of the professional providing the program and associated support. Given this limitation, the authors recommended that future studies consider the nature of the professional delivering the intervention.

Boudreau and Godin (2014) conducted a study in Canada that investigated the factors contributing to participation in leisure time physical activity by people with diabetes. They used a survey where 200 participants self-reported their intentions according to predetermined psychosocial factors of attitude to exercise, perceived behavioural control and moral norm. Data was analysed using hierarchical regression equation, which demonstrated that attitude ($\beta=0.1, \ p<0.05$), perceived behavioural control ($\beta=0.37, \ p<0.001$), and moral norm ($\beta=0.45, \ p<0.001$), were significant determinants of intention. The results indicated that the individual’s intention was the key factor influencing participation in leisure time physical activity. The study findings asserted that techniques such as providing instruction to participants during physical activity strengthened self-efficacy and improved commitment to being involved in exercise. Beat It employed trained professionals to instruct and support participants during the program. The Findings chapter more closely reveals the role of the instructor in the Beat It program, according to participants.

Diabetes, Therapeutic Recreation and Meaning

Several researchers considered the meaning of TR programs for other populations and people with other conditions and diseases, for example; vision loss (Berger 2011);
asthma (Ringsberg, Lepp & Finnström 2002; Cashin, Small & Solberg 2008); mental health (McCormick & Iwasaki 2008); Aboriginal people (Isaak & Marchessault 2008); older persons (Rydeskog, Frändin & Hansson Scherman 2005); people with mental illness (Moxham et al. 2015); and people with other chronic conditions including cardiovascular disease, pulmonary disease, obesity, hypertension and cancer (Johnston et al. 2012; Pooler 2014; Thome et al. 2004). These studies identified the value of understanding why people choose to engage in leisure activities like exercise. The researchers who conducted the above studies sought to understand the meaning behind the activity so as to better appreciate the population being studied and the motivation for the choices they make. Each study asserted the need for TR programs to extend beyond traditional TR practices of directive intervention practice, and to seek from the participant’s own voices their perspectives on the program and understand their personal experiences. This, the researchers argued, would better direct TR programs and ensure they are most beneficial for the participants. Carruthers and Hood (2007, p.277) state that “TR has the opportunity to play an important role in supporting clients to create a life of meaning, in spite of challenges and limitations”. For the opportunity to be most effective for people with diabetes, the participants need to be actively involved in elucidating what is meaningful to them.

Very little is reported about people with diabetes and what having the disease means to them. Even less is reported on what meaning is ascribed by people with diabetes to engaging in and undertaking TR programs. A study by Morrison, Lowe and Collins (2014) considered 393 Australian women with gestational diabetes experiences. The study used a mixed methods approach to describe Australian women’s contemplations on their experience of having gestational diabetes. A self-administered questionnaire,
which utilised 69 closed questions, was sent to the identified women who were recruited from a national database. Eight themes, identified using a thematic framework analysis, emerged from the research and demonstrated that the women’s experiences were diverse in nature. A key factor in the study was the important role of the health professional to support the women in their perceived challenges. Although the study had a large number of participants (1381), due to the closed nature of the questions and the very specific population, this study is of interest but not directly comparative to the one being reported in this thesis. The point of interest and connection to this research study is the importance of the support person or instructor. In this case it was a health professional. In this current research though the equivalent of the health professional is the instructor.

Brunet et al. (2005) conducted a study with Aboriginal adults with diabetes in Canada and examined social cognitive theory constructs associated with physical activity behaviour. The research team interviewed 34 participants regarding their perceived understanding of physical activity, physical activity behaviour, and social cognitive theory constructs. Using student t-tests and chi-square analyses, analysis (all \( P<0.05 \)) identified that most participants saw leisure time physical activity as suitable for young people only. Of note, 61.5 percent of study participants were classed as sedentary. This reduced to 33 percent when occupational and household activity was included. The findings found that 69 percent of participants reported walking for exercise weekly and associating meaning relating to this with physical, psychological and spiritual health benefits. Participants deemed their lives to be less stressful when exercising and their minds to be clearer. Participants also reported lower blood glucose levels, strength development, maintaining mobility, increased joint mobility and minimising
further diabetes complications (Brunet et al. 2005). Participants with sedentary lifestyles had a low physical activity social support network in place and expressed lack of confidence to embark on any form of exercise.

Chun and Chesla (2004) utilised interpretive phenomenology as a methodology to examine cultural issues affecting the management of diabetes in a sample of twenty Chinese people. Findings identified the need to consider culture, particularly the role of family, and its effect on the interpretation and experience of diabetes as a disease for individuals. Although the research did not incorporate or investigate the meaning of a TR program it did reinforce the importance of understanding individual needs.

Iwasaki and Bartlett (2006) also used phenomenology as a means to consider the lived experiences of urban Aboriginal Canadians who had diabetes to see if leisure activities assisted stress levels in this group of people. The authors used three focus groups, with eight people in each, to collect data. They found resilience was heightened in this group of people when they engaged in culturally appropriate forms of leisure and stress levels were reported as reduced. The findings indicated this occurred due to sense of community, physical benefits, and shared identity as well as being consulted in the process of implementation. The authors determined that culturally appropriate approaches to health and leisure are important for this group of Aboriginal people and interventions should be conducted in consultation with the participants.

Piven (2015) likewise explored cultural perspectives in her study with first-generation, bilingual Mexican-American older adults with type 2 diabetes. She conducted two focus groups with ten people in each, then used a phenomenological approach to discover that culturally relevant intervention services are crucial to help Mexican-
American older adults with diabetes to develop self-management skills and to promote adherence to wellness and health practices. Internal locus of control emerged as a key finding, indicating that the people in the study needed to feel included, involved and empowered.

Phenomenology is a powerful means of eliciting lived experience. Pooler (2014) explored the experiences of adults living with chronic pulmonary illness, interviewing sixteen participants to increase understanding of individuals’ experiences and how they connect to the health professional’s practice. By articulating themes through reflection and reduction, using van Manen’s (1997) methods of attentive thoughtfulness, wondering, conversing, reflecting, writing and rewriting, Pooler (2014) found that the people in her research identified an interruption in their lives. This meant having to slow down, do less and at times stop altogether. Pooler’s (2014) research using phenomenological methodology highlighted that the individual is more than just the physical body.

This message is important to the research being reported in this thesis. Individuals undertaking a TR program come with their own stories, with their individual disease manifestations and its physical, psychological and emotional implications that all impact their experience and the meaning they connect to the experience.

Thome et al. (2004) conducted hermeneutic phenomenological research with older people (over 75 years) who were diagnosed with cancer. The authors wanted to explore the meaning of living with cancer in old age. Ten people were interviewed, revealing that cancer changes life world perspective in a number of ways. These being, disintegration of existence, a sense of finiteness, and a redefinition of their role in life.
The authors determined from the analysis of data that it is important to encourage the older person to describe their experience(s) of illness, to assist healthcare providers in understanding what is meaningful to the older person and thereby provide individual support and appropriate care.

This important research emphasises the significance of my research in exploring people with diabetes’ experiences of being involved in a TR program involving exercise and health promotion. This then acts to inform future programs so they are appropriate and encourage motivation and engagement in the program.

Another study, by Schleien et al. (2014), highlighted the individual perspective as crucial in the development of any TR program. This study, conducted in the USA with 35 participants, considered the role of parents of children with an intellectual or physical disability in designing and implementing a TR program for their child. Using focus groups as the means of data collection, the researchers identified that parents often felt distanced from programs despite them knowing their children and their children’s needs best. This sense of not being consulted, led to concerns for their child’s safety and wellbeing due to perceptions of poorly prepared staff and/or inappropriate programs.

The research described above all targeted very specific participant groups, as does the study being reported in this thesis. The studies described above, also all have a similar theme, that is, the impact of key individuals being central to the design and implementation of TR programs. Individuals contribute to ensuring that programs are meaningful for those participating in them. Choosing the right people to be involved in the planning and implementation of TR programs, according to Strom Williams et al.
(2015), is critical to the programs success in terms of engagement and meaning for the participants.

Porter, Shank and Iwasaki (2012) distributed surveys to 229 people with diabetes who had been a part of a diabetes education and counseling program in Pennsylvania, USA to determine how to increase the time people with diabetes spent exercising. Of this number, 31 people responded and completed the cross-sectional survey about frequency, engagement and meaning of exercise to the individual. Using Spearman Rank Correlations, the research team found that participants spent more time undertaking physical activity when they experienced personal meaning, specifically a sense of connection and belonging with others and within self. The authors recommended that further research be conducted on the experience of personal meaning in relation to physical activity for people with diabetes. The phenomenological research study reported in this thesis also addresses this recommendation.

In research by Barbosa et al. (2011), the patient perspective is professed to be fundamental in demonstrating the benefits of a lifestyle program. The authors were not clear in the methods they used to attain the patient perspective, but reported that psychological adjustment to diabetes, motivation to change and self-efficacy were key views considered relevant by the patients. Using these reported perspectives, the authors recommend instruments that would best measure these perspectives – these being the Problem Areas in Diabetes scale (PAID), the Motivation and Energy Inventory (MEI) and the Diabetes Management Self Efficacy Scale (DMSES).

Barbosa et al (2011) propose that the transtheoretical model of behaviour change
should be used to evaluate lifestyle programs, claiming that patients need to be prepared and motivated to take an active role in changing their lifestyle (preparation phase), they need to be supported in making good choices to impact positively in their lifestyle (action phase), and supported in maintaining behaviour changes (maintenance phase).

In this thesis, the experience of people with diabetes has been researched and the meaning they attribute to being involved in a TR program involving exercise and health promotion is reported. Although Barbosa et al. (2011) discuss the importance of patient perspectives, the research is quite different and, as previously alluded to, it is not clear how the patient perspective has been attained. By using quantitative measures, Barbosa et al (2011) offers a different but important perspective to the research undertaken and reported in this thesis.

Minimal research was found when searching the literature that considered participants experiences in a specified exercise program that could be called TR. A qualitative study in Scotland by Tulle and Dorrer (2012) investigated fifteen older peoples’ (aged 55-83) experiences when exercising regularly for health. The research focus was to demonstrate how older people engaging in exercise offers opportunities for better physiological status and improved mind-body relationship. Using individual face-to-face interviews and then theming the emergent data, the researchers found that older people in the study reported significant benefits to their health capital and social networks when involved in a TR exercise program. Tulle and Dorrer (2012) discuss how older people often feel reluctant initially to engage in ongoing exercise in a gym due to a fear of the environment. This fear, argue the authors, is generally
owing to a deficit in understanding of the environment and what they will be required to do. Others have found similar outcomes in previous studies around deficits in understanding of what gym and recreation centres are like, and how individuals can be a part of programs (Nelson et al. 2007; Balde et al. 2003). This fear of gym environments and lack of understanding about what the experience will be like is allayed by using exercise professionals trained in the TR program for the older person as well as tailoring and catering for participants’ needs. Such tailoring and meeting needs can be done by having a trained instructor who is able to deliver a TR program for a relatively homogenous participant program group so that participants do not have to enter the gym with the general population (Tulle & Dorrer 2012; Kunstler & Stavola 2010).

The concept of self-management was explored by Minet et al (2011) as an important aspect of diabetes treatment in a self-management interventional TR program. The authors studied how promotion of self-care activities (including exercise and health promotion), after being involved in a TR intervention program based on motivational interviewing, could impact living with diabetes in everyday life. Seven focus groups of three to five participants, each with diabetes were conducted. Both the transcripts and the data collected from the focus groups were then analysed using phenomenological methods to reveal that people with diabetes see meaningful treatment programs as facilitating and assisting in overcoming problems they experience in self-management.

Holstrom and Rosenqvist (2005, p.149) found in their qualitative study that the “problems” experienced in diabetes self-management were related to engaging in exercise and maintaining a healthy diet. The authors postulated that people with
diabetes needed to be involved in reflecting the key issues of disease management to educators so that targeted and appropriate education could be provided. The authors used a phenomenological approach, advocating this as essential in ensuring understanding of individuals and their unique situations. Further, this approach was found to influence future education strategies and requirements, including exercise, dietary assistance and health promotion.

Exercise can be viewed as an component of TR (Mobily 2013). Within the field of Therapeutic Recreation, exercise is used to improve functional ability and to develop social, psychological and physical functioning (Aquadro 2011; Skalko & Morgan 2011; Witman & Ligon 2011). Although older people can reap these benefits, some say more so than younger adults (Mobily 2013), it is known that many do not participate in adequate levels of exercise (Howe & Skelton 2012). Commitment to exercise can be hindered by physical limitations that come with age and disease, but it can also be more acutely hindered by lack of motivation (Centis et al. 2014). These are all relevant for this current research study as participants were all over 55 years of age, thereby classing them as older adults. Issues around commitment and motivation, which emerged as themes in this research study, will be considered in the findings, Chapter 4.

**Summary**

This chapter demonstrated that diabetes is a significant and increasingly prevalent disease. Management of it can be complex for health care providers (Schulte, Rothaus
& Adler 2014) and also for the people who live with the disease. With such high numbers of people in Australia affected by diabetes, the discussion also illustrated that it is important to consider ways to engage people with the disease in healthy lifestyle decisions and behaviours.

The chapter also discussed how important exercise is for people with diabetes, and illustrated that higher levels of activity/exercise in people with diabetes lowers rates of mortality (ADC 2014b; Sluik et al. 2012; WHO 2014). The numerous physiological benefits of exercise on diabetes were discussed within this chapter providing evidence to demonstrate that physical activity improves diabetes outcomes by assisting glucose control, weight management and preventing related complications (Hu et al. 2014; Schneider et al. 2014) and an individual’s overall health (Law et al. 2013). For these benefits to occur, the recommended and required levels of exercise must occur. These recommendations were also explicated in the chapter.

The discussion above also elucidated how people with diabetes can manage and maintain a healthy lifestyle and examined the reported lack of commitment to sustaining an exercise regimen by people with diabetes (Barrett et al. 2007; Jennings et al. 2013; Wisse et al. 2010). Engagement in exercise programs and interventions requires active involvement by people with diabetes to take some control of their disease and its potential implications. The need for education about diet and exercise requirements (Schulte, Rothaus & Adler 2014) was also discussed.

There are not only physical benefits of engaging in exercise and healthy lifestyle behaviours. The chapter discussed the psychological and social benefits of exercise also. The literature analysis identified that it is vital that people with diabetes are
actively involved in the management of their disease. An inclusive approach is said to decrease the risk of further complications associated with diabetes, which place not only physical, but psychological, emotional and financial burden on the individual and the community (WHO 2014).

In addition to the above, what TR is, and its relation to diabetes was also described in detail. Little TR research has focused on TR interventions in diabetes populations. The chapter demonstrated how Beat It is an example of a TR program that has been implemented in the Illawarra region of NSW, Australia, for older adults with diabetes. Discussion regarding the need for programs to be supported by professionals was also made apparent to enhance the experience of the participant.

The above discussion demonstrated there is a distinct lack of research and literature about the meaning of why people with diabetes choose to engage (or not) in TR programs involving exercise and health promotion. This is evident in terms of both TR research and diabetes research. Engaging with and then synthesising the literature, revealed a significant lack of research that contributes to understanding how people with diabetes perceive, experience and attribute meaning to being involved in any TR program. There is a small amount of research that has considered the outcomes for people with diabetes utilising a TR program, but there is very little known about what it means to a person with diabetes to engage in and be a part of a TR program involving exercise. A number of researchers have recommended the examination of meaning when it comes to TR, a recommendation that this research study enacted.
Contributions of this research study

The aim of this research was to provide understanding of the essence of meaning that people with diabetes attribute to being involved in a specialised TR program. However, it is not evident from the literature reviewed what the essence of meaning is for people with diabetes undertaking such programs. There is a distinct lack of research focusing on people with diabetes engaging in TR programs.

This research addressed this knowledge gap by examining a TR program for people with diabetes specifically focusing on the meaning of the TR activity for the participant group.

Understanding why people choose to be physically active and exercise and why others do not is crucial so that programs can be written effectively and target the causes of inactivity and ensure exercise and program sustainability (Bauman et al. 2012). It is, therefore, important to gain insight into the experiences of those people who have already undertaken a TR program such as Beat It to establish why people with diabetes join TR programs so that future programs can be more effectively promoted and delivered. This is particularly important as physical inactivity becomes more frequent and seemingly acceptable (Bauman et al. 2012; Dumith et al. 2011) and since obesity and sedentary behaviours (risk factors for diabetes) in modern society, are generally rising (Lakerveld et al. 2013). This supports the impetus for the research study being reported in this thesis.

By understanding the meaning people ascribe to a TR program such as Beat It, physical activity and thus quality of life can be facilitated through appropriate TR interventions.
in a way that is meaningful to people with diabetes. If this can be considered an outcome, the financial burden of health related illness like diabetes could be reduced (Li 2014).

The chapter to follow – Research Design – will outline aspects of the research study undertaken by myself as chief investigator, including methodology and methods.
Chapter 3 – Research Design

Introduction

This chapter provides detail of my role as chief investigator within this research study. It elucidates the paradigm chosen, the research question, the methodology and methods used with discussion as to why they were deemed suitable and appropriate for this research.

This chapter examines the philosophical underpinnings that led to the adoption of a Heideggarian hermeneutic phenomenological approach. In order to understand and interpret the essence of meaning that the 15 participants attributed to being involved in a specialised therapeutic recreation program, a phenomenological approach was used. Phenomenology is acknowledged as a research paradigm that seeks to uncover embodied, experiential meanings and rich descriptions of phenomena (van Manen 2014).

Two prominent leaders in phenomenology, Husserl (descriptivist) and Heidegger (interpretivist) are discussed to demonstrate the different theoretical phenomenological perspectives. A description of the phenomenological research methods used in the study is also provided, including ethical considerations, recruitment details, data collection and analytic processes. The chapter concludes with a discussion on how van Manen’s approach to data analysis, as used in this research, ensures trustworthiness.
This chapter is not presented using a generic qualitative approach with conventional headings. Rather, in order to present a convincing textual flow that speaks clearly to hermeneutic phenomenology, the chapter is structured under the following headings:

- research aim
- role of the researcher
- methodology, including paradigm, ontology and epistemology, and phenomenology
- methods, including van Manen’s (1990) six steps of methodical structure
- trustworthiness of the data

**Research aim**

The overall aim of this study was to provide understanding of the essence of meaning that people with diabetes attribute to being involved in a specialised therapeutic recreation (TR) program.

**Role of the researcher**

As the researcher, my role was pivotal to the research process and influenced strongly by the ontological and epistemological opinions I held. Ontology refers to interpretation and understanding of reality, or the nature of existence and how we view the world in which we live (Hennink, Hutter & Bailey 2011; Grbich 2013; Hesse-
Biber & Leavy 2011). Essentially, ontology is my perspective as the interpreter. Epistemology investigates the relationship between the ontological view and what is already known (Hennink, Hutter & Bailey 2011). It is the interpretation of understandings using existing theories of knowledge to determine what is true and then building and applying knowledge more globally (Streubert & Carpenter 2011; Grbich 2013). My ontological, epistemological and methodological positions formed the philosophical paradigm I used and, in turn, how I saw and reacted within my world. This influenced my research as I worked within them to frame and guide my actions (Denzin & Lincoln 2008).

Given these philosophical postures, it was essential for me as the researcher to be actively reflexive and safeguard against personal bias or preconceptions (Grbich 2013). Reflexivity is the process of reflecting critically on the self and understanding the dynamics between researcher and participants, analysing and making note of epistemological positioning and personal values that could affect the research process (Silverman 2011; Grbich 2013; Polit & Beck 2014). Keeping a reflexive journal and also engaging in regular supervision assisted in self-examination and reflection and thereby enabled me to gain insight into my biases and determine if they would compromise the research. This supported me to look through the lens of the participants (Laverty 2003). By engaging in reflexivity from the beginning, my ontology and epistemology were evident and showed congruence with the methodology and methods used within the research process.
I worked in a constructivist paradigm where the role of the researcher was to interact with those being researched thereby creating findings in an interactive process (Hennink, Hutter & Bailey 2011). This will be explored in the following section.

Methodology

Research paradigm

Paradigms are colloquially termed worldviews (Hesse-Biber & Leavy 2011; Creswell 2009; Polit & Beck 2014). They are neither right nor wrong, but rather a way of cogitating. A research paradigm is essentially a model or framework for how we see and understand our own ‘worldviews of beliefs, values and methods for collecting and interpreting data’ (Gribich 2013 p.4). Working within a research paradigm is individual and needs to resonate with the researcher, since it is our perspective of reality (Hennink, Hutter & Bailey 2011). For me as a researcher, I was aware that I had my own values and beliefs about social reality and how it could be recognised and presented. The research paradigm established the position I took in the research process and guided me throughout the various stages of the research (Hesse-Biber & Leavy 2011).

The research paradigm I chose to work within was the interpretive paradigm, also known as the constructivist paradigm, which focused on understanding, multiple participant meanings and social construction (Creswell 2009; Hennink, Hutter & Bailey 2011; Denzin & Lincoln 2011). Fundamentally, this paradigm assumes that participants seek understanding of the world in which they live and hold subjective meanings of their experiences, which are varied and may be numerous. Therefore the researcher
must look for complexity and breadth of views rather than constricting views into clusters of ideas (Polit & Beck 2014; Grbich 2013; Creswell 2009). Within this paradigm the researcher seeks to cognise and appreciate people’s lived experience from the viewpoint of the individuals themselves, therefore examining subjective meanings that individuals ascribe to their experience rather than focusing on facts (Hennink, Hutter & Bailey 2011). I, and others such as Hennick, Hutter and Bailey (2011) and van Manen (1990) believe that individuals seek understanding of the world in which they live, of their lived experiences and the variety that may emerge from this, and hence consider knowledge to be subjective. To generate such meaning requires broad and open-ended questions so the participant can construct meaning in situations and share their views. As the researcher, I listened actively, hearing words but also hearing intent, and sought to understand the meanings that were being portrayed and influenced by culture, history and context, whilst being aware of my own experiences and background and how they might affect my interpretation. The meaning that arises is when this paradigm is evident and is socially and societally embedded and based on thought, interaction and lived experience (Creswell 2009; Crotty 1996; Grbich 2013; Denzin & Lincoln 2011). This paradigm enables individuals’ realities to be dynamic, and experienced differently according to personal interpretations of lived experiences (Grbich 2013).

A researcher’s paradigm is described by Denzin and Lincoln (2008) as the scope of the researcher’s epistemological, ontological and methodological principles and forms the fundamental beliefs that guide action. I will now describe and discuss my ontology and epistemology in the next section.
The aim of this research was to provide understanding of the essence of meaning that people with diabetes attribute to being involved in a specialised therapeutic recreation (TR) program. The study did not aim to search for one reality or truth of a specific entity, as a distinct and measureable object, which would necessitate a rationalist ontology (Kinash 2010b). Instead, the research sought to understand a phenomenon that may have multiple realities and interpretations (for which there was no right or wrong). This approach is referred to as naturalistic ontology and was the view taken within this research (Kinash 2010b).

Epistemology, the interpretation or ways of knowing (Hennink, Hutter & Bailey 2011; Hesse-Biber & Leavy 2011; Kinash 2010a), was, in this research, about the relationship and shared understanding between the participant (the knower) and the researcher (the respondent) and how this shared understanding enabled the researcher to accurately interpret and represent the material and knowledge (Denzin & Lincoln 2003). I have no lived experience of diabetes and had no prior involvement with anyone with diabetes before undertaking my undergraduate nursing education. I do though, have lived experience with TR programs, having been a personal trainer for ten years and writing specialised individual exercise and health programs for clients with various levels of physical ability and health. Therefore, my epistemological reality has been created from professional nursing and academic education along with experience as a personal trainer working with people with various health conditions.

The knowledge that came with me into the research process grew from undergraduate and postgraduate nursing curricula, particularly acute care aspects from my
emergency nursing education. In addition to this is my initial and ongoing education and training in physical activity and its (predominantly documented physical) benefits to participants. The way in which I have built understanding around this knowledge is through practice as an emergency nurse in both metropolitan and rural hospital settings, and in training people generally in physical activity. Through both my nursing and my personal training, I have been exposed to the lived experience of people with diabetes. However, my lens has always been from a professional position.

I have continued to develop my ways of knowing – my epistemology, through current practice in an emergency department and ongoing training of individuals in exercise programs. It is also through teaching undergraduate students in a Bachelor of Nursing program, which includes curricula encompassing diabetes and health promotion. In order to maintain currency of knowledge in my teaching and personal training, I engage in continuous reading and synthesize new knowledge into my nursing and personal training professional practice. Additionally, my knowledge is further shaped through observation and real-life experiences of people living with diabetes. I believe I am continuing to develop and be shaped by people’s experiences in a recursive manner that thereby impacts my own knowledge (Kinash 2010a), and my interpretations of the research findings is both informed and influenced by this epistemology.

As stated, I have developed my own opinions and attitudes about both diabetes and TR that are informed by my education and experience. These beliefs have contributed to the development of ideas for how I wanted to study these concepts. My underlying beliefs are that diabetes is a prevalent and chronic disease and that the majority of
people diagnosed with diabetes can live relatively unaffected by it; that is, when they appropriately manage their diet and incorporate regular exercise into their life. I believe that many people can avoid this disease or eradicate it when they are in the pre-diabetes stage or when they have diabetes type 2. This is largely because the prevalence for developing diabetes is increased with sedentary lifestyles (ADC 2014c; Boudreau & Godin 2014), obesity (Montesi et al. 2013; Wimalawansa 2013) and poor diets (Lakerveld et al. 2013). I, and indeed others (ADA 2014a; Balducci et al. 2014a), believe exercise is crucial to managing diabetes and that people with diabetes can positively engage in exercise to minimise other health risks such as cardiovascular disease, hypertension and neuropathy (ADA 2014a).

Complimentary to scientific knowledge is the particular value that subjective experiences of individuals brings. I believe the individual holds the key to their own journey and the achievement, from the experiences they are undertaking, of positive outcomes and benefits. The truth or reality of an experience is therefore gained by entering another’s world and acquiring their understandings by listening to the voices of those who have had the experience (Crotty 1996). I hold strongly to the principle of person-centredness, placing the person at the centre of all interventions and decisions (Hebblethwaite 2013; McCormack 2003). I acknowledge the individual as the authority on their own experience and interpret all responses as meaningful. This has informed my approach, and lens, for this research design. I thereby consciously chose not to adopt a nursing lens, which would have been a professional perspective. My philosophy for this particular study, which explored the meaning of a TR program to people with diabetes, meant that people who had the experience had to be the key contributors.
Quantitative research methods do not enable such an examination of lived experiences, and hence a qualitative research methodology that pursued the understanding of meaning and essence of experience, was apt for this study (Tracy 2013). This methodology fit with my epistemology, that is, what was being sought was not the *truth* as to whether a situation occurred or not, but rather, the meaning of the experience to the person who had it (Hennink, Hutter & Bailey 2011; Grbich 2013). This methodology will be explored in the following section.

**Qualitative research**

This research study was therefore conducted using a qualitative paradigm. Laverty (2003) parallels quantitative and qualitative research, suggesting quantitative research emphasises prediction, control and measurement; whereas qualitative research highlights discovery, description and meaning. Traditionally, research topics that could not be explained objectively (or quantitatively) were not recognised in science (Streubert & Carpenter 2011). In current times, it is acknowledged that both quantitative and qualitative methodologies are required in research. Both paradigms study different things and both are useful. Qualitative approaches are particularly useful when researching matters involving human interaction or experience as it is the meaning of the experience to the person who had it that is being sought (Polkinghorne 2007). Various qualitative methodologies have been used by researchers, including ethnography, grounded theory and hermeneutic phenomenology (Denzin & Lincoln 1998).

Qualitative research is concerned with understanding the complex and subjective meanings that emerge for different individuals and groups, in particular social contexts.
and over time (Schneider et al. 2014). These methodologies are often employed when the subject of research is sparsely represented in the research literature or has been poorly examined in the past (Tracy 2013), as is the case with this research investigation.

**Phenomenology**

The chosen methodological approach for this research was phenomenology. Phenomenology is both a philosophy and a research methodology (Streubert & Carpenter 2011) and so is apropos for a Doctor of Philosophy as it embodies ontology, epistemology and methodology for the researcher. As a methodology, phenomenology is relevant and appropriate as it facilitates the question of how we as humans experience the world and conceptualise a gamut of phenomena (Crotty 1996; van Manen 1990), which in this research study was TR. There are a number of variations of phenomenological research approaches, although all consider phenomenology to focus on how experiential phenomena happen and to uncover the essential features of the phenomenon. Phenomenology is considered to be about experience as understood from the individual’s perspective (van Manen 2014). It is subjective, as the fundamental characteristics are based on the observation that every phenomenon is experienced in individual ways and so should be understood from the perspective of the individual experiencing it (Grbich 2013; Berger 2011; Crotty 1996; Holloway 2005; Rydeskog, Frändin & Hansson Scherman 2005).

van Manen (1990), proposes that phenomenological research is a means of questioning the way we experience the world, with the intent of wanting to know the
world in which we live as human beings. He argues this forms an inseparable connection to the world that is revealed upon reflection, which he calls “intentionality” (van Manen 1990 p.181). Berger (2011) speaks about phenomenology as a research methodology that seeks to understand and describe the individual’s lived experience of a phenomenon. This makes it a powerful tool to gain insight into what motivates actions of individuals and how meaning is constructed by the individual, within the context and frame of reference of their situation (Berger 2011; Mackey 2005; Paley 2013). A phenomenological approach was seen to provide the means by which this research study’s aim could be met. That is, to provide understanding of the essence of meaning that people with diabetes attribute to being involved in a specialised therapeutic recreation (TR) program.

Phenomenology in its current construct was formally introduced to twentieth-century thinking, in the early nineteen hundreds through the seminal works of the philosopher Edmund Husserl (1859-1938). It is argued however, that the term phenomenology precedes Husserl, having been presented as a philosophy by Husserl’s teacher Franz Brentano (1838-1917) (Dowling 2007). Brentano’s formulation of phenomenology is sometimes referred to as the preparatory phase of the phenomenological movement (Streubert & Carpenter 2011).

The practice of phenomenology can be traced back to the wisdom traditions such as Buddhism and Hinduism (Smith 1999). Despite these early beginnings, Husserl’s work has been purported as the first true phenomenological work (Finlay 2009), with a focus on the practice of descriptive phenomenology as an empirical qualitative research approach. Husserl introduced the terms life-world and essences (Todres 2005),
referring to everyday experiences being described and linked to consciousness that enables common understanding (Johnson 2000; Moran 2008). The life-world, essentially our lived experiences, underpins all of our everyday living and activities. Husserl asserts that our experiences occur within the horizon of the life-world and are understood through consciousness (Moran 2008; Koch 1995). Husserl further believed that this was possible through intentionality, which Koch (1995) describes as a conscious act towards an object providing a channel between consciousness and objects in the world. Husserl claimed that in order to discover consciousness, or reach the essence of consciousness, it is necessary to suspend our own beliefs and intentionalities. He referred to this as being able to bracket out the world and all its associated aspects (Moran 2008; Dowling 2007). Bracketing involves putting aside what the researcher already knows about the experience being investigated and approaching the data with no preconceptions or personal beliefs about the phenomenon (Crotty 1996; Grbich 2013; Streubert & Carpenter 2011). Husserl set aside preconceived opinions by bracketing in an effort to maintain objectivity.

Heidegger (1889-1976) was a colleague and student of Husserl and was thought to have based his work on that of his teacher (Miles et al. 2013; Streubert & Carpenter 2011; von Zuben 2011). Crotty (1996) and Speigelberg (1994) argue that, in fact, Heidegger was inspired by the work of Franz Brentano to explore the meaning of Being. A key difference emerged between Husserl and Heidegger that caused great dispute between the two philosophers. Speigelberg (1994) highlights that Husserl focused on consciousness and Heidegger on Being. Being is capitalised because Heidegger’s interest was in the pursuit of Being itself. Heidegger claimed that how we experience the world is based on our context, he asserted that we are of the world and
therefore cannot be separate from it, as Husserl proposed through bracketing (Miles et al. 2013). Heidegger saw bracketing as untenable according to Dowling (2007), and held the view that interpretation of lived experience occurred simultaneously with the experience, rather than through later reflection. The difference in foci was so marked that Husserl and Heidegger parted company. Heidegger focused on Dasein, that is, what it is to be human in our world (Heidegger 1962). By positioning his philosophy on the essence that “our experience of the world is based on our particular context of the world, because we are of the world and cannot be separate from it” (Miles et al. 2013 p.274), he chose to use the concept of hermeneutics as the means of doing this. The link between the two concepts was profound, in that Heidegger believed that interpretation could occur in a non-symbolic fact, the human, and that what was to be interpreted had meaning (Laverty 2003; Speigelberg 1994). He believed that inquiry of Being was inquiring into the nature and meaning of a phenomenon (Heidegger 1962). Heidegger was intent on finding Truth in Being and proposed the two to be intimately connected, interpreting truth as un-hiddenness and as such illuminating meaning through interpretation (Heidegger 1962).

Although I did not have the experience or direct access to the phenomena, I was able to interpret the important aspects through the reflections of others who had lived the experience (Giorgi 1997). van Manen (1990) supports this as valid, claiming that when a person experiences a phenomenon, they react and reflect to make meaning of their response.

While Husserl focused on the epistemological aspect of phenomenology (how do we know about man? Why are things the way they are?), Heidegger focused on the
ontological aspect (what is Being and how do we find meaning in the midst of it?)

Heidegger hinged phenomenology on human Being (what shows itself in person) rather than on consciousness as Husserl did. Husserl was concerned with acts of attending, perceiving, recalling, and thinking about the world, and humans were understood primarily as “knowers” (Crotty 1996 p.38). Heidegger, in contrast, suggested that consciousness is not separate from the world of human existence and chose to use hermeneutics as a way to uncover the structures of Being. Thus, moving away from the traditional interpretation of texts to the interpretation of Being (Crotty 1996).

The focus of Heidegger’s hermeneutic inquiry was on what humans experience rather than what they consciously know (Mackey 2005; Miles et al. 2013). Heideggerian hermeneutic or interpretative phenomenology rejected the idea of separating oneself and one’s prejudices and predetermined thoughts and ideas from a setting by simply being-in-the-world (Heidegger 1962). One is immersed in the world and as such, cannot have awareness of everything being acquired from the world. Heidegger also insisted that any interpretation was only valid when personal background was taken into account thereby rejecting the idea of bracketing that Husserl asserted (Laverty 2003; Miles et al. 2013).

By recognising the researchers’ consciousness the researcher's deeper understanding of other's experience is facilitated. In this research, it was the meaning attributed by people with diabetes from undertaking a TR program that was the phenomenon of interest. Researcher insight gained in ways previously discussed facilitated more accurate interpretation of context and meaning.
In interpretive phenomenology, the phenomenological researcher becomes an interpreter of interpreters (van Manen 2014). The aim of interpretive phenomenology is to seek explicit and universal meanings, to describe and give structure to a given phenomenon. The researcher analyses and interprets lived experiences to find essential themes and the themes taken together allow meaning of the experience to emerge as a whole (van Manen 1990).

Hermeneutical phenomenology as a philosophy of actions has the potential to not only challenge and change thought, but to make a difference in the world (van Manen 1997), in the case of this thesis by giving voice to those people with diabetes undertaking a specialised therapeutic recreation program. I believed, as Heidegger (1962) did, that it was impossible to bracket my own life experiences, values and assumptions – a conviction that my own life would enhance the study as the research process unfolded; a precept held in high regard within the hermeneutic approach.

As a result of my own experiences and consciousness and all that I brought to this research, the Heideggarian interpretative phenomenological approach was the framework that I deemed best fit with understanding the conceptualisation of the meaning people with diabetes attributed to being involved in a TR program and which resonated with me as a researcher. This was due to the fact that I sought to understand the participants’ experiences, but did not believe it was possible to fully suspend my presumptions about peoples’ experiences of diabetes and of exercise, given my professional expertise and experience.

As a researcher, I recognise these presumptions and am making them explicit so that the readers of the research can understand the strengths and limitations of my inquiry.
With this type of methodology, I may also use my own experiences to guide the research questions (Holloway & Todres 2005). I also want to emphasise the uniqueness and diversity of the participants that took part. By interpreting the participants’ voice, to capture the key aspects of the experience, phenomenological reduction occurs (van Manen 1990). Phenomenological reduction is coming to know the phenomena as it shows itself through the participants’ descriptions of lived experience. In this research, this occurred by listening to the participants’ voices and interpreting the essential features and structure of their experience/s (Holloway 2005). Reflection on raw experience by the person who had it, combined with a listening researcher, who is seeking to uncover concealed meanings and gain understanding, is powerful (Moustakas 1994). The role of active reflection and trying to grasp the meaning and essence articulated by the participant is challenging for the researcher. Therefore, the role of the researcher can be seen as implicit within phenomenological research, but needs to be made explicit. Creating structure from listening and active reflection is referred to as imaginative variation. Moustakas (1994) describes this as seeking

‘possible meanings through the utilization of imagination, varying the frames of reference, employing polarities and reversals, and approaching the phenomenon from divergent perspectives, different positions, roles or functions. The aim is to arrive at structural descriptions of an experience...how did the experience of the phenomenon come to be what it is?’

(Moustakas 1994, pp.97-98)
I came to this research and the process of imaginative variation with the perspective of my registered nurse self and my personal trainer self. These perspectives contributed to how I developed and designed the research. In addition I brought my ontological, epistemological and methodological views with me, so it was critical that I remained mindful of all these perspectives as my paradigm connected with the research process.

The interpretive paradigm was viewed as suitable for this research because of its potential to generate new understandings of complex multidimensional human phenomena, such as those investigated with this research (Laverty 2003; Polit & Beck 2014). What is sought is an understanding as opposed to facts, in this case, an understanding of the meaning people with diabetes attribute to being involved in a TR program. Essentially others’ *lived experiences* of the phenomenon (the TR program) are used to understand the fundamental aspects and elements of individuals’ reality (van Manen 1990; 1997; 2007).

Gadamer, in van Manen (1990, p.26), states “when we interpret the meaning of something we actually interpret an interpretation”. When considering this research, this is appropriate in the phenomenological approach that is used to look deeply within the stories of people with diabetes to inquire into the meaning of the TR program as they saw and experienced it. The research was conducted with the intent to privilege the voice of people with diabetes who had engaged in the TR program. What was examined was the meaning of the TR program for people with diabetes, *not* the aspects or the outcomes of the TR program.

The philosophical perspective of Heidegger informs this hermeneutical phenomenological study of the meaning of the TR program for people with diabetes
and guided all aspects of the research process including the methods of data collection and analysis, and the interpretation and discussion of findings. These components will now be examined in more detail in the next section of this chapter.

Methods

There are a number of procedural interpretations of phenomenological methods in the form of frameworks available. Just as there are many variants of phenomenological philosophy (Moran 2000), there are many ways it has been operationalised empirically in research. Max van Manen (1990) began promoting the use of phenomenological qualitative methods in educational and human science in the 1980s. van Manen (1990) developed his interest in the human sciences and phenomenology through his studies into pedagogy. According to Heidegger (1962), phenomenology differs from almost every other science in that it attempts to gain insightful descriptions of the way we experience the world reflectively, without classifying or defining it. van Manen (1997) considers phenomenology to be systematic, explicit, self-critical and intersubjective in its research endeavours.

These aspects sat well with me, particularly after reading van Manen’s (1990, P.9) dialogue about phenomenology being a “study of lived experience”, which echoes the work of Heidegger. This resonance was further enhanced when reading van Manen’s (1997, p.346) description of phenomenological understanding as “tension between what is unique and what is shared… between the reflective and the prereflective spheres of the lifeworld”. van Manen’s work in 2014 (p.15), highlights that “phenomenological research and writing reflects on and in
practice”. These aspects of van Manen’s philosophy had an extended effect on me and were reasons behind my choice of van Manen’s methodical structure.

van Manen’s Six Steps of Methodical Structure

van Manen (1990) outlines an approach to interpretive or hermeneutic phenomenological research, where the researcher recognises previous experience, knowledge and beliefs, and how these may influence the researcher in all phases of data collection, analysis and interpretation. van Manen (1990) outlines six dynamically interconnected activities, a methodical structure for hermeneutic phenomenological research (see Table 5), that although he acknowledges are sequential, there is dynamic movement and interplay between them throughout the research process. The six distinct activities or steps are not intended to provide a detailed process that a researcher should adhere to. In fact, van Manen (1990, p.34) is clear in advising against this strategy by stating that “although a certain order is implied in the methodological presentation this does not mean that one must proceed by executing and completing each step”. The steps allow some activities to be undertaken simultaneously whilst others may occur intermittently, they are general enough to enable flexibility or modification, dependent on the emergent data. An unfolding and infolding occurs as the data is read and re-read, considered and re-considered, examined and re-examined. There is no beginning or end, no top or bottom to this circular process.

Based on these concepts, I chose to use van Manen’s methodical structure to found this research on. van Manen (1990) six step methodical structure was chosen because it provides a comprehensive framework that incorporates hermeneutic
phenomenological reflection and hermeneutic phenomenological writing, which resonated with me and provides the rigour necessary for a doctoral study. The structure enables deep personal involvement within a human experience to bring out and describe the meanings and structures within that lived experience. In my case, this meant finding the meaning that people with diabetes ascribe to being involved in a specialised therapeutic recreation program. The steps that have been utilised for the research enable me as the researcher to acknowledge previous experiences, knowledge and beliefs, and how these may influence any or all phases of data collection, analysis and interpretation.

The van Manen Six Steps of Methodical Structure are outlined in Table 5.

**Table 5: Six Step Methodical Structure** (van Manen 1990)

<table>
<thead>
<tr>
<th>Step 1</th>
<th>• Turning to the nature of the lived experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>• Investigating experience as we live it</td>
</tr>
<tr>
<td>Step 3</td>
<td>• Reflecting on essential themes</td>
</tr>
<tr>
<td>Step 4</td>
<td>• The art of writing and rewriting</td>
</tr>
<tr>
<td>Step 5</td>
<td>• Maintaining a strong and oriented relation</td>
</tr>
<tr>
<td>Step 6</td>
<td>• Balancing the research context by considering parts and whole</td>
</tr>
</tbody>
</table>

van Manen (1990, p.30) determines that for hermeneutic phenomenological research to be pursued, it can be “seen as a dynamic interplay among six research activities”.

94
Following is an explanation of how van Manen’s Six Step Methodical Structure has been applied in analysing the data and answering the research question in this research. Within each of the steps, examples are provided so as to illustrate the analytic process that was undertaken. It is important to note that the examples provided do not represent the final findings.

**Step 1: Turning to the nature of lived experience**

Turning to the nature of lived experience (van Manen 1990 p.31) is also described by van Manen as “turning to a phenomenon which seriously interests us and commits us to the world” (van Manen 1990 p.30). This essentially involves formulating a research question and divulging presumptions and understandings, based on choosing a phenomenon of interest.

How does one choose a lived experience that warrants interest and “commits us to the world” (van Manen 1990 p.30)? I needed to be clear about what lived experience entailed before I could formulate a research question. van Manen explained it as “the breathing of meaning” (van Manen 1990 p.38), as an essence or quality only recognised retrospectively. Indeed as reflection occurs, memory is added to the lived experience and so it gains hermeneutical importance. This occurs through conversations, meditations and other ways of reflection so that meaning is ascribed to the phenomenon of the lived experience (van Manen 1990).

van Manen (1990) is clear in stating that until interest is identified, then true phenomenological questioning is not possible. There is a need to orient oneself to the phenomena to approach it with interest (van Manen 1990). Interest in
people with diabetes and TR programs has developed as a result of my longstanding professional experience in nursing, working with people with diabetes and working with people in exercise and health (personal training), across numerous exercise and health promotion programs. The benefit of being involved in exercise and health promotion programs for people with diabetes is well researched. Despite the evidence for physical (and mental) benefits of exercise, a lack of commitment and sustaining of an exercise regimen by people with diabetes is reported (Barrett et al. 2007; Jennings et al. 2013; Wisse et al. 2010).

After reading more on phenomenology, in particular the works of Heidegger and van Manen, I realised that the ‘essence’ of what I was seeking could not be explained by asking ‘why didn’t you engage?’ Practices could not be potentially changed or recommendations made unless I knew more about people with diabetes’ reasons for engagement, rather than why they did not engage. It has been demonstrated that change occurs when there is focus on strengths (Hood & Carruthers 2016; Wells et al. 2014). By exploring strengths rather than focusing on barriers and negative action and thought, change can be facilitated (Dixon, Lee & Ghaye 2016). A strengths-based focus (or lens) therefore enables future experiences of the program.

I therefore believed it was important to establish why people with diabetes did join TR programs such as Beat It, and what aspects held meaning for them so they continued to engage, so that future programs can be more effectively promoted and delivered, particularly since obesity and sedentary behaviours
(risk factors for diabetes) are rising in modern society (Lakerveld et al. 2013). If some understanding of the meaning ascribed, by people with diabetes, to a TR program like Beat It can be reached, then physical activity and potentially quality of life can be improved in a way that is meaningful to people with diabetes. I wanted to know what it was like for people with diabetes to be involved in a TR program involving exercise and health promotion. I sought to give rich description and evoke new and deeper understanding of the phenomenon of meaning that people with diabetes attribute to their engagement with a TR program.

van Manen (1990) describes this identification process as being essential before the formal development of a phenomenological question. The question must be clear in outlining the topic being explored. With the aspects above having been considered, I believed I had fulfilled this first step of turning to the nature of the lived experience, and was able to formulate the research question: What does it mean for people with diabetes to be part of a therapeutic recreation program involving exercise and health promotion?

Once the research question has been defined, the researcher lives the question as if becoming the question. van Manen (1990, p.42) is careful to remind the researcher that constant mindfulness of the question is required to ensure unwavering orientation “to the lived experience that makes it possible to ask the ‘what is it like’ question in the first place”.

van Manen (1990) suggests that a real problem with phenomenological inquiry is our knowledge of the phenomenon we are investigating and how this affects our interpretation of the nature of the phenomenon before we “come to grips with the
significance of the phenomenological question” (van Manen 1990 p.46). Our combined scientific and everyday knowledge supposes responses and themes anecdotally before data is acquired or analysed. Since I chose to use a Heideggarian interpretive framework, I recognised that I could not suspend or “bracket” my assumptions or simply forget them. I acknowledged that they would always tend to “creep back into my reflections” (van Manen 1990 p.47). Hence I acknowledged my experiences with people with diabetes engaging in exercise and health promotion programs but chose to distance assumptions and be mindful of their potential influence.

**Step 2: Investigating experience as we live it**

Investigating experience as we live it, and van Manen adds “rather than as we conceptualize it” (van Manen 1990 pp.30-31). Methods employed to investigate the lived experience in question are outlined, for example, using in-depth interviews for data collection. The phenomenon needs to be explored by searching for lived experiences that can provide a deeper understanding of the nature of the phenomenon. van Manen (1990 pp.31-32) suggests that lived experience must be investigated and not learned remotely through literature, discussions and other second-hand accounts. Hence, two types of interview were conducted; in-depth individual interviews and a focus group interview, which are appropriate ways of examining people’s unique experiences through conversations and observation.

This step correlates with the researcher exploring the phenomenon by examining the meaning of the lived experience to obtain a richer understanding of the nature of the phenomenon. van Manen (1990, p.54) is clear to point out that my own (as researcher) life experiences “are immediately accessible to me in a way that no one else’s is”. This
does not mean I needed to include an autobiographical account when presenting others’ lived experience phenomena. It does mean that I needed to be aware of the structure of my own experience of the phenomena, so as to provide clues for orientating myself to the phenomena. In this way, the experience of my clinical and professional background helped to orientate me to the phenomenon, ensuring that the phenomenological descriptions had a universal, intersubjective character (van Manen 1990, p.58).

Another important place to look for information was with an exploration of personal descriptions of the experience. van Manen (1990 p.62) talks of “borrowing” others experiences and reflections in order to achieve this, essentially to “allow us to become more experienced ourselves”. It is important to acknowledge assumptions and presuppositions again at this step and hold them at bay, thereby enabling the researcher not to take anything for granted about the phenomenon, but to focus on the lived experience for what it is (Cashin, Small & Solberg 2008; van Manen 1990).

Research participants

The selection of participants was the initial step in the data gathering process. Phenomenological inquiry is founded on human experience and how humans experience phenomena, it encompasses the holistic perspective and is the study of lived experience (Streubert & Carpenter, 2011). Participants in phenomenological research must experience the phenomena; for this research, this meant that participants had to have been a part of the TR program Beat It (Crotty 1996). Participants cannot be chosen randomly in order to achieve statistical generalisation, but need to be chosen purposively – selected due to their experience with a given
phenomena (Laverty 2003). Therefore, purposive sampling was appropriate to determine the primary participants.

The sample was based on the purpose of the study, that is, those who have had experiences relating to the phenomenon to be researched (Laverty 2003). The participants in this study were purposively selected due to their relationship with the phenomena under investigation. Purposive sampling is a strategy in which the researcher selects participants who will yield information necessary for the needs of the study (Polit & Beck 2014; Polgar & Thomas 2013). Thus, it was necessary to conduct research with a purposive sample of people with diabetes who had the experience of being a part of the TR program Beait It and who could therefore speak on the meaning of the program to them personally.

Recruitment of participants

With a phenomenological study, when it comes to recruiting participants, “the question the researcher needs to ask themselves is: do you have the experience that I am looking for?” (Englander 201, p.19). Therefore the researcher must find and select participants who reported having a specific experience of the phenomenon. Hence, a random sampling method, where each member of a population group has an equal chance of selection (Polgar & Thomas 2013), would not be appropriate.

With a random sample, the researcher would be working out if the person belonged to the population they were studying. However, the participant in a phenomenological study must belong to the population – they have to have lived experience of the phenomenon.
A non-randomised, convenience sample, where the participant group and the setting from where the participants were drawn was purposively selected and used to gain insights into the phenomenon explored. The sample size was not pre-determined. Sampling within the phenomenological framework is not about size, but about quality and richness of data, and hence the aim was to understand the phenomenon more deeply through the lived experience of the participant(s) (Holloway 2005; Hesse-Biber & Leavy 2011). With this thinking, human experience is always considered to be unique but can also be shared and therefore even studying one case of an experience can be greatly informative and bring awareness to the researcher (Holloway 2005; Mason 2010a). Phenomenological research addresses the gathering of reflective descriptions and then interpreting essences and making meaning, not the pursuance of participant numbers in an effort to generalise (Mason 2010b; Pereira 2012; van Manen 1997). As such, one participant may well be adequate to describe a phenomenon.

The actual sample size was dependent upon the number of responses to the invitation to meet with me and be interviewed. In 2013, twenty two people participated in the Beat It program. All were invited to participate in my research, sixteen people responded to say they would like to be involved. In the end, fifteen interviews occurred, as one participant had health issues that prevented her from being interviewed. This number of participants, however, enabled a significant generation of data so as to construe elements and themes for this research.

Participants were sourced from the Illawarra region, New South Wales, Australia. This region was chosen as I wanted to interview people personally at a place and time of
their choosing and given the financial and time limitations of a PhD this area was accessible. The result was that I drove within an hour to the venues in which I conducted each interview, which was both time efficient and financially viable.

I met with the local City Council Commercial Business Manager to discuss the research purpose and procedures and to confer the best method to raise awareness of my research study with potential participants. Participants from the most recent *Beat It* program, which concluded in December 2013, were identified and contacted via email and/or mail by a staff member from the Leisure Centre where the participant undertook the *Beat It* program. Research packs were distributed to people who met the inclusion criteria. This included an information sheet, written in plain English, detailing the proposed research (Appendix 3) and a consent form (Appendix 2). Potential participants were asked to contact the researcher if they wanted to be involved. An introductory letter explained that the study was totally independent from the *Beat It* program and that the potential participant was free to accept or decline the invitation to participate without affecting their relationship with the *Beat It* program or the Leisure Centre. I, as the researcher, only knew the identity of participants when they contacted me by mail, email or phone.

Employees of the Beaton Park and Lakeside Leisure Centres did not know which individuals had chosen to participate in the research. Sixteen participants contacted me to express their interest in being interviewed as part of my research study. One participant did not come to the arranged place for the interview. I contacted her to ensure her safety. She informed me that she did not want to leave the house and was going to see her doctor with regard to her ‘depressed’ state. This person chose not to
Fifteen participants were interviewed over an intensive two month period. Two males and thirteen females were interviewed with an age range of fifty six (56) to seventy three (73) and an average age of sixty four. The gender split is not suggestive of any particular reason, other than the fact that more women responded to my invitation to be involved in the research.

The selection criteria specified that the participants were people with diabetes who had participated in the Beat It program offered in the Illawarra, NSW, Australia (see Figure 5 below for location map). The Illawarra TR program Beat It was chosen due to time and resource constraints of doctoral research. The Beat It program was geographically located in the area where I as the researcher resided and was undertaking the doctoral study.
Inclusion criteria

Selection criteria included people who:

- Were over the age of eighteen

- Had been diagnosed with diabetes

- Had participated in the Beat It program in 2013

- Were not working

- Could converse in English

Participants were excluded from the study if they did not fit the inclusion criteria.

Collecting the data

Phenomenological research can employ a range of data collection methods, including interviews, focus groups, participant observation and personal texts (Finlay 2009). van Manen (1990) recommends that structure needs to be minimal, yet depth needs to be maximal. These aspects are influenced by time and the researcher’s ability to maintain focus and integrity on the research issues while averting redundant influences and diversions. They can however, be attained through personal interviews with participants where meaning is created through the human experience within a framework (Polgar & Thomas 2013). For my research, I considered that individual interviews were the most appropriate means of gathering information from participants initially. Once preliminary analysis of themes had occurred, I also
considered that a collaborative discussion in the form of a focus group to member check themes and theories would enhance and consolidate the elicited meaning articulated by participants. Focus groups provide opportunity for collaborative discussions so participants can “share their views of the way the description does or does not resonate with their experiences” (van Manen 1990, p.100) of previously collected data. This added richness to my data as I sought meaning from participants who then confirmed the interpretation of their own meaning.

Individual interviews

The data in phenomenological study are human experiences (van Manen 1990), and so in this study, individual, semi-structured, conversational, in-depth interviews occurred. van Manen (1990, p.53) on occasion also refers to these as conversational interviewing. These interviews, or conversations, served the dual purpose of collecting data to discover a rich, deep understanding of the phenomenon in question, along with creating dialogue between the researcher and the participants about the meaning of their experiences. The interviews were used as a means for exploring and gathering narratives (or stories) of lived experiences, and also to develop a conversational relationship with the participant about the meaning of the experience (Moustakas 1994). Reflection with the participant on the conversation also occurred (van Manen 1997). The aim of phenomenological research is to become deeply involved in the data and thus the phenomenon (Armour, Rivaux & Bell 2009). This is possible when participants are able to ‘reflect, focus, intuit and describe’ (Crotty 1996 p.172). All participants that were interviewed were able to reflect on questions asked, make sense of their understanding and interpretation and have articulate conversations. I
conducted fifteen interviews, the reason for this is outlined later.

Hermeneutic phenomenology endorses the use of interviewing participants in either an unstructured, semi-structured conversational or one-on-one manner (Crotty, 1996; Dowling, 2007). This enables the researcher to explore and gather accounts of participants’ lived experiences in their own words, facilitate conversations and reflect actively with the participant about the meaning of their lived experiences (van Manen 1990; Moustakas 1994).

Prior to conducting each interview, rapport with the participant was established. This included disclosing to them my professional backgrounds. All participants interviewed commented that they could see why I would have interest in the program and in their perspectives. It is crucial to express a sense of interest and concern for the participant, so that they feel comfortable and therefore will be more likely to reveal information (Streubert & Carpenter 2011). I treated participants as individuals and was genuine in my approach to establishing rapport with them.

A ‘grand tour’ question was used to open the conversation (Brenner 2006), inviting the participant to give a broad description of their understanding of the topic under investigation (Streubert & Carpenter 2011). That is, an invitation to the participant to express what had attracted them to join the TR program and then what it meant for them to be involved in it: “Can you tell me how you got involved in the Beat It program” and once that was explored “What did participating in the program mean for you?”. This allowed the phenomenon of interest to be introduced early and remain central to the interview. The participant could then choose to engage with the aspect of the question they saw as important. More focused questions were then asked based
on the participant’s response to the initial overarching question.

The interviews were conversational and like any conversation, moved back and forth between the interviewer and the participant, with the latter leading most of the conversation. I sought clarification at times and provided prompts when the participant was not as talkative, for example, “Can you tell me more about that”, “How did that make you feel?” or “You said..., I’m interested to hear more about ...”. Table 6 outlines examples of interview questions and additional prompts that were used.

Table 6: Interview questions and prompts

<table>
<thead>
<tr>
<th>Questions</th>
<th>Additional prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td>What did it mean for you to be involved in the Beat It program?</td>
<td>Can you tell me more about that?</td>
</tr>
<tr>
<td>Tell me about the reason(s) you decided to be involved in Beat It</td>
<td>How did that make you feel?</td>
</tr>
<tr>
<td>What was the purpose of the program overall for you?</td>
<td>What was your experience of that?</td>
</tr>
<tr>
<td>What did it mean for you to be involved in a program involving exercise</td>
<td>I’m interested to hear more about...</td>
</tr>
<tr>
<td>and health promotion?</td>
<td></td>
</tr>
<tr>
<td>What do you value from being a part of this program? Why?</td>
<td></td>
</tr>
<tr>
<td>Is there anything you would change about the program to make it more</td>
<td></td>
</tr>
<tr>
<td>meaningful for you?</td>
<td></td>
</tr>
<tr>
<td>What is the major thing you got from participating in the program?</td>
<td></td>
</tr>
</tbody>
</table>

van Manen (1990) purports that numerous questions are not required to elicit conversation, rather silence can be a prompt in itself for the participant to further reflect and continue with their response. I used silence as a strategy to encourage
participants to reflect and consider their next thought. Clarification may be needed at times and van Manen suggests that phrases like those mentioned above are appropriate for triggering the participant to continue. I also employed active listening, where I listened for intent, feeling(s) and content. This strategy was invaluable to the process as it allowed me to revisit or clarify points raised by participants (Weger, Bell & Robinson 2014; Guion, Diehl & McDonald 2011). Active listening allowed me to take cues from the participants as to when they were ready for the next question. I did not vocalise any leading or directive statements or questions and I offered participants the opportunity to provide any further information after the final question.

Another strategy I used to elicit clarity from the participants was the “think aloud” strategy (McAllister 2011, p.52) where participants were encouraged to verbalise what they were thinking as a way of actively reflecting and making sense of their thoughts.

Individual interviews ensure participants have the opportunity to speak about their lived experience and disclose the meaning they attribute to engaging in a TR program. Undertaking the interviews using open-ended questions in a semi-structured, conversational manner was valuable, as it enabled dialogue to be adjusted and modified prospectively as participants revealed their responses (Grbich 2013). This interview approach afforded greater depth and breadth of data to be collected from participants’ free responses (Hesse-Biber & Leavy 2011; LoBiondo-Wood & Haber 2013) and enabled me as the researcher space to probe further or explore aspects that were of interest and value to the research question (Morse & Field 1996; Polit & Beck 2014).
All participants I interviewed were able to talk freely about the meaning of the phenomena – the meaning attributed to their experiences with the TR program. In fact, they all appeared pleased to be able to speak about their experience and what it meant to them. Some even commented that ‘it’s nice to be asked’. The principle was to ensure that the process remained focused on revealing something about the nature of the phenomena in question (van Manen 1990; van Manen, Higgins & van der Riet 2016). The interview was brought to a close when I sensed the participant had exhausted their reflections and thoughts on the conversation. Interviews ranged in length from 25 minutes through to 55 minutes. The average length of interview was 40 minutes.

As the researcher, I conducted face-to-face interviews with all fifteen participants. Six of the fifteen interviews were carried out in the participant’s home, at their invitation. Another six interviews were performed in a private room at the Leisure Centre, two interviews were held at the University of Wollongong and one interview transpired in a coffee shop.

Interviews with participants were all conducted at a time and place that was suitable for them, with no financial or other reward for participation. The interviews were audio recorded and transcribed verbatim to ensure accuracy and completeness. Data were de-identified and participants were notified that they could withdraw from the study up until the point of de-identification and merging of data. None chose to withdraw.

The use of a journal helped me reflect and interpret my own experience as a novice researcher (Moran 2000) as I conducted and considered the interviews. The journal
helped me to be reflexive, as I referred to it to stimulate and deepen my understanding of the research processes. I used this method to make links to literature on methodology and my understanding (as it evolved) of qualitative, phenomenological research throughout the process. Using this, I began informal analysis following the first interview.

Undertaking personal interviews is time consuming and labour intensive, but needs to continue until the researcher develops a sense that no new information is emerging or saturation is reached (Crotty 1996; Hesse-Biber & Leavy 2011). In phenomenological research, however, there is no absolute saturation point in terms of phenomenological meaning, as meaning continues to emerge and is essentially “bottomless” (van Manen, Higgins & van der Riet 2016, p.5).

Transcripts were prepared by personally transcribing all recorded conversations following the interviews, and critical conversations with my supervisors happened continuously to discuss the emerging themes. This enabled me to understand the information gathered, to evolve interview probes for future interviews, and conceptualise a process for analysing the data concurrently as I conducted more interviews. Formal analysis commenced after all completion of all the interviews, as I was undertaking steps along the way to glean the experiences and meaning from participants.

**Step 3: Reflecting on essential themes**

The third step, Reflecting on essential themes, also expressed by van Manen as “reflecting on the essential themes which characterize the phenomenon” (van Manen 1990 pp.30, 32) is centred on hermeneutic phenomenological reflection. This step
emphasises the value of reflectively observing and analysing phenomenon that can
tend to be obscure. A reflective process helps the researcher to make explicit the
structure and meaning of the lived experience, to gain insight into the essence of the
phenomenon (van Manen 1990). This step is about reflecting on the themes identified
from the interviews and undertaking to highlight the essential meaning of the lived
experience in question. van Manen (1990 p.32) asserts that there is “a distinction
between appearance and essence”, that which we tend to see as everyday and that
which is obscure. Phenomenological research allows the obscure to be brought into
focus. With this, the researcher conducts thematic analysis or the formulation of the
thematic sense or meaning.

This stage of the analysis reflectively questions what it actually is that comprises the
nature of the lived experience being studied. This enables consciousness to be
revealed and themes to be uncovered. Themes are a focus of meaning; they are
simplifications, descriptions of aspects of phenomena. Themes in a phenomenological
sense are concerned with exploring meaningful structures as opposed to repetitive

Capturing the essence of the phenomena is the purpose of phenomenological
reflection. Through reflection, individuals develop a consciousness around their lived
experience that van Manen (1990) describes as a process of “appropriating, of
clarifying, and of making explicit the structure of meaning of the lived experience”
(p.77). This suggests that a pre-reflective understanding of lived experience is different
to one that is reflected upon. This reflective understanding is not straightforward or
simplistic, but has multiple layers and dimensions that are open to explore and analyse.

For the themes, or “structures of experience” (van Manen 1990 p.79) to be determined the following process occurred. All interviews, were audio recorded and then transcribed verbatim to form a narrative of the participants’ experiences and how they ascribed meaning to their experience. van Manen (1990) outlines that when analysing data and framing themes, there really are no rules, but rather, an arena for the researcher to see meaning as it emerges for them. The transcriptions formed a narrative of each participants experience with the TR program Beat It. Within the narratives were the participants’ everyday lived experience, namely, how they ascribed meaning to being involved in the TR program and the impact it had on them.

As I listened and re-listened to each recording and reading and re-reading each transcript, I made notes in a reflective journal about my questioning techniques, verbal and non-verbal responses, as well as my personal thoughts, feelings and ideas regarding the participants’ stories and words. I kept this journal as part of my audit trail for the study, which helped facilitate a reflexive approach (Anney 2014). While these observations were not data in the formal sense, they were of tremendous value in the process of interpretation and analysis of participant data. The notes I had taken served as a reminder of earlier thought processes, initial impressions of concepts (van Manen 1997), and as a cue to the continued development of thought involved in producing the thesis. An example of this is seen below in Figure 6.
Figure 6: Screen shot taken from journal

Coding

As data were collected and transcribed, coding occurred to capture themes and
concepts, and determine essence(s). I particularly paid attention to remaining true to my own insights as I analysed the data so, as Holloway (2005) would suggest, it was not so much a formal process but an evolving understanding. I immersed myself in the data to become familiar with the depth and breadth of the data. I conducted all collection, transcription and analysis of data.

An important aspect of coding is recognising “when an issue raised is a code” (Hennink, Hutter & Bailey 2011 p.220) and when it is worthy of being included in the analysis. Hennink, Hutter and Bailey (2011 p.220) claim an issue must be demonstrated to be “valid, robust and useful” for it to be included as a code. This is achieved by ascertaining the level of importance placed on an issue by a participant(s) and by determining if it is repeated in a number of different interviews, hence ensuring meaning and not just a passing comment. Repetition, suggests Silverman (2011), is an indication that a dominant theme is emerging. The focus group also served to reiterate the importance of themes.

Initially I reflected on all the interviews after undertaking them and noted key words and phrases, highlighting them and pasting them into NVivo™. This initial coding process involved extracting and tabulating words and statements from participants into groups under key words, then elements. What followed was that the anecdotal themes emerged through my reflection. I was able to use these pre-determined themes when formally analysing the data by allocating statements made by participants during the interviews (Creswell 2009). My main method of coding occurred as themes emerged from the transcriptions. I studied the transcripts and was
very familiar with the material, and so was able to note themes, concepts and ideas (Polgar & Thomas 2013). van Manen (1990, p.90) outlines themes as:

“The stars that make up our universes of meaning we live through. By the light of these themes can we navigate and explore such universes. Themes have phenomenological power when they allow us to proceed with phenomenological descriptions.”

A theme, advocates van Manen (1990), is something that appears in the text and is understood as a structure of experience. Hence, the themes that originated denoted an element of the lived experience of the phenomenon.

Grbich (2013) suggest that codes and themes are essentially interchangeable terms in the analysis of this research. Within this thesis I use coding to refer to grouping and labeling; or identification of themes through labeling. When coding the data, I chose to code the following (Grbich 2013 p.262):

- Themes
- Theoretical concepts
- Key words
- Participant values, interpretations, relationships and states of mind
- Events and key situations reported by participants
- My own views
- Metaphors and similar language
The NVivo 10™ data management system was used to create nodes and assist in developing themes and categories (Bazeley & Jackson 2013), and not for any other purpose. This is discussed in greater detail in the following section.

**Qualitative research software for data management (NVivo™)**

There are a number of qualitative research software programs available to assist in storing data and providing tools to enable that data to be managed when preparing for analysis. NVivo™ is one such program and the program I have chosen to use in the management of data in my research.

NVivo™ was developed by QSR International as a tool to assist researchers to analyse their qualitative data. The program was not intended to replace learning from data, but rather to increase the focus, efficiency and success of that learning, and enable the researcher to examine the meaning evident from the data (Bazeley & Jackson 2013; QSR-International 2014).

In my research I stored my data using the NVivo™ computer software program (Version 10). This was used to support and facilitate the process of data coding analysis. Using this program assisted in the tasks commonly associated with analysis of qualitative data such as margin notes on transcripts, and cutting and pasting blocks of text. This process did not take away from reading all transcripts in depth in hard copy as well as in the document view section of NVivo™. Document folders were set up, including digital recordings of interviews; interview transcripts; summary notes of interview transcripts; and memos and notes. An example of this is seen below in Figure 7.
Figure 7: Screen shot taken from NVivo™

NVivo™ also enabled searching and retrieval of quotes and information from within the coded documents to be more manageable. By reviewing coding and source data on a singled screen, I was able to refine and identify categories more easily through the use of nodes. Coding in this way triggered me to consider relationships between categories and sub-categories and could be reviewed on a single screen thereby managing the process again.

Coding typically moves through two main stages according to Bazeley and Jackson (2013). These are initial identification and labeling, as seen above, and then
refinement and interpretation. This is done in order to develop analytic groups. The analytic work lay in establishing and linking the elements and themes, and coding was a process that allowed me to identify meaningful data for interpretation (van Manen 1990).

Focus group

van Manen (1990, p.100) considers that “collaborative discussions or hermeneutic conversations on the themes” is helpful for deeper comprehension and understanding of themes. This occurred via focus group interview. van Manen (1990, p.100) advocates for participants to “share their views of the way the description does or does not resonate with their own experiences”. Hermeneutic phenomenology endorses the use of focus groups (Crotty 1996; Dowling 2007), since data is based on human experiences (van Manen 1990) and focus groups enable sharing of experiences (Silverman 2011). A focus group is fundamentally different to an individual interview since data are both generated and reviewed collectively and collaboratively in a dynamic forum (Hesse-Biber & Leavy 2011).

On this basis, a focus group is therefore an appropriate means of data collection and was also used to confirm findings and seek transparency of process. Once I had been able to ascertain themes and theories, I invited all those I had previously interviewed to be a part of the focus group to see if the findings were representative of, or resonated with, their ascribed meaning. I sent to participants by post an introductory letter outlining the purpose and commitment required (Appendix 4), along with a participant information sheet (Appendix 5) and consent form (Appendix 6). Those who
were able to attend notified me by email or text message. Seven (7) participants agreed to be a part of the focus group.

The focus group enabled participants to reflect on, consider and validate themes I had identified from analysis of the interview transcripts. Participants were given time to converse about the themes amongst themselves and reflect upon whether these accurately echoed their experiences. The focus group narrative was audio recorded and transcribed verbatim for analysis.

A focus group is facilitated by someone who is able to keep discussion relevant and ensure all members have a voice, it is crucial in ensuring the purpose of the research remains central to discussion (Polit & Beck 2014). As the researcher who had themed the individual interviews, I also facilitated the focus group. I found this aspect of facilitation challenging at times, as the participants were pleased to see each and wanted to catch up, and because group humour emerged that was not always related to the discussion. Hennink, Hutter and Bailey (2011) outline a funnel approach to discussion within a focus group to assist the conversation to be beneficial and centred on the research. This funnel approach is outlined below in Figure 8.
The use of this funnel design ensured the focus group members were versed in the purpose of the group and felt safe and at ease. After welcoming the participants, I gave an overview of how the focus group would run, explaining that the themes that had emerged from analysis of their interviews would be presented for them to discuss, confirm or disagree as they saw fit. Introductory questions allowed me to warm the group into the conversation around the themes from analysis. This then transitioned to discussion around the key themes. I facilitated the group using broad-brush phrases and actively encouraged group members to interact and converse with each other (Silverman 2011). Examples that were used are outlined in Table 7 below.
Table 7: Focus group questions, phrases and prompts

<table>
<thead>
<tr>
<th>Questions / Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>A theme emerged around the importance of social connectedness with others in the</td>
</tr>
<tr>
<td>Beat It program. Do you think this theme represents your experience? Tell me</td>
</tr>
<tr>
<td>about your social experience of being a part of Beat It</td>
</tr>
<tr>
<td>The instructor was identified as an important part of the program to contributing</td>
</tr>
<tr>
<td>to meaning for participants in interviews. Do you think this theme represents your</td>
</tr>
<tr>
<td>experience? Can you tell me how the instructor influenced your experience of the</td>
</tr>
<tr>
<td>Beat It program</td>
</tr>
<tr>
<td>Commitment arose as a theme from the interviews. Do you think this theme</td>
</tr>
<tr>
<td>represents your experience? Do you agree that commitment to be involved in the</td>
</tr>
<tr>
<td>Beat It program was meaningful to you?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can you tell me more about that?</td>
</tr>
<tr>
<td>How? Why do you think that occurred?</td>
</tr>
<tr>
<td>What was your experience of that?</td>
</tr>
<tr>
<td>I’m interested to hear more about....</td>
</tr>
<tr>
<td>Do others agree with what Joe Bloggs has said? (Why? Why not?)</td>
</tr>
</tbody>
</table>

To close the group, a summary of the conversation occurred and was sounded to the group to determine if this resonated with them. Finally, I checked with members to ensure they had no further questions, clarifications or additional information they wanted to add.

Focus groups can enhance data collected in interviews as they are dynamic and promote synergism (Denzin & Lincoln 2011). They benefit from the rich and complex nature of group dynamics, augmenting social interactions, which can prompt memories, positions, practices, and desires (Denzin & Lincoln 2011; Hennink, Hutter & Bailey 2011; Polit & Beck 2014). The focus group allows the group members to take ownership of the research process as they stipulate the perspectives and correlate
themes amongst themselves (Denzin & Lincoln 2011). There is a sense of vulnerability with this process however (Denzin & Lincoln 2011; Hesse-Biber & Leavy 2011; Polit & Beck 2014; Streubert & Carpenter 2011). Hence I needed to be mindful of this vulnerability as I facilitated the group. I noted agreement and disagreement and tried to help the members reflect on what they were saying, to ensure meaning was truly represented (Hesse-Biber & Leavy 2011), and that members felt comfortable with all responses and comments (Polit & Beck 2014).

An aspect of focus groups that is reported in literature is that of groupthink, where some group members can influence others to agree with them and bias the discussion (Streubert & Carpenter 2011). It is reported that a good facilitator can overcome this potential for groupthink if they are attentive to its potential (Hesse-Biber & Leavy 2011; Streubert & Carpenter 2011). I was aware of this element prior to conducting the focus group and maintained vigilance throughout the time to ensure all voices were heard, sometimes by actively encouraging people to express their opinion or make a comment. I was mindful when analysing the focus group data that although it serves its purpose well to member check, it is not equivalent to the sum total of the individual interviews (Hesse-Biber & Leavy 2011).

The focus group was held in a private room at the Leisure Centre where the Beat It program had been conducted. This location was chosen for familiarity for participants and ease of access for those travelling by private or by public transport. The focus group discussion lasted for 66 minutes and was audio recorded and transcribed verbatim to ensure accuracy and completeness. Data were de-identified and participants were notified that they could withdraw from the study up until the point
of de-identification and merging of data. None chose to withdraw.

Data Analysis

In keeping with the methodology adopted in this research, the data analysis methods were developed from Heidegger’s phenomenological and hermeneutic principles. Heidegger introduced interpretation as both a theory and method of phenomenology (Heidegger 1962, p.61). Heidegger denoted phenomenology (in seeking to understand the meaning of Being) as “hermeneutic”, describing it as an interpretive, not descriptive, process (Heidegger 1962, p. 62). Hence van Manen’s interpretive methods were deemed to be intricately linked to Heidegger’s work and ontology and thus an appropriate way to analyse the data from both individual interviews and the focus group that emanated from this study.

Prior to analysis I again familiarised myself with the data through the transcription of interviews. The interviews were the primary source of data collected and hence were the focus of analysis (Polit & Beck 2014). The focus group interview was primarily intended as a means of member checking but there were insights gleaned from this data and so it became an additional source of data that contributed to the findings and subsequent discussion.

Typically, Heideggerian phenomenological analysis encompasses the researcher assuming a phenomenological attitude, reading the whole data for meaning and working closely with the detail, so as to transform the everyday into language that reflects the essential structure of an experience (Giorgi 2000). Throughout all stages of data analysis, there was ongoing interpretation of the research text and the
phenomenon of meaning attributed by the people with diabetes in relation to their experiences of being a part of the TR program.

In the analysis, the researcher “composes linguistic transformations” (van Manen 1990, p.96) to create a process of explicating the phenomena. To remain true to this, I studied and deeply immersed myself by reflecting on the transcribed narratives to determine the incidental and essential themes prior to data analysis. Each transcript was read and re-read several times whilst listening to the matching audio to assist in gleaning the experiences of the participants and to reflect on possible themes emerging from the data. I also referred to my journal for memos and notes I had documented. Bringing meaning to the data requires the researcher to be immersed in the data. It requires commitment to maintaining the integrity and individuality of each participant’s lived experience, while permitting an understanding of the phenomenon under investigation (Streubert & Carpenter 2011).

Data analysis was thematic, which conforms to many qualitative approaches to exploring data. van Manen (1990) was a key source of guidance for the thematic data analysis undertaken in this study. In this approach, the researcher is interested in discovering the phenomenological themes that make up the experiential structure of a lived phenomenon. van Manen (1990, p.90) compares phenomenological themes to “knots in the web of our experiences, around which certain lived experiences are spun and thus lived as meaningful wholes”. The collection of themes led to a rich depiction of the phenomena.

Thematic analysis develops through examining transcripts in whole and in parts. This, says Benner (1994), is an important process in interpreting emerging themes.
to shift focus from the participants’ lens to a more distanced one where perspective can be achieved. By doing this, I attempted to define the essence, or a more enlightened, deeper understanding of the meaning of the phenomenon as the research outcome (van Manen, Higgins & van der Riet 2016). Hence, I anticipated that a new, deeper understanding of the person with diabetes experience of being involved in a TR program involving exercise and health promotion would come about.

There are various ways to approach data analysis; the process chosen for the thematic analysis of this research data was van Manen’s method for isolating thematic statements. Although van Manen (1990) is clear that thematic analysis should not be rule bound, he gives insight and clarity into how best to identify themes through a series of techniques. The researcher is guided in the process of thematic analysis as a means of uncovering and thereby isolating thematic aspects of the lived experience descriptions. Adopting van Manen’s approach ensured research design consistency and provided a clear and logical approach to the phenomenological data analysis.

Themes, which were inductively uncovered from the data, essentially referred to any element that occurred repeatedly in the data (van Manen 1990). van Manen (1990) acknowledges that lived experience descriptions (found in multiple forms) are appropriate sources for uncovering thematic aspects of the phenomenon they describe. He outlines three approaches for uncovering or isolating thematic aspects of the participants’ descriptions of the experience: holistic, selective or detailed reading approach (Polit & Beck 2014; van Manen 1990). All three approaches are important for
identifying essential themes and meanings around the experience or phenomenon that can be reflected upon and then interpreted (Polit & Beck 2014; van Manen 1990). I chose to use all three approaches when analysing the data in this research study.

Utilising the holistic approach, van Manen (1990) asks the researcher to ponder the phrase that may capture the central meaning or main implication of the text as a whole. Considering this, I ensured that the transcripts were transcribed as close as possible following the interview so that the time between the two were minimised. Following transcription, I began reading the interview in its complete form several times. I viewed the text as a whole and tried to summarise the meaning that was or may be evident. van Manen (1990) advocates that the researcher continually ask themselves the question – what critical phrase might encapsulate the fundamental meaning or main significance of the text as a whole? On reading and re-reading, I continuously attempted to be questioning what the big picture meaning was or could possibly be. This process was helpful in developing a sense of the experience as a whole for each of the participants.

Using the selective reading approach, van Manen (1990) asks the researcher to look at which statements were the most revealing about the phenomenon in question. After multiple readings of the data, I searched and examined the data in order to ascertain a statement or phrase that seemed particularly essential or revealing about the participant’s experience of the TR program and the meaning they ascribed to being involved in it.

van Manen (1990) proposes in the detailed reading approach, also known as the line-by-line approach, that the researcher look at each sentence or group of sentences in
an attempt to unveil what it reveals about the phenomenon or experience being described. Every sentence was analysed to look for some revelation about the phenomenon or experience being described. Whilst reading and re-reading and listening to the audio file, I scoured sentences searching for meaning in the narratives. These were then précised to become a coding guide.

Using all three approaches helped me to identify themes from the interviews that were confirmed by the focus group, and I then endeavoured to capture the essential meaning or essence that people with diabetes attributed to being involved in a TR program. I also had my supervisors, who have extensive experience in undertaking qualitative research, including phenomenology, complete simultaneous independent theming for comparative measures and to ensure consistency and veracity of meaning. We all agreed on the meanings, identified as themes, which then informed the findings of this study.

**Step 4: The art of writing and rewriting**

The art of writing and rewriting (van Manen 1990 p.32) is important as it describes the phenomenon in this process. Through the process of writing, the purpose is to make visible the feelings, thoughts and attitudes of participants. van Manen believed that phenomenological writing involves the confluence of language and thoughts, arguing that they are difficult to separate. The application of both language and thoughts through writing about a phenomenon assists in elucidating the phenomenon itself. van Manen (1990) considered that this step is the most important skill possessed by a phenomenological researcher.
van Manen (1990, p.125) states that “writing fixes thought on paper”. This is an important element of the analysis as it helps to externalise what is happening internally through reflection and it promotes others’ understanding. In this way, writing also distances us from the lived experience and so enables the essential structures (themes) to be made more clear through a broader global perspective. Writing, in the phenomenological sense, occurs as two distinct operations – practical and reflective. Practical writing focuses on method, technique, form and style, while reflective writing involves un-hiding truth, finding limits of language, interpreting narrative and the phenomenological meaning (van Manen 1990).

Re-writing is an essential aspect of phenomenology – the process of back and forth questioning develops deeper thinking, reflection and cogniscance (van Manen 1990). This cannot be achieved in one session of writing, it needs to be an ongoing reflexive activity (van Manen 2007).

Through the process of writing and rewriting, my intention in this study was to make visible the feelings, thoughts and attitudes of the participants, staying true to the aim of phenomenological research. Anecdotes or stories can be used to highlight a point that may be difficult for the researcher to explain, as has been done in the Findings chapter. Anecdotes are not “merely a literary embellishment” (van Manen 1990, p.120), but serve to provide material on which reflection is possible.

As the cycles of writing and rewriting continued through this research process, there was constant revising and refining of thought, thematic reflection and description. This analysis was complemented by the journal, which captured styled, reflexive observations documented during data collection and when completing the analytic
van Manen (1990) is clear that writing does not indicate the final stage of research, but instead is an essential part of the hermeneutic phenomenological investigation. Analysis therefore, entailed constant writing and re-writing of reflections on the parts and the whole. Each analysis of the participant interviews, in conjunction with my reflections, was written and re-written several times. Hence, the themes were derived in a way of creating structure and making sense of the phenomenon rather than a result of coding alone.

**Step 5: Maintaining a strong and oriented relation**

Maintaining a strong and orientated relation, also described by van Manen as “maintaining a strong and oriented pedagogical relation to the phenomenon” (van Manen 1990 pp.30, 33), is crucial so the researcher maintains integrity to and focus on the research question.

Throughout the study, I remained focused on the research question. Genuine interest helped me to persist through the intense time demands of transcribing, interpreting, re-interpreting and analysing data. Since phenomenology is “a philosophy of action always in a personal and situated sense” (van Manen 1990 p.154), it is essential that reflection and analysis occurs through personal engagement which must be genuine. Throughout the study I aimed to keep the strongest possible interpretation of the phenomenon and write in a way that represented the rich and full meaning elicited from the participants.

Phenomenology requires considered reflection so that the researcher can come into a
more direct state of contact with the phenomenon (van Manen 1990). When reading each text and working my way through the three reading approaches, I spent time reflecting on the emerging picture of the meaning that the people with diabetes attributed to their decisions to engage with and remain engaged in TR programs involving exercise and health promotion. This analysis was augmented with the journal-styled reflexive observations documented throughout the data collection and analysis.

By maintaining my orientation to the phenomena through systems such as my reflective journal and frequent contact with my research supervisors, I was able to maintain concentration on the task at hand. This also helped me avoid loose speculations. The ongoing process of reflexive writing was necessary to help in maintaining a conscious awareness of my pre-understandings of the phenomenon and how the memories of such experiences could possibly influence the research process (van Manen 1990).

**Step 6: Balancing the research context by considering the parts and whole**

Balancing the research context by considering parts and whole (van Manen 1990 p.33) involves the researcher monitoring the big picture and ensuring that the elements of the research contribute significantly to the whole. This suggests researchers thoughtfully consider their approach to writing so it reflects the nature of the phenomenon being explored. This type of research can have “transformative effect” on the researcher herself, as it is a time of deep learning, heightened perceptiveness and increased thoughtfulness (van Manen 1990, p.163). Despite the positive aspects of this personal transformation, I had to ensure I allowed the text to speak in the “hope
that the reader will be affected by it” (van Manen 1997, p.364).

Although phenomenology has no set format for documenting the emergent themes, van Manen (1990 p.168) recommends choosing a structure to “organize one’s writing” so that it is coherent, reflects the nature of the phenomenon and assists in evolving the relationship between the parts and the whole in the researcher’s mind.

Throughout my analysis of data, I constantly reminded myself of what I was focusing on, thus finding the balance between what the participants were revealing and the intention of the research question. Consequently, the final phenomenological text needed to be concretely part of the life world of the participants, be vivid and evocative, and develop intensity and thickness in the descriptions and discussions. To do this, I chose to use the thematic method (van Manen 1997), where the text is divided into sections representing themes. These individual themes (outlined in the Findings chapter) together represent the complete ascribed meaning of people with diabetes undertaking a TR program. The participants who chose to be a part of the focus group confirmed these themes. In considering the parts, I tried to continually look at the whole – at how each of the parts contributed to the whole. By doing this, no one theme or meaning stayed static or fixed. As I attempted to uncover the experience, I found visualisation helpful to see how the whole was comprised by the parts and vice versa.

van Manen (1990) also advises consideration of ethical responsibilities – to self and participants. The process of phenomenological research can have certain effects on participants, such as anxiety, discomfort and self-doubt (van Manen 1990). Ethical considerations are discussed below.
Ethical considerations

LoBiondo-Wood and Haber (2013) identify three ethical principles that should guide all research – respect for persons, beneficence, and justice. Respect for persons, allows participants the right to self-determination and freedom of choice in participation (NHMRC, ARC & AVCC 2013; LoBiondo-Wood & Haber 2013). Beneficence is articulated as obligation to do no harm and ensure participants gain benefit if possible (LoBiondo-Wood & Haber 2013). The final principle of justice guarantees participants will be treated fairly with no impositions placed on them during the research (LoBiondo-Wood & Haber 2013). These principles were upheld during all stages of this hermeneutical study on the meaning of the TR program *Beat It* to people with diabetes.

Formal, written ethics approval to conduct this research was acquired from the University of Wollongong Human Research Ethics Committee (HREC); New South Wales, Australia. The approval number is HE14/057 (see Appendix 1).

Participants were provided with a plain language information sheet outlining the nature and purpose of the research, including the contact details of the research supervisors and the ethics officer. Participants were able to ask any questions regarding the study and were then asked to sign a consent form (Appendix 2). They were informed of their right to participate or refuse to participate in the research and that they could withdraw from the study at any time.

Privacy and confidentiality was guaranteed throughout the study by allocating a pseudonym to each participant and making sure their names did not come in contact with the data, with any identifying details being removed. All data collected was kept
confidential, and stored in a locked cabinet, in strict accord with the code of research conduct outlined in the Australian National Statement on Ethical Conduct in Human Research 2007 (updated May 2013) (NHMRC, ARC & AVCC 2013).

An identified ethical concern highlighted in the literature is that of potential distress being experienced by participants (Silverman 2011; Polit & Beck 2014). The qualitative interview format used in the study required participants to discuss the meaning of the TR program to them. As the information sought was of a personal nature, there was a possible risk of participant distress, for example in recalling an unpleasant event. Ethical issues that could potentially have occurred for participants were addressed in the participant information sheet (PIS) (Appendix 3), with every effort made to ensure that the participants were not put at risk of emotional harm. For example, the conversational style of the interview allowed the participants to control their response to questions and I did not pursue any conversations that might have been upsetting to the participant. They were assured that they could cease the interview at any time. Appropriate referral was outlined as available if necessary, in the PIS:

*Apart from the 60 minutes of your time for the interview we can foresee no risks for you. It is important to note that any identifiable data will be de-identified before being used in the research and the researcher Rebekkah Middleton has no dependent relationship with the participants involved in this research. If you do become distressed as a result of participating in this research, help is available from Lifeline 13 11 14 or the UoW Student Counselling service on 4221 3445 or in person at the Counselling Service on Level 3, Building 11. Your involvement in the study is voluntary and you may withdraw your participation from the study at any time. Refusal to participate or withdrawal from the study will not affect your relationship with the University of Wollongong, the School of Nursing & Midwifery, Beaton Park Leisure Centre or Lakeside Leisure Centre.*

Prior to facilitating the interviews I had considered what my action would be if a participant became upset during the interview. I planned on stopping the recording...
and spending time with the participant responding to their distress. I would then have referred them to the counselling service outlined on the information sheet. Thankfully, I did not have to action this plan as none of the participants became distressed during or after their interview.

The purpose of the six steps described above was to assist the research process in order to gain a deeper understanding of the nature of meaning of our everyday experiences. This process was a constant flow for me as I carried out the study, all six steps flowed one into the other and, at times, spiralled backwards. On reflection, some of these steps occurred simultaneously. In an effort to apply the apposite phenomenological depth, there was no beginning or end, no top or bottom; rather the process was circular.

**Trustworthiness of the data**

In qualitative research quality is determined by the trustworthiness of the process of inquiry (Lincoln & Guba 1985; LoBiondo-Wood & Haber 2013; Streubert & Carpenter 2011). That is, a demonstration of quality by presenting accurately the participants experiences (Streubert & Carpenter 2011). Terminology in quantitative research reflects the processes of the research, and so validity, generalisability and reliability are sought in that type of research (Denzin & Lincoln 2003).

The goal of hermeneutic phenomenology is to increase understanding of the multiple interpretations of the meaning of human experience (van Manen 1990). Phenomenology seeks to understand human behaviour through personal, human
experiences, which cannot be explained through detached experimentation. Both the researcher and the participant approach the phenomenon with unique conversation and connectedness.

Terms used in quantitative research like rigour, reliability and validity do not fit the details of qualitative, phenomenological research. These are discordant with the processes of qualitative research. However, interpretive phenomenologists are not neutral or value-free, but come into the research with biases and assumptions. These are clarified and become an important part of the study findings (Koch 1995). Interviewer subjectivity is considered a necessary and unavoidable component of Heideggarian phenomenological interviewing, fitting with the principles of Heidegger’s philosophy. The researcher is visible and audible, as I have been in this thesis.

Qualitative researchers who have rejected the use of quantitative terminology have developed an equivalent language to express similar concepts. Guba and Lincoln (1989, p.290) conceived the term “trustworthiness” with an aim of supporting the argument that the inquiry’s findings were “worth paying attention to”. Language used to demonstrate trustworthiness of the process in qualitative research is represented by the terms credibility, dependability, confirmability, transferability and authenticity (Denzin & Lincoln 2003; Guba & Lincoln 1994; Lincoln & Guba 1985; Polit & Beck 2014; Streubert & Carpenter 2011). Each of these will be explored in this section in relation to my research.

**Credibility**

Credibility refers to confidence in the data and the interpretation of it by the researcher to ensure credible findings will emerge (Guba & Lincoln 1994; Polgar &
Guba and Lincoln (1989) suggest this replaces internal validity. They assert that credibility means recognisable and faithful descriptions of human experience – making something worthy of belief.

Trying to see and interpret the lived experience of the participants through their eyes meant my focus was on describing phenomena of meaning from the people with diabetes as it was presented to me, rather than forcing themes or concepts into it (van Manen, Higgins & van der Riet 2016). It is vital to the process of qualitative inquiry to ensure the data is considered accurate by the research participants and by an external source who can review and ask questions of the researcher (Creswell 2009; Polgar & Thomas 2013). To help with this, I checked and re-checked the written observations I made throughout interviews, along with my reflexive journal and memos written throughout the study. I contemplated these against the participant stories at every phase on the analysis.

In addition to reading and correlating my data interpretations with my supervisors, the process of writing and re-writing along with on-going critical dialogue with my supervisors strengthened my own critical reflection. This also contributed to the credibility of the study and served to heighten awareness of the preconceptions and assumptions I held about the research topic. This was important and ensured that I did not allow preconceptions and assumptions to influence my interpretation of the data (Kingswell, Shaban & Crilly 2015). In doing this, I maintained the Heideggarian phenomenological approach.

The constant reflecting back and clarifying throughout each interview and also when reviewing transcripts, aided in understanding the participants’ meaning, rather than
imputing my own. I reviewed each theme thoroughly and did not allow these to be finalised until I was convinced by re-reading, checking and re-checking that each one was a faithful representation of my perception of the truth in the text (van Manen 1990). Incorporating other researchers (supervisors) into the interpretation of the data served to challenge, question and confirm my interpretations of the data, minimise bias and enhance credibility. The credibility of the study was augmented by reading the participants’ narratives and examining my own interpretations. The supervisors enriched and substantiated my data interpretations, which also strengthened the study’s credibility.

Some authors have indicated that the credibility of qualitative studies is improved through extended interactions with participants (Polit & Beck 2014; Streubert & Carpenter 2011). I spent significant time with each participant – before, during and after their interview. Credibility of findings is improved by ascertaining whether participants recognise the findings presented to them in collaborative discussion as synonymous with their own experiences and the meanings they had ascribed (Streubert & Carpenter 2011). This was achieved in this study, with the focus group serving as a check following the theming. The collaborative discussion (focus group) allowed any gaps in the data from the interviews to be addressed and it enabled clarification and resonance to be documented, which contributed to the credibility of the findings.

As alluded to previously, credibility refers to establishing confidence in the truth of the findings and that credible findings will be produced (Polit & Beck 2014; Streubert & Carpenter 2011). To do this requires the researcher to construct strategies that
minimise the risks of presenting inconsistent or inaccurate findings from inadvertent bias or deceptive representations of the data. Streubert and Carpenter (2011) claim that establishing credibility results from prolonged engagement with the material being studied. This was evident in my research as I spent time working through the Six Steps of Methodical Structure by van Manen (1990), integrated with theory and considered my assumptions, reviewed results and considered its limitations. In addition, peer review and debriefing with academic supervisors occurred regularly to confirm my conceptual interpretation of the data from the interviews was realistic and consistent (Streubert & Carpenter 2011).

**Dependability**

The second aspect of the framework for trustworthiness by Guba and Lincoln (1994) is dependability. Dependability can be defined as the stability or reliability of the data over time; it is met once credibility is demonstrated (Guba & Lincoln 1994; Lincoln & Guba 1985; Polit & Beck 2014; Streubert & Carpenter 2011). This criteria must be transparent in explicating the phenomenon in question, ensuring sufficient material around context and process are provided throughout the study to enable another researcher to replicate the study (Denzin & Lincoln 2011). In this study, the journey is overt from my initial proposal through to the final presentation of this thesis. Dependability is evident through the audit trail, that Koch (1996) suggests demonstrates the development of the completed analysis, making the theoretical, methodological and analytic choices clear (presented earlier in this chapter).

Employing more than one method also contributes to the dependability of the findings. The use of interviews and the focus group for collaborative discussion in this
study to collect data, along with details of analysis and theory generation support my interpretations and findings (Hesse-Biber & Leavy 2011). My academic supervisors oversaw the process of data analysis and theory generation.

Throughout this journey I have maintained a stated orientation towards the phenomenon and followed a methodology most suitable for both the research intention and my own epistemological and ontological stance (Laverty 2003). I have been clear in outlining the supporting methodology for this study as hermeneutic, interpretive phenomenology, with this being reflected in the title of the research and the aims. In order to make sense of how phenomenology would best provide clarity to the research question, I acquainted myself with Heidegger’s philosophy (Heidegger 1962), as well as other scholars who have contributed to contemporary phenomenology.

Data collection occurred in a way that fits the interpretivist paradigm, facilitating conversational interviews to develop opportunities for knowing, rather than guiding participants in the direction I thought appropriate. I immersed myself in van Manen’s (1990) methodical structure so I viewed text as whole before looking for emergent meanings.

Maintaining an understanding of my pre-assumptions kept me regulated in how I interpreted the data. Ensuring I was cogniscent of my own experiences and assumptions and how they may influence the research process helped me to maintain a focus within the hermeneutic paradigm (van Manen 1990). I felt the responsibility as a phenomenological researcher to present the participants’ stories as close to the experience as possible, and so continued to follow the interpretive process until I
reached reasonable meanings of the experience for the people with diabetes undertaking the TR program.

**Confirmability**

Confirmability is the third criteria outlined by Guba and Lincoln (1994). This criteria is about process and refers to establishing objectivity in findings by presenting the participants’ voice and not the penchants, biases and viewpoints of the researcher (Polit & Beck 2014; Streubert & Carpenter 2011; Lincoln & Guba 1985). Using the Heideggarian approach to qualitative research, I was mindful of my preconceptions and potential biases that threatened objectivity. Through a checking mechanism including peer debriefing and supervision of my study, including data analysis and generation of findings, objectivity was maintained. Another mechanism to demonstrate confirmability is the audit trail I kept throughout the research study, enabling others to follow and see the evidence and thought processes that led me to the findings and conclusions generated (Streubert & Carpenter 2011). Examples of this have been presented throughout the thesis, particularly in relation to van Manen’s model of data analysis. I continually engaged in active reflection and checking to confirm the participants’ voices were evident, not my own.

**Transferability**

Qualitative research must also be transferable, or the ability to apply fittingness (LoBiondo-Wood & Haber 2013; Streubert & Carpenter 2011). Guba and Lincoln (1989) suggest this aspect should replace external validity or generalisation. The fittingness of the research lies in the power of the phenomenological text to elicit recognition of the individual experience (van Manen 1990). This relates to the extent in which the study
findings have meaning to others in similar situations (Lincoln & Guba 1985; Polit & Beck 2014; Streubert & Carpenter 2011). Transferability, or fittingness, essentially means a faithfulness to the participants experiences described with enough detail that others in the same discipline may evaluate and determine if it could be useful for their practice (LoBiondo-Wood & Haber 2013; Polit & Beck 2014). Only potential users of the findings can determine if transferability can occur (Streubert & Carpenter 2011). Generally, phenomenological research is not considered to be generalisable or transferable, nor does it strive to be. In keeping with this, I used methods to ensure that rich descriptions were described in detail (seen earlier in this chapter) in terms of recruitment, purposeful sampling strategies and employment of open-ended conversational interviews.

Findings from this study comprised assertions about meaning of TR programs like Beat It for people with diabetes. These findings may be transferable to other people with diabetes undertaking a TR program involving exercise and health promotion. It would not however, be considered transferable to other populations. Lincoln and Guba (1985) advocate that the ability for transferability to occur lies with the potential user and not the researcher. The role of the researcher is to supply appropriate process data so others can determine whether they can transfer the data to other contexts (Lincoln & Guba 1985; Polit & Beck 2014; Streubert & Carpenter 2011). As TS Eliot says “approach to the meaning restores the experience in a different form”, (Denzin & Lincoln 2003, p.71).
Authenticity

The final criteria outlined by Guba and Lincoln (1994) is authenticity; the extent to which different realities are presented. Phenomenology is a methodology that is deep and descriptive and allows for authenticity to be present. In writing, authenticity appears as tone of participant responses being expressed. This allows for any reader to sense issues being represented and to glean some understanding of the voices of the participants (Polit & Beck 2014). By using a phenomenological approach, the participants’ voices were portrayed using a language that remained true to who they are and the message they presented at interview and during the focus group. The participants’ voice is the “backbone of the study” (Denzin & Lincoln 2003 p.71). This may resonate with others who share the experience.

Summary

This chapter introduced the research aim of providing understanding of the essence of meaning that people with diabetes attribute to being involved in a specialised therapeutic recreation (TR) program. It discussed the methodological features of the study, in particular the hermeneutical phenomenological approach that was employed, based on the philosophical perspective of Martin Heidegger. Heidegger’s methodology was implemented as the overarching philosophy that directed the study. Phenomenology was elucidated as a suitable method for investigating lived experiences and is becoming increasingly used in health and nursing inquiry. The research paradigm was based on the belief that research involving the lived experience
should be from the viewpoint of the individuals themselves, therefore the researcher adopted a stance of *with* participants, rather than *about* participants. My professional education as a nurse, my clinical nursing role, and my personal training experience all specialise in health promotion and exercise and brought a professional nursing and personal trainer perspective to the research process. Without any personal experience of living with diabetes, the co-creation of a shared understanding between the participants and myself was necessary to allow for accurate interpretation and representation of the experiential meaning of the phenomena under investigation. Ethical approval was attained, and purposive sampling was used to select fifteen consenting participants with diabetes who had undertaken a TR program *Beat It*. I personally interviewed these consenting participants at a time and place of their choosing. A collaborative discussion in the form of a focus group with participants authenticated findings. Data collected using in-depth conversational interviews were analysed using a hermeneutical approach (van Manen 1990).

The discourse confirmed that van Manen’s (1990) approach to phenomenology fitted the aims of this research, as his approach enabled a process of textual reflection that assisted me to remain focused on the uniqueness of the participants experiences and the clarification of their lived meaning. van Manen’s (1990) thematic approach to data analysis helped to provide phenomenological structure to the analytic processes.

The findings gathered from this hermeneutical analysis of the data will be discussed in detail in the next chapter.
Chapter 4 – Findings

Introduction

This chapter presents the interpretive findings from the phenomenological approach to analysis of fifteen participant interviews and one focus group conducted with seven of the original fifteen participants, to investigate the essence of meaning that people with diabetes attribute to being involved in a specialised therapeutic recreation (TR) program. The themes, and elements within the themes, emerging from the phenomenological analysis are also described. The approach to data analysis was informed by van Manen’s six methodical steps (1990), discussed in Chapter 3 – Research Design. The critical point of difference, identified in this research study, of effective programs for health and health purposes, is person-centredness. This essence of meaning, person-centred program efficacy, was informed by and stemmed from two themes and five elements as illustrated in Figure 9.
The expertise of the participants in regard to their own journey and lived experience is recognised throughout this chapter by privileging their voices and thus presenting their words, thereby ensuring the findings are presented through their lens. Initial analysis of participant data revealed two themes, which were; people and structure. Within these themes five elements were identified, namely; motivation, physical benefits, psychological benefits, the instructor, and connectedness. Although participant accounts intimated an occasional overlap and relatedness between elements, they are presented and discussed separately.
The identified essence of *person-centred program efficacy* emerged after an examination through a strengths-based lens. In keeping with this approach, this chapter will focus on and discuss enablers to meaning rather than barriers. Person-centredness is well researched and defined, and in this research context is underpinned by values and philosophies of “empathy, dignity, autonomy, respect, choice, transparency, and desire to help individuals lead the life they want” (Reid-Searl et al. 2014, p.486). Person-centredness focuses on the uniqueness of the individual and hence the importance of customising service delivery to the needs and requests of the person, supporting their rights, values and beliefs with the intention of maximising their potential (Moyle, Parker & Bramble 2014). The strengths-based approach moves attention to the person and their abilities, focusing on the fact that individuals have strengths that can be utilised and developed to promote ownership of their own health, care or service delivery and contribute to improving their quality of life (Moyle, Parker & Bramble 2014; Xie 2013). This is important when considering the participants in this research study, as individuals with diabetes who were able to contribute to improving their quality of life when involved in exercise and health promotion through empowerment and self-efficacy (Gottlieb 2014), in whatever capacity or meaning that has to the person.

This chapter will therefore report the findings from both the individual interviews and a focus group that contribute to the development of the essence of meaning of *person-centred program efficacy*. This chapter describes the themes, and elements within the themes, emerging from the phenomenological approach to analysis of fifteen participant interviews and one focus group conducted with seven of the
original fifteen participants. It follows van Manen’s six-step method (1990) that was comprehensively discussed in Chapter 3 – Research Design.

This research adheres to the National Health and Medical Research Council (NH&MRC), Australian Research Council (ARC) and Australian Vice-Chancellors’ Committee (AVCC) Ethical Conduct in Human Research (NHMRC, ARC & AVCC 2013) principles and hence individual participants are not described in any detail. This was done to ensure confidentiality (Petrova, Dewing & Camilleri 2014). Consequently, each narrative has a participant pseudonym attached to it, along with an identifier for interview (Int) or focus group (FG). Participant’s identifier details are outlined in Table 8.
Table 8: Participant Information regarding participation in interviews and focus group

<table>
<thead>
<tr>
<th>Participant Pseudonym</th>
<th>Age</th>
<th>Data Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>61</td>
<td>Interview and focus group</td>
</tr>
<tr>
<td>June</td>
<td>61</td>
<td>Interview and focus group</td>
</tr>
<tr>
<td>Liz</td>
<td>70</td>
<td>Interview and focus group</td>
</tr>
<tr>
<td>Bruce</td>
<td>65</td>
<td>Interview and focus group</td>
</tr>
<tr>
<td>Kathy</td>
<td>61</td>
<td>Interview and focus group</td>
</tr>
<tr>
<td>Noel</td>
<td>73</td>
<td>Interview and focus group</td>
</tr>
<tr>
<td>Lyn</td>
<td>64</td>
<td>Interview and focus group</td>
</tr>
<tr>
<td>Dawn</td>
<td>62</td>
<td>Interview only</td>
</tr>
<tr>
<td>Gail</td>
<td>58</td>
<td>Interview only</td>
</tr>
<tr>
<td>Patty</td>
<td>72</td>
<td>Interview only</td>
</tr>
<tr>
<td>Trish</td>
<td>69</td>
<td>Interview only</td>
</tr>
<tr>
<td>Beth</td>
<td>65</td>
<td>Interview only</td>
</tr>
<tr>
<td>Jill</td>
<td>61</td>
<td>Interview only</td>
</tr>
<tr>
<td>Pauline</td>
<td>68</td>
<td>Interview only</td>
</tr>
<tr>
<td>Kerry</td>
<td>56</td>
<td>Interview only</td>
</tr>
</tbody>
</table>
Themes

Step three of van Manen’s six-step method (1990) wherein reflection on essential themes, and a highlighting of the essential meaning of the lived experience occurs, revealed two themes and five elements that inform the essence of meaning for the person with diabetes involved in the specialised TR program *Beat It*. Each theme is informed by contributing elements that emerged from the data and which are also presented here. The emerging themes, *people* and *structure* were seen to have intrinsic and extrinsic elements. The themes and contributing elements, which are not represented in any hierarchical order, are discussed below and are represented diagrammatically in Figure 10.
As a result of a systematised and structured analytical approach, the theme of people emerged as critical to creating a person-centred approach to the efficacy of the TR program Beat It. In various ways all of the participants described how being involved with other people encouraged them to attend the TR program Beat It and enabled them to interact and engage with it meaningfully. This engagement which was described by participants in a positive way, contributed to valuable outcomes for them as an individual. The participants’ reported meaning gained through experiences associated with people throughout the TR program Beat It. Participants, during interviews and in the focus group, described these experiences as being linked to
connectedness with others and the ensuing benefits of this connection, along with personal motivation. These translated into the emerging elements associated with the theme *people*:

1. **Motivation**
2. **Connectedness**
3. **Psychological benefits**

These elements are shown in Figure 11 below.

![Diagram showing the elements of the People theme: Motivation, Connectedness, Psychological benefits.]

*Figure 11: Elements of People theme*

The participants’ accounts indicated they chose to continue to be a part of the TR program *Beat It* and commit to it because it meant social connection with others. Perhaps significantly, and which could be the subject of further research, the sense of social connectedness was with people who were at a similar stage of life and shared experience of diabetes. Participants talked about how being with ‘*like minded people*’ had psychological benefits – benefits that were both mental and emotional and were evident to the individual. Such connection with people and direct personal benefit assisted in motivating participants to attend each week. Discussion that occurred in
the focus group confirmed these elements as focus group participants reiterated these key messages.

‘I liked the group of people, it was nice being in a similar age group... I got positive reinforcement, talking to others and getting positive feedback from them. I felt good, it made me feel ready to face the day and any problems you come across didn’t seem quite so bad’ (Bruce, FG) (nods all around from focus group members).

A discussion of the three elements informing the theme of people and the narratives of the participants to support the discourse follows.

1. Motivation

![Figure 12: Motivation as element of theme People](image)

The findings suggest that the participants’ motivation was an important factor in their initial decision to join and attend the TR program and also in their decision to continue in the program. Motivation was to join and also to continue to attend. Motivation factors were both internally and externally driven, and included qualities relating to weight, exercise and health promotion, companionship and engagement, ease of access, safety, commitment and advertising and promotion. Motivation to be part of the TR program was reported by most participants as primarily intrinsically driven,
while one third of the participants, reported a combination of both externally and internally driven motivators. While these motivators did vary between participants, there were general commonalities present.

Participants who were internally motivated to join Beat It described the primary impetus for their joining the program as ‘it was free’. Secondary reasons for wanting to be involved in the program were due to various personal desires. These desires included wanting to: exercise and/or lose weight, improve their blood glucose level, be with people, try a gym, acquire nutritional advice, and get out of the house.

Whether internally or externally driven, motivation was around either joining the Beat It program or continuing to attend the Beat It program.

Weight, exercise and health promotion

As described in previous chapters, Beat It is a TR exercise and health promotion program. In both the individual interviews and the focus group, the desire to engage in a health promotion activity was highlighted as important, considered attractive and described as a motivator by participants for joining the program. The desire to make lifestyle changes was articulated by participants. Some specifically outlined that it was the health promotion component that was a motivator for engaging in the program. Trish expressed it as a ‘holistic’ program that she wanted to join to improve her health, as evident in the comment:

‘It had the holistic approach of the nutritional stuff and everything else and the exercise, but also [TR facilitator] coming to talk about things and motivation and things like that. So I was interested in that because it was so holistic... and so if I could get
healthier and more active then I would be able to continue on my own to do an exercise once a week at the gym or something, or even be able to walk. I thought it might help me be able to walk because I find it so hard to walk. So that's basically my purpose in going, health and - to improve my health and to improve my mobility and to help me lose weight’ (Trish/Int)

Patty reiterated this sentiment, saying she:

‘wanted to improve (my) overall health and wellbeing’ (Patty/Int)

Bruce described his motivation as being related to wanting to lose weight, and explained that being part of the program would facilitate his use of machines for resistance training, stating:

‘Well, I think for me to lose a bit of weight, to maintain fitness. I was already doing yoga and Pilates and I thought, at the gym, there might be some more strength and cardio work, which I don’t get in the Pilates. That was the main thing for me actually. Also increasing my flexibility as well’ (Bruce/Int)

Beth was also motivated to undertake resistance training, to help with her fitness and another chronic health condition that she was trying to manage on a daily basis, as noted in the comment:

‘I also have osteoporosis and I wanted some strength exercises to help with that as well as the sugar. Although my teacher at the Pilates tells me that Pilates takes care of that, I don’t believe it. I think you need to do some weight work’ (Beth/Int)

Kerry, the youngest interviewed participant at fifty-six years of age, talked about how her recent retirement had made her acknowledge that she was getting older. Her
activity and exercise levels were quite good but her motivation resided in the fact that she knew resistance work would benefit her as she got older:

‘Because I’m recently retired and I do a reasonable amount of exercise and I like the idea of - I fitted their criteria. I liked the idea of doing some gym work and I wasn’t at the time, doing sorts of exercise that I wasn’t already doing on a regular basis with a view to, I guess, toning and perhaps fitness, knowing that resistance work is supposed to be very good as you get older’ (Kerry/Int)

Several others shared the desire to lose weight, which subsequently motivated them to join the program. Lyn wanted to lose weight, but added that for her it was trying to commence a lifestyle habit of exercise that motivated her to join the program:

‘For me it was to get fitter and to lose some weight, and to try and establish a better habit of exercise so that I could continue afterwards’ (Lyn/Int)

The desire to improve and manage blood glucose levels (BGL) as part of their diabetes was another motivating factor for participants to join the program. Pauline expressed this as:

‘The thought that I thought I could improve my blood sugars and my weight. I thought it might help me’ (Pauline/Int)

Although health promotion was an initial driver for participation in the program for some, it was rarely mentioned as a benefit of the overall program. Others mentioned the health promotion aspect of the TR program as a positive factor, but something they did not consider a motivator for enrolling in the program. Kerry illustrates this when she said in her interview:
‘The talks on nutrition were optional and I have to admit that I never made it to any of them, because I hadn’t looked at the - sometimes I hadn’t looked at the calendar but I usually had other things happening and I know a fair bit about nutrition anyway. I do have a PhD in exercise physiology and nutrition, so I thought I... There could’ve been new stuff that we were going to learn. But it wasn’t really an audience that was going to learn a whole lot of new stuff, I figured for that audience it would be fairly basic’ (Kerry/Int)

The internal motivators outlined above were reinforced externally from family members who encouraged participants to join the program to assist their diabetes health or to lose weight.

Gail described her motivation as one where she:

‘wanted to get out, to meet people and mainly to get fit, lose weight because I had a little bit of weight there to lose. My daughter-in-law is a dietician and she told me that I should be walking at least half an hour nearly every day of the week and to keep the exercise up because I’m not on [diabetes] medication’ (Gail/Int)

Noel and Liz reported similar experiences of personal desire associated with strong family encouragement. This encouragement was seen as positive and supportive despite being a little confronting. Noel shared his experience, laughing both in interview and again at the focus group:

‘My granddaughter saw it in the paper and started nagging me, and the result was (laughs)... I’m definitely out of condition, definitely overweight, definitely... I don’t know... I was thinking about some exercise program, this one just, this one... I didn’t know what it was but I thought I’d try it’ (Noel/Int)
When Noel shared his motivation with the members of the focus group, wry smiles were evident on many faces as they possibly could relate to family reinforcing the need for exercise and weight loss. For example Liz shared that her daughter:

‘always says, Mum you've got to do some kind of stretching - some kind of exercise. She sort of doesn't know, but she thinks it is healthy to do exercise if you can’ (Liz/FG)

**Companionship and engagement with others**

The internal motivation and driver to be with people in similar stages of life and with a shared condition was apparent. May succinctly stated that for her the motivation to undertake the program was simply to be with people and exercise together:

‘It’s an opportunity to interact with other people and have a bit of chat and work up a bit of a sweat’ (May/Int)

Dawn shared:

‘Yeah, I thought if I could join with a group, I would do it, and make friends with other people. For me... to use gym and education, what nutrition is. You have to spend 30 minute everyday. But the program, I want to hear from other people what they’re saying, I like to talk to someone who give me a feedback’ (Dawn/Int)

When this aspect of being with others was discussed and member checked in the focus group, Bruce astutely remarked that:

‘The internal motivation came from being with the other people, and talking to each other and getting positive feedback from all the others too’ (Bruce/FG)

Resounding agreement was forthcoming from the other members of the focus group as Bruce shared his views.
Ease of access

All fifteen participants described access as a determinant of being involved in the TR program. The ease of access was a strong external motivator for choosing to be involved in the program. This, together with internal motivation, was critical to all participants when discussing why they wanted to be a part of the TR program Beat It.

All of the participants indicated that access issues, particularly those related to cost of attendance, was a key factor for being involved in Beat It. Numerous participants’ accounts signified that they chose to be a part of the TR program because it was free, and this generally prompted their drive and motivation to action – whether that motivation was internally or externally driven. The focus group discussion confirmed these elements as definitely resonating and participants reiterated these key messages. Issues related to financial implications was succinctly stated in comments including:

‘It was free and that really did, I mean that’s why we did it in the first place because it was free’ (Pauline/Int)

‘It was free!’ (Bruce/Int)

‘No money, it was free’ (Beth/Int)

‘It got me into exercise but also it was easily accessible because it was no cost, so it meant that I could go’ (Lyn/Int)

‘I’m on the pension, and this was free. Being free was definitely a motivator’ (May/Int)

When cost was member checked with the participants at the focus group, all participants strongly agreed this was a key factor in motivating them to action and to
join the TR program. May articulated this point quite clearly in the focus group when the notion of free access was raised. May said:

’I wouldn’t have been [able to be] here apart from that’ (May/FG)

The impetus of being able to do the program with no financial burden meant the program was accessible. Given the population was older and participants were either on the pension or self-funded retirees who had to monitor their finances carefully, this was an important consideration and motivator for involvement. Participants all agreed that the program being free enabled them to come and engage. No cost was in fact a motivator to join. Participants talked about ‘having no excuse’. Kathy described this aspect as being:

’an absolute incentive’ (Kathy/Int)

June specifically mentioned the fact that she had no more excuses, saying:

’I'd worked full-time for 42 years; I never put it [exercise] as a plus. I always put work first... I thought now I've retired I should be - well, I've got the time, I haven't got any excuses, and financially it was possible since it’s free’ (June/Int)

Jill said that because the TR program was free, it enabled her to do something she had always wanted to do:

’I've always wanted to go to the gym but could never afford it. See that was it, and now I could since it didn’t cost me anything as well, yeah. Yeah, always wanted to you know because I do what I can here, like I've got my weights, or two bottles of water, my little stepping thing. As I said I loved every minute of it, loved it. If I can and if I can afford I
will be going back. I've actually thought of hinting to my daughter that she can give it to me for a mother's day present’ (Jill/Int)

As Jill alluded to in her comment above, she can no longer go to the gym due to financial reasons. Gail also reported this as a reason she no longer attends a gym and spoke about how the TR program Beat It program being free, was a good thing:

‘Now I’ve just gone back to walking again because like probably a lot of people in the same situation as me, we can’t afford to join a gym. It’s just too expensive. I’ve always wanted to work out, but never been able to afford to pay to join a gym. It’s a lot of money and especially when you’re not working and your husband is not working anymore and we’re not eligible for the pension because we’re not old enough yet and we are just living off - we’re self-funded, so I couldn’t afford to do that, to pay for the gym. Yeah, it [Beat It] was really good. I was sorry when it ended’ (Gail/Int)

When access in terms of cost, was member checked and discussed with the participants at the focus group, there was deafening agreement and consensus that this was a key factor in motivating all participants. The aspect of no charge was described as:

‘attention getting’ (Lyn/FG)

Bruce claimed that payment of:

‘even five dollars a class is a lot for people on our income’ (Bruce/FG)

The access participants gained to the program because it was free was articulated by members of the focus group in a way that demonstrated it was an instrumental motivator. They described how it gave them access to something they would not have
otherwise been able to afford. It was noted by the focus group participants however that:

‘Being free wouldn’t have been enough to overcome an unpleasant experience’
(Noel/FG). All other members agreed and laughed.

All participants reported that free access drove initial motivation to ‘pick up the phone and register’. When specifically asked what attracted them to the program, along with individual drivers and motivators, all participants reported the fact that it was free. As Liz commented:

‘probably exercise and probably more because it says “free”. You know when it says it’s free – it doesn’t cost you anything. You’ve got to get your doctors thing (clearance), and I said, this might work with me, I’ll try. So that’s what started me’ (Liz/Int)

June concurred, adding that:

‘There was a poster in the doctor’s surgery and so I took down the number and I rang. It was saying have you got diabetes? So, yes, I have. Then it said, do you want to do something about it? Exercise does help for diabetes, that type of diabetes. So I thought, yes, and they said, it’s a free program because I’d just kind of left work, so financially, I thought, no, I’ve got to do something and I thought, I’ll give it a go and see what happens’ (June/Int)

Some participants reported valuing the program being free as a ‘gift’ from the Government:

‘I value that it was available for people. I think we’re so lucky with our systems. I know we criticise a lot of things. I’ve lived overseas and done a lot of things and I still think we’re very lucky. So things are available if you want to do them’ (Patty/Int)
‘I value that council and government are thinking of people like us - to give us this program to keep us healthy. I value that a lot. That’s beautiful. Even if you can’t afford it, we’re going to give you this chance. So I value - that’s beautiful of the government. I appreciate it very much. So that free - it was great. Some of them, like the lady - she was so happy, she said, I couldn’t go up the stairs but since I’ve been with Beat It - she can do that. See? Thanks to the government that gave that opportunity, otherwise maybe she would never go. When you’re older - when you’re sick, who thinks of leisure and going somewhere like this? If someone gives you this chance, like for me when I saw it and I see the free bit and all that, I said, I’m going to try this. I’m glad I did’ (Liz/Int)

Kerry considered that Government funding of the program would be beneficial from a future focused viewpoint, ensuring health promotion in the community and thereby potentially decreasing hospital admissions:

‘My understanding of it was that if the Government paid for these programs then hopefully that would pay off for them, there’d be less claims on Medicare later on, so the idea was to get people that not necessarily are normally inactive but people exercising more. That part of it was good and made me want to continue with that sort of exercise’ (Kerry/Int)

Looking to the future and enabling participants to be able to continue to exercise following the TR program was discussed in the focus group. All participants stated they wanted to continue with a program like Beat It. They described this sort of program as giving them the structure they needed; they wanted a specific time and place to attend, a program to commit to. They were concerned about the cost though. Quite a long discussion ensued about cost and the need for:
‘a program that targets older people. Because you’re a pensioner and need to get it at a cheaper rate’ (Bruce/FG)

Cost was considered by members of the focus group to be a major factor for not continuing to attend the gym once the TR program finished. This was despite wanting to continue to meet with others from the program and replicate the time spent in the TR program:

‘They should be doing something about that [cost] to help us come here’ (June/FG)

Only one member of the focus group had continued to attend the leisure centre where Beat It had run:

‘For me I’ve continued and it’s working for me’ (Noel/FG)

Safe environment

Another key characteristic of motivation that was reported by participants was being able to exercise in a ‘safe environment’. Participants outlined this as a motivator to join the program. Reasons for this ranged from physical esteem to confidence. For example, Kathy said:

‘Yeah, I’ve always exercised. But the last six years since this started [pointing at face] - I couldn’t go to the gym, I stopped because of my face. I always just used to go out at night and walk, that was my exercise. I’ve always exercised. Then when I finally did go back to the gym everyone was staring so that was me finished. Going into the class was a safe environment. It got me back in - basically got me back into the gym and gave me the confidence to be able to go back into classes and not have people staring.’
I guess that's the same sort of thing it would be with people who are obese. They would feel the same thing. People would be staring at them just the same’ (Kathy/Int)

Pauline also reported feeling ‘safe’ in the TR program. She spoke about how this occurred because she was in a group with people experiencing a similar condition. Pauline outlines this in her interview:

‘It was safe because there were other people so you were sort of anonymous and there were other people with other issues, yeah. And that's not - it's part of ageing too. As you get older things happen and some of them - most of them are out of your control, they talk about lifestyle diseases and stuff, but a lot of it is ageing and you can't do the things that you used to do. They take longer or they're harder and when you lose your fitness it takes longer to get it back up again. It's a natural part of - it's a normal part of ageing’ (Pauline/Int)

Others reported self-consciousness relating to preconceptions of who they thought entered a gym. June said:

‘I was put off the gym before I came to Beat It because I saw it as all the body beautifuls and the [grunts]’ (June/Int)

Trish also was concerned that the gym environment would not be something she felt comfortable in, commenting:

‘When I first went to the gym I thought - I never went to the gym before - I thought oh it’s all going to be these trim, taut and terrific people, women, and there’s going to be all these men hanging around looking...’ (Trish/Int)

Lyn said she was concerned about the clientele of the gym as she felt she was different to the general gym user. She was attracted to the TR program because she
‘didn’t want to be with a lot of younger people that didn’t have the same preconditions we’ve got or the same body shape and limitations and things’ (Lyn/Int)

When the members of the focus group were asked about the environment and perspective of group safety, as a motivator for being a part of the TR program, there was consensus that it was. Participants shared that they found the room they exercised in to be their ‘security blanket’ where they ‘felt included’ – it was ‘our group’.

Convenience

Another consideration of motivation for people choosing to be involved in the TR program was one of convenience. Participants described how the facility location and services (along with the actual program itself) all had bearing upon their decision to enroll. The ease of physical access to the facilities was described during individual interviews and also spoken about in the focus group discussion as being important:

‘I think it was just getting back out and into exercise and it was convenient for me being close by. It was good to be able to do all the other classes as well as the two classes a week’ (Kathy/Int)

‘Yeah, and they were easy places to go to, easy parking and everything was easy which made it easy to get to’ (Kerry/Int)

‘It was close so you could drive to it and park. It was easy parking and stuff like that’ (Trish/Int)

‘I catch the free bus every week, so easy’ (Liz/FG)

Another salient point participants brought up in relation to convenience was how they valued the routine, and how attending the class brought structure to their week:
'It taught me the value of setting up a pattern I suppose and setting up a habit of exercise’ (Lyn/Int)

'Well, because of my situation I, like a lot of people, can quite easily sit at home and go, well, I'm not going to do any of this. It's easy to get into that - well, with me I've found, it seems to be easy to get into that cycle. It gave me a purpose to get out, otherwise you sit at home and veg and that's not what you want. So, if I know I'm doing something like that it's something that I've got to get up and get out and go and do so because of health issues I feel I need structure otherwise I do nothing. So even though you said you could have met me here, there and everywhere, I said no, no, no I'll meet you here. Well, see I've come down here on the bus so I'm constantly trying to move forward I suppose and all of that - the exercising and all that, that's - to me that's helpful. All of that's good for your health and your wellbeing. So going to a facility and saying I have to be there at 11 o'clock you're more inclined to do it’ (Patty/Int)

'I find I do things better in a group or if they’re more structured than what I’d do myself...saying I’ll be there at 11 o’clock meant I was more inclined to do it’ (Gail/Int)

Discussion within the focus group confirmed that having the routine of meeting twice a week at a certain time was important as it established somewhat of a habit, which participants felt compelled to maintain and follow:

'I think also having a regular routine, like at 11 o’clock on Tuesday and Thursdays...having that routine that was good. Because that was what I missed from work, the routine’ (Liz/FG)

'Just having that routine, that was good. You had it penciled into your diary and that’s what you did at that time. I think that helped a lot too’ (Bruce/FG) Multiple participants affirmed with ‘yes’
Commitment

Another aspect of motivation in regards to staying in the TR program was one of commitment. A number of participants specifically mentioned commitment to the program, almost as though they must honour the decision they made to do it and couldn’t deviate from that decision. Noel adamantly noted:

‘It was just that I’m gunna do this because I said I would. Well basically it made me do the exercises because I was determined to follow the program through. So it made me do the exercises that were being laid out by the Beat It program. And... (pause)... even though sometimes I didn’t feel like coming, I did. So, there was an incentive to exercise...(pause)... I think because I agreed to come, I was going to come. There was motivation to come because I agreed to something. When I agree to something, I generally do it’ (Noel/Int)

Kathy and Pauline also expressed strong commitment to the program, noting that this was because they had said ‘they would do it’. They declared that they missed sessions only for reasons that were not ‘frivolous’:

‘Well, it meant that I’d committed to something and I needed to keep that commitment. I certainly didn’t miss any activity if I was at all able to do it. I mean, I think I only missed two classes the whole time. That’s just the way I do things. And they were things that I’d pre-committed to. I think it would’ve been - my children live up in Ballina and I’m sure it would’ve been - just to go up there, it wouldn’t be anything frivolous’ (Kathy/Int)

‘I guess you make a commitment and you keep to it. Oh gosh, I don’t know you just forced yourself. Well I forced myself to do what I had to do. I mean the commitment is
there because you can meet and you do it, but you [laughs]... do it because you’d said that you would do it’ (Pauline/Int)

Dawn described how she had a sense of responsibility to commit to the program because it was being paid for her:

‘Because I join it, I feel very necessary, responsible. I diabetic. They pay for me. Must do it... for them’ (Dawn/Int)

When the notion of commitment was member checked in the focus group, all participants concurred that they had agreed to participate in the TR program and so had honoured that commitment (including those who hadn’t mentioned it in their interview). They referenced ‘their generation’ and the fact that the commitment to the program was not negotiable – it was a ‘verbal contract’ (May/FG). Pertinent comments made in the focus group about commitment are outlined in the conversation below:

‘Here’s the program, I’ve agreed to do it, so I’m going to do it’ (Bruce/FG)

FG Participants: that’s right (resounding from all)

‘The only time I missed I was overseas, because as you say, you’ve said you’re going to do it so you’ve got a moral obligation’ (May/FG)

‘And our generation have got a more... tend to do that too, you’re committed, we keep it’ (June/FG)

FG participants: yes

‘We’ve said we will, so we will’ (Lyn/FG)

‘Yes, you’ve made a verbal contract and you’re going to stick with this’ (May/FG)
Advertising and promotion

Advertising seemed to attract people to the program by getting their attention and encouraging an underlying internal motivation. Participants discussed in their individual interview that being prompted by external sources to join the program stirred an internal desire and motivation to do something for their health. Advertising worked for some participants by drawing attention to the program that they described as something they had been looking for. Participants also discussed how the program being advertised as free drew attention and prompted them to make contact regarding the program and enroll. Essentially, advertising was seen as an external motivator that instigated internal motivation to be involved in the TR program. Badger et al (2015) found that positive advertising impacts motivation and increases activity level. Emotions are triggered by advertising and prompt positive or negative reactions. Positive emotions draw the person towards the option being offered in the advertisement (Kwak, Kim & Hirt 2011; Smith 2013). This suggests that something in the advertising was in fact a motivator for the participants. Generally this was expressed as the fact that the TR program was free. This is evident in the participant comments below:

‘I was reading a pamphlet advertising while I was waiting at the doctor, and I said, I think this will be good for my health - I’ll try’ (Liz/Int)

‘I saw an advertisement and it was free and that was great incentive for me. I also have osteoporosis and I wanted some strength exercises to help with that’ (Beth/Int)
'I got a letter from Diabetes Council. I want to do something for my diabetes and start to exercise so I email to join' (Dawn/Int)

Word of mouth was a strong factor in motivating people to join the program. For some, knowledge of the program came about through family members and friends:

‘Well, a friend of mine told me about it. I didn’t know anything about it’ (Gail/Int)

For others, like Patty and Trish, they felt motivated to attend the program when people from other community groups discussed it with them:

‘A gentleman I walk with in the [Heartmoves], he was involved in one of the previous programs and he told me about it’ (Patty/Int)

‘I heard about it from one of the ladies that was in my folk art class, and she was taking part in it and she was quite thrilled about it’ (Trish/Int)

Others, including Jill, overheard conversations that triggered motivation and prompted them to action:

‘Well, actually I was in the chemist and a woman who was talking about it. I said, Jesus, I wish had something like that’ (Jill/Int)

Overall it is evident that the element of motivation has many facets. Motivation to join, and motivation to continue to attend are evident through participant stories and comments. Many of the facets of motivation are commonly shared among the participants; particularly those involving access, safety and commitment.
2. Connectedness

Connectedness is the second element that emerged in the findings under the theme of *people*.

Elements are not in isolation, but rather overlap and intertwine. This interconnectedness was illustrated in the previous section in the way participants described how connectedness became a motivator to attend the TR program. The focus group participants discussed this in some detail, with Bruce expressing that the personal contact with people kept him coming and wanting to come each week:

‘The internal motivation came from being with the other people (multiple others in focus group agreeing saying yes; yes that’s right), and talking to each other and getting positive feedback from all the others too’ (Bruce/FG)

Lyn agreed with Bruce, adding that common life experiences along with the shared disease diabetes, gave an instant connection point. This sense of connection made her feel more comfortable with the people in the group as noted in the comment:
'So the group then became... a motivator, and knowing it was a group too, people with diabetes, also in the older age group where you don’t got a lot of younger people that hadn’t got the same preconditions we’ve got or the same body shape... and the same limitations and things...’ (Bruce/FG)

Lyn’s comment outlines how connectedness is aligned with aspects of social connection with others, shared understanding and experiences, and having fun. All participants interviewed and again those who participated in the focus group expressed connectedness as encompassing these features. As such, connectedness emerged as an element, also informing the core theme of people. All participants discussed connectedness in some capacity. The ability to connect and have social engagement with others gave meaning to the TR program Beat It for all participants.

**Social connection with others**

Social connection was clearly an important part of participating in the TR program Beat It. This motivated some to come each week (as seen in the quotes above) and also helped others to embark on a lifelong health routine:

‘They motivate me...better, better, better. When it finish, I keep coming back, they help me’ (Dawn/Int)

Key considerations of social connection within the element of connectedness were associated with meeting and chatting socially with others regularly. This was important to participants, as illustrated in the following comments:

‘All the sort of chatting beforehand and after was pretty good and you felt fairly included’ (Patty/Int)
'There were a couple of people in the class that I looked forward to seeing and having a chat to’ (May/Int)

‘I think having the group there and knowing twice a week that they would all be there and talking about things’ (June/Int)

The learning that transpired from conversations with others was also seen as important. Participants felt this was valuable from both a social and an educational perspective. Dawn and Jill revealed:

‘To use gym and education, what nutrition is... But the program, I want to hear from other people what they’re saying, I like to talk to someone who give me feedback’ (Dawn/Int)

‘Just meeting the people and there was all - there was so much in it really that it meant to me the learning process. It was interacting with the other people’ (Jill/Int)

Members of the focus group agreed that the educational aspect of connecting with others and getting feedback was a significant factor in their ongoing engagement in the TR program:

‘I kept coming because I was getting positive reinforcement each time I came’ (May/FG)

‘Talking to each other and getting positive feedback from all the [trainers] too’ (June/FG)

Findings revealed that the educational aspect of connecting with others was not especially evident in regards to the nutrition talks. This was surprising considering participants had diabetes and were undertaking a program only for people with this
condition. Some participants did discuss this in interview, with responses indicating that some found value in the nutrition talks while others did not, as illustrated in Jill and May’s comments:

‘Just to learn the things about food which [instructor] said, listening to [instructor] and the different things. Being able to ask because a lot of times you can’t - there’s no - unless you go - say I’ve been to dieticians, you’ll eat this, you’ve got to eat this, you got to eat that. But no one explains to you the consequences if you eat something, like you don’t eat yellow capsicums. What else did she say? Everything else and I thought that’s not much help. Being able to talk to [instructor] and ask him what happens, sort of thing. Like diet Pepsi and that sort of thing they say you have that - well I very, very rarely drink the soft drinks. I might have Pepsi Max like that but then they tell me it’s the worst thing you can have and this’ (Jill/Int)

‘They’re not getting the correct information during the Beat It thing. So I’m just really annoyed... I really think if things like Beat It and changes in people’s diet and attitudes to food - if that’s actually going to happen, then they’ve got to get the correct information. You’re just rehashing all the old information. I think some changes could have been made. I certainly wasn’t the only person in the group going hang on a minute, what about X, Y, Z? There were a number of people in that group who were very aware of diet and nutrition and exercise, not just the overweight ones’ (May/Int)

A sense of shared understanding and experiences was common and described by most participants. Shared experiences and understandings meant different things to different participants. For some, the similar age of other participants was important, as Patty suggests:
‘Something that’s really good with the program is the bulk of the people who did it are people who are similar age. So maybe some different health issues, that didn't matter but being a similar age I think is a benefit. Because I find with young people, and it's not a criticism - I mean, it’s nice being young but to me with them everything seems rush, rush, rush - we’ve got to do this and we’ve got to do that. Whereas with older people we realise - yeah, you can rush but that’s not what’s important about what you’re doing. It’s about the actual fact that you’re doing stuff, everyone was doing it at their own pace and if you stopped it wasn’t like people were looking at you and singling you out because you’re not participating. There’s not all that rushing and you don’t feel like you’ve got to keep up with them or - I mean, even though we’re all the same age we’re still all at different levels but it just, to me, felt more comfortable... because it was like-minded people – and I don’t mean that in the sense of age or whatever or people who have issues’ (Patty/Int)

For others, like June, the social connection of being a similar age and sharing life circumstances such as being overweight and having diabetes, was motivation to participate in the program. The fact that the program was tailored to accommodate both the age of the participants and their individual circumstances was also seen as important:

‘They were very nice people, very similar type of people to me as in older, some overweight like me, with diabetes, they hadn’t exercised for a long time. So they really were saying, well, maybe I should try and do something. It was nice to not be in a class where there was all young people. For people our age I said - everything. I think it was more encouraging for us to actually participate and it was at the pace that got us into it, not at a kind of a quick pace as in some of the Jazzercise classes or Zumba things. We were there as a group. We had the interview all together and looked at our fitness.
So some were more fit than others, but there was others, like me, that weren’t very fit and I think it was just a good cross-section of people’ (June/Int)

A key aspect of shared experiences was, for every participant, the fact that they all had diabetes. This was seen as the ‘glue’:

‘Well you got to talk to other people, other diabetics, and their lives - like what their daily life was like and that sort of thing, because I’ve got friends mostly younger girls more so because they seem to gravitate to me as a mother, and to [get with them] - and that it was lovely. Just to hear the kids they had and like talk about our kids and this sort of thing and the exercises. Just being able to talk to them about diabetes, the exercises and what they were doing for us more than anything because all of us really benefited from it’ (Jill/Int)

In addition, the sense of having similar life experiences meant people felt connected. The value of social connectedness can be seen in the following:

‘I think for all of us there this wasn’t our first attempt to get healthy. I would say, that probably all of us had been around the merry-go-round and tried different things and different diets and different forms of exercise, and so we could all kind of empathise with that. I mean, not that anyone gossiped or anything but a lot of us had similar life stories. Oh, I’m late because my daughter lost the car keys or just something like that, that we could all empathise with, because we’ve all got adult children who lose the car keys. So just there was that kind of level of communication going on, and shared life experiences’ (Lyn/Int)

When the dynamic of shared experiences and understanding was discussed in the focus group, it was described by participants as a valuable part of the TR program Beat It. This discussion re-affirmed the element of connectedness that emerged from the
individual interviews as informing the theme People. Connection with others was strengthened by shared conditions, circumstances and experiences, which were considered by participants as an enabler to confidence and feeling comfortable about engaging in the program’s activities. This forged a sense of belonging, as the group ‘bonded’ more over the duration of the program. The focus group members affirmed these concepts. This is evident in the following comments:

‘Having a similar age group helped, it made me feel more comfortable’ (Liz/FG)  

‘You could relate to what others were saying, we had shared experiences and understood where we were at in life. I felt like I belonged’ (Kathy/FG)  

‘It was a group too, people with diabetes, also in the older age group where you don’t got a lot of younger people that hadn’t got the same preconditions we’ve got or the same body shape... and the same limitations and things’ (Lyn/FG)  

‘We could certainly relate to what others were saying. It’s good. It’s good to go along with a group of people. You get involved and interested in their lives, so that helps’ (May/FG)  

This sense of shared experiences and understanding appeared to also be a platform and incentive to share information and knowledge with others. This sharing particularly occurred in relation to food and dietary habits and knowledge, as Pauline noted:

‘Oh just listening to everybody else just to hear what they had to say. Some things they brought up that I didn’t really know, something about bananas, eating bananas. One of them who was a diabetic said well you shouldn’t eat a really ripe banana because
that's really full of sugar and that's the worst sort of banana. I didn't know that, yeah so it was things like that’ (Pauline/Int)

Lyn talked about sharing information leading to accountability and a sense of ‘community’:

‘The group kind of bonded after a few weeks and people talked to each other and told each other their stories and setbacks and steps forward and achievements and accomplishments and, oh crap, I had a cream cake yesterday and that kind of thing. So it was a bonding sort of exercise as well, in a way, not that I see any of those people subsequently but it was nice at the time’ (Lyn/Int)

The social connections that were established across the TR Program Beat It, progressed into more solid bonds and linkages which some described as fostering a sense of ‘community’ and nurturing camaraderie. Beth and Kerry highlighted these aspects:

‘When you're not working, you don't realise but you miss that community feeling with other people, who are not your family and not your husband 24/7, et cetera, et cetera’ (Beth/Int)

‘What kept me coming each week? I think the company... At the time we went there were hardly anybody there and the only people that were looking at anything were these young guys that were looking at themselves. It was really hilarious. They’d sit in the mirror, they’re going [laughs]. They were a bit perplexed that all these oldies were there [laughs], but they were really helpful too. They’d help with showing you how to do that, yeah, so we struck up a bit of camaraderie. So what kept me going was that’ (Kerry/Int)
Words that emerged in the focus group when discussing the sense of community and camaraderie amongst the participants during the program included: ‘friendliness’, ‘friends’, ‘understanding’, ‘fun’, ‘kindred’, ‘connected’.

‘Very much so a sense of community, of camaraderie’ (June/FG)

All other participants echoed the above sentiment expressed within the focus group, their responses were replete with enthusiastic agreement. A sense of community, camaraderie, friends, fun and connection were discussed by the focus group members as reasons for continuing to attend the program:

‘Coming in and doing it by yourself that’s hard’ (Lyn/FG), Others agreed ‘it is, it is; that’s true; yes...’ ‘Equally coming in a group and doing it together, I enjoyed that and kept coming because I like the group dynamic. If I hadn’t liked the group dynamic, I’d have stopped coming’ (Lyn/FG)

Many participants described a feeling of being encouraged by others within the group whilst in the program. They also talked about encouraging others:

‘Perseverance of some of the people there was really quite - and it was really good to watch them do it. They were feeling better about themselves. We’d joke about, you know, have you had any cuggies this week? That made me feel quite good too, just talking to different people. I think because we did a lot of mutual encouragement, I think, and they - you got it from everybody, sort of telling you, you were good’ (Bruce/Int)

‘Yeah, it was really good just meeting with people and talking with them about the things that they were going through and you see some people who are obviously going
to be struggling and I think that's - it's great to keep encouraging them just by talking
to them, being there and doing stuff with them’ (Kathy/Int)

‘We were going twice a week. I probably would've liked to have gone three times but -
and could have but didn't [laughs]. Also, the other people - we got friendly with some
of the other people there and each encouraged the others and we could joke with one
another. So it was enjoyable. There were some really nice people there’ (Beth/Int)

The focus group members explained how this sense of connection gave them the
desire to support and encourage others within the group:

‘keep together to keep going to encourage each other’ (June/FG)

Ideas relating to community, camaraderie and encouragement were discussed by a
number of participants who talked about the growth of friendships that transpired
within the group. Trish, Liz and Jill all emphasised various aspects of friendship that
manifested and were important to them. These were aspects that they valued as being
part of the program:

‘People struck up friendships. This woman she had low vision but she walked
everywhere. I used to pick her up and bring - I said don't walk I'll bring you and she
said oh I don't mind walking, but it was hot and I said let me pick you up. I value the
program that gave me the opportunity to do that and I value meeting the other people’
(Trish/Int)

‘I met a few new friends that I didn't know before - that I did this program, but there
were lots - lots that you say hello and you have a joke. Yeah it's that - the people.
Otherwise - but I like to make friends with people, and I like them to come. This lady,
and she said to me, if you come next week I'm coming. See? You encourage each other. I'm so happy now I can say I've been in gym and I did all this' (Liz/Int)

'The friends I made and the things I learnt. Because I didn't care - we could meet anyway and have a laugh and a joke and we might not see other for 12 months and still you know’ (Jill/Int)

Irrespective of friendship, all participants described how much fun they had doing the program. The ‘fun’ was often linked to connectedness with the other program participants:

'We learnt from each other because we've all got different experiences. Of course recipes, we used to swap recipes. We’d swap recipes and you'd be talking to one and I'd say Jesus I love my white bread, I don't like the seeded stuff... Because [June] was another one and she’d say - oh she's said there's nothing I can do about it. She said hubby goes down the street and buys the cheese rolls and the white bun rolls and she said oh and you can't waste it. I used to say you're worse than me. Oh she had a lot of wine last night. [Beth] used to say to me well you won't give up smoking, so I won’t give up alcohol. Well is smoking worse for you than alcohol, and I'd say would you give up your drink? No. I said well shut up. But this is the way we went on, the whole class. After we got to know each other it was just - and you'd be sitting there and you'd say - I would say [Noel] you haven't done that one and this sort of thing because one would be on this one, one would be on that one, and you wouldn't know where you were. It was so much fun, we just laughed a lot and messed with each other’ (Jill/Int)

'The classes, themselves - I think very quickly there was a nice feeling of people having fun together and doing things together’ (Beth/Int)

'I think having fun together was a really good thing. We had a good group’ (Bruce/Int)
'We had a lot of laughs and giggles you know, which - and even the men, likes [Bruce], he was one of them that was in there. He used to also torment me about being Hercules. Every day there was a laugh about something’ (Patty/Int)

‘Because the group had struck up that camaraderie. Comments would be made as you went around, oh no not this again or whatever and if you’d throw the ball and you’d miss or whatever it was hilarious a lot of the times. So it was good fun so yeah’ (Trish/Int)

The focus group members eagerly spoke over each other in their desire to talk about the fun side of Beat It and the good times they had during the program. Fun, friendship and encouragement were important to participants. Another aspect of being involved in the TR program Beat It that was discussed by participants was the concept of meeting others and ‘getting out of the house’:

‘It was fun doing it. I’ve met and made some new friends out of it. The ladies, the instructors were lovely. Yeah. Made friends and it got me out of the house. Like I said, it got you out and you got to meet people...’ (Gail/Int)

‘To come out - to come out of the house - come out of the house and move and meet people at the centre. Yeah, and I was looking forward for next week because I met a few people and they said, oh hope we’ll see each other next week - and things like that. Important for me getting out of the house, and being with people... get ready, put my gym clothes, get ready and come out of the house, do my hair. That was good. That was a good experience. Then, when I come out at finish - I sit on a bench in the park and have my yoghurt and my fruit - eat that. So that was good. If I was home probably I wouldn’t do that. Maybe I would have a piece of pizza or something. See and I was sort of motivated to be healthy and continue’ (Liz/Int)
The focus group members could relate to the positive aspect of the TR program Beat It, of meeting others and getting out of the house, but did not discuss it in any depth. However, they did mention it was their ‘space, time to get out’. This was particularly discussed in terms of caring responsibilities, specifically as grandparents:

‘A lot of grandparents do look after grandchildren and its exhausting so it’s nice to spend time for yourself’ (Kathy/FG)

The benefit of connectedness to the participants was overwhelming. Each participant actively described aspects of connectedness as valuable and a key reason for continuing to attend the TR program Beat It. Whether it be the sharing of experiences and understanding, the comfort of being with people of a similar age and condition, or another reason, all participants felt connected. This fostered learning and encouragement generally. Connectedness developed into friendship for some, and gave reason to meet people and get out of the house for others. June’s comment below summarises the element of connectedness:

‘That’s where the group, because they’re all similar ages to a certain degree, could relate to it. Where if you go somewhere where it’s all younger people and that, they say, I don’t have anything like that. What have you got? I think they said, oh yeah, I’ve got that and did you know that you can do that for that or take that or see - you know, it was kind of like an advisory thing as well. So it was good. Sharing knowledge. Experience with things. Again, I think a lot of that, the interactive type of thing is the best to get people’s ideas or see what they did. They see what happened to you and said, oh, the same thing happened to me. I do, I really believe in communication for people’ (June/Int)
3. Psychological benefits

The more abstract benefits of being involved in the TR program *Beat It*, in relation to the theme *People*, was in the form of *psychological benefits*. This encompassed emotional benefits (described by participants as relating to feelings), and mental benefits (described as relating to clarity and thinking).

*Psychological benefits* were evident in a number of participant’s responses and were affirmed by participants in the focus group. Most participants described how ‘*good*’ they felt when they were undertaking the TR program. This sense of wellbeing took a variety of forms – psychological (discussed here), and physical (which is discussed later in this chapter). *Psychological benefits* is the third element of the theme *people*.

The sense of ‘*feeling good about myself*’ and recognition of the benefits that resulted from participation in the program was expressed by Beth and Gail:

> ‘The feeling that you got. You felt good about it. You could see change. It made me feel good about myself because I had put on muscle and lost weight’ (Beth/Int)
‘It just made me feel really good. Fitter and healthier and it meant a lot. It was good...
I was really disappointed when the program finished because I loved going. It made
me feel really good, I was sorry when it ended’ (Gail/Int)

Feeling good about self, together with notions of how attending the program helped
one feel better, was specifically stated as a key benefit of participating. Bruce and Jill
discuss this:

‘The feeling of feeling good about yourself and you weren’t feeling good about
yourself this morning... Well, you just - I felt relaxed and sometimes you - if you have a
few worries, you can forget about them for the hour that you’re doing the thing and
then afterwards, they don’t seem so bad. I suppose, yes - it made you feel good, I think.
Felt good about yourself’ (Bruce/Int)

‘The major thing. Well feeling so much better. So much better about myself. You know
like I went in there doubting myself and came out positive. You know because at the
start I thought oh shit am I going to be able to do this? I proved to myself that I could.
Once I proved to myself that I could do it then I had to do better’ (Jill/Int)

The focus group participants affirmed this notion of feeling better about oneself when
active in the program:

‘I was enjoying how it made me feel about myself so I’d come along the next time’
(May/FG)

Feeling good about oneself appeared to be due to personal effort, as Noel describes:

‘I quite enjoyed it once I got there. I didn’t always necessarily enjoy the thought of it
but once I got there I always enjoyed it and I always enjoyed when I finished, I enjoyed
having done it. I enjoyed the thought that I had done it and put some effort in’  
(Noel/Int)

Lyn adds that feeling good was also about gaining personal control:

‘I felt like I was doing something to take control of my physical wellbeing. I liked the 
thought that I was doing something for my own wellbeing and my own good’ (Lyn/Int)

Other participants reported how their confidence increased, their experience became 
more positive and they became less inhibited over the time they were undertaking the 
TR program. June and Trish illustrate this in their comments:

‘As you get older your confidence goes I think. You tend to say, well, I can’t do this, I 
can’t do that and you end up - I think if you’re with a group like that who have had the 
same type of experience as in not being as fit, I think emotionally you don’t feel so 
isolated because if you go somewhere else or to other things you tend to feel, oh, they 
don’t know what I’m feeling or talking about. I said there was overweight people, 
there was slimmer people but a lot of us have got problems and I think emotionally we 
all knew that. I think if you have that, that same common denominator, it helps. I 
think exercise does make you feel better emotionally too. It does… But no, I think 
emotionally and physically it’s good for you’ (June/Int)

‘Of course, as I said, because by the time we got there, there was hardly anybody there 
so you didn’t feel - what’s the word - self-conscious and towards the end it didn’t worry 
me. I’d just go in there and all these guys are there and I’d get on the bike and yeah do 
all that, so I didn’t worry. I think I just got more confident in myself in knowing what I 
was doing and so I felt like - you know, it was like saying well, I may be not slim, taut 
and terrific but I know what I’m doing and I’m getting there’ (Trish/Int)
Psychological benefits in terms of emotional wellbeing were described positively as making a difference to the individual during the TR program:

‘I lose weight, then I put on weight again. But I thought I need more than just a walk along the beach, swimming. Something to do with emotions. Yeah, I join with this group, I do it...yes, make friends with other people, better emotions’ (Dawn/Int)

Interestingly, the key observations that participants made regarding the cognitive and mental benefits were often as a result of things that were said or comments that were made to them by other people. Pauline revealed that her son had remarked about her (and her husband’s) mental fitness during the program. Pauline’s husband did the program with her and had a diagnosis of early onset dementia. Pauline stated:

Pauline: ‘Matthew [son] was saying - he reckoned that while we were on the program we were more with it, if you know what I mean’

Researcher: ‘What do you mean by that?’

Pauline: ‘Well better mentally, yeah. I can’t say that I noticed really, no. Matthew thought that... maybe he did see a difference. He said not a lot, but some. More clear minded maybe’ (Pauline/Int)

During her individual interview, June made reference to other people’s psychological gains as a result of participating in the TR program. When the researcher probed, June disclosed:

June: ‘There was a few I think emotionally and kind of psychologically it helped them because they were with a group, they felt they were doing something. Yeah, so I think it was good psychologically for everyone’ (June/Int)
Researcher: ‘Do you include yourself in that would you say?’

June: ‘Yes, yes. Oh yeah, I do, I do’ (June/Int)

Other participants alluded to improvements in their own personal psychological wellbeing during their interviews, including being able to switch off and have time and space for themselves and doing something that was good for them:

‘Well it just - you just seemed to be able to switch yourself off. Just like I felt so much better. So much better and meeting the other people, even the like [instructors] and that, they're all lovely people. It was an outlet sort of thing. Like while I was there I wasn't thinking of anything else. Yeah, it's you know - all I was worried about is whether I was going to pull the next weight down or push it up with my legs. There was nothing else, you weren't thinking of anything else. That was the good part for me. Yeah. Time that no one else could get to me because I'd come out - each day come out and open the phone up and here there would be the messages you know. I think well serve you frigging right, you just couldn't get me’ (Jill/Int)

‘Yeah, I mean exercise makes you feel better, doesn’t it? I mean exercise in itself is a positive activity’ (May/Int)

‘How good it feel, how good your mind and body feel when you finish’ (Dawn/Int)

It was evident from the data collected, through individual participant interviews and the focus group, and then being deeply immersed in the analysis, that there were positive psychological benefits for participants in being involved in the TR program Beat It. When this element was raised during the focus group, to member check this finding, it was clear there certainly were benefits such as ‘happiness’ and ‘clarity’. The conversation during the focus group flowed with ease and participants freely discussed
this, without any show of embarrassment or discomfort. They had a sense of connection to each other which was obvious and throughout the discussion affirmed comments made by each other:

‘I did feel happier. Stressed less. I felt I was doing something for myself’ (June/FG)

‘I felt the emotional thing, the endorphins. I felt good about myself. I felt ready to face the day and any problems that I’d come across didn’t seem quite so bad’ (Bruce/FG)

‘I felt better about myself and more positive generally’ (Lyn/FG)

‘Going was my space, my time to get out’ (Liz/FG)

The psychological benefits of being involved in the program Beat It are clear and representative of most participants. This element, within the theme of people, is significant and an outcome that participants appeared to be surprised about.

The three elements of motivation, connectedness and psychological benefits are linked within the theme People and represented below in Figure 15.
The second theme to be discussed is *structure* and will follow now.

**Structure**

The second theme that informs the essence of meaning of *person-centred program efficacy* is *structure*. The participants indicated in interviews and in the focus group that the structure of the TR program *Beat It* impacted significantly on their experience of the program. Structure informs *person-centred program efficacy* by providing clear principles related to ways of working. Structure enables participants to feel comfortable and be able to engage in a meaningful way with the program. The
structure framed the participants’ experiences and gave meaning to them in different ways to their interaction with people. Structure was informed by two elements:

1. Physical benefits
2. Instructor

These elements impacted on the experience of participants during the program. Physical benefits resulted from the exercise and nutrition aspects within the structure of the program. The instructor was a central part of the structure as they influenced participant’s experience of exercise and nutrition. These elements will now be considered in order to understand the theme of structure more fully. They are outlined below in Figure 16.

![Structure Diagram](image)

**Figure 16: Elements of Structure theme**
1. Physical benefits

*Physical benefits* is an element of *structure* that emerged from the data, as outlined in Figure 17 below.

![Diagram](image)

*Figure 17: Physical benefits as element of theme *Structure*

Participants revealed in personal interviews, and again in the focus group, that they had significant physical benefits from being a part of the program *Beat It*. These physical benefits were in the form of improvements in balance, strength and agility. Physical benefits were also identified as activities that improved everyday functioning, such as walking and standing straighter. Some participants disclosed they had experienced actual physical changes to their bodies, like toned legs, arms and abdomen. Another, and important aspect of physical benefits that participants discussed in their individual interviews was the reduction in their Blood Glucose Levels (BGL). A few participants highlighted they had decreases in BGLs and reductions in diabetes or blood pressure medications as a result of exercising. When discussed in the focus group, participants confirmed the physical benefits and physical changes they saw in their bodies and in their BGL and blood pressure. Physical benefits are explicated with participant quotes following.
Balance, strength, agility and energy

Participants talked about balance, strength and agility in relation to their engagement in the program. Balance, which was described as having improved, was seen as a really important benefit by most participants. Having good balance contributed to improving many activities of daily living. Numerous comments were made by participants about this notion of balance, a few are offered below:

‘I was looking for some exercise program that I could do that was under supervision, that took into account my form of disability with my feet and my balance, because I didn’t have any - I have real problems with my balance, I’ve had several falls because of uneven surfaces. For me this really helped’ (Trish/Int)

‘I get tangled up in the balance, tangled up in me feet, umm, but yeah there are improvements there, and improvements in the fact that I can at times coordinate better. But I still need the push’ (Noel/Int)

‘The balancing was great because it’s something I wouldn’t normally do’ (Kathy/Int)

‘At the end I felt better. Way back at the beginning I feel tired, 2 months before I had a lot of fall over. 4 times. Something to do with, I don’t got balance, or strength. No fall since then, better balance’ (Dawn/Int)

‘Something that really improved with me, was I noticed my balance, that really improved. Before I had trouble, I was struggling to stand on one leg and not fall over. By the end of the program, I was standing on one leg and probably [instructor] could tell you that because I think he was amazed too, when he saw me standing on one leg for ages and not losing my balance’ (Gail/Int)
Discussion in the focus group regarding balance brought greater insight into the value of improved balance including the enhancement of confidence with regard to 'ageing better' and reducing the risk of injury to the participants:

‘Balance is definitely one I noticed improved… and I’m standing up straighter’ (June/FG)

‘My balance, it’s much better, it’s very good now’ (Liz/FG)

‘Yeah, having had parents who got older, they fell, and broke hips and things like that, and it was simply that they didn’t really trip over anything, it was simply balance. So the idea of getting my balance, getting on top of it and making it good, because I don’t want that to happen to me’ (Bruce/FG)

Balance was often grouped together, by participants, with strength. However the benefit of increased strength seemed to focus on agility and having more energy, which also contributed to better functioning in everyday activities of living. Noel describes this when he said:

‘I must be gettin’ stronger, literally, because I can pick things up and then do things ah, that I couldn’t … yeah, I don’t knock up quite as easy. Oh there’s been positive outcomes from it, that I can quantify. The wife says that I can get up. I didn’t realise that I was doin’ that until she pointed it out. You’re gettin’ up off the floor and suddenly you realise that it was, onto my arse, onto my knees and up, I’m sort of rolling over and standing up with a minimum. Standing straighter, well I’d not realised that at all, but obviously I am. Um, my knees don’t hurt as much. And they’re not very good. My shoulder doesn’t hurt as much’ (Noel/Int)
Increased strength and the affordances of this, particularly in relation to improved energy levels was identified by participants as an outcome of engagement in the program. This noted in the following comments:

‘I mean I got more - I did get more strength, I have to say that’ (Pauline/Int)

‘I felt great after it. When I’d come home, I was full of energy. I could just keep going and going. Like before, I was getting tired earlier of an evening and falling asleep on the lounge. I felt great, and I felt stronger and I felt I had more energy and I wasn’t as tired and I wasn’t sitting around as much as what I used to. It just gave me heaps more energy to do things and it impacted on my daily living too, I started going in the pool every morning and walking in the pool. I found that really good exercise too, walking in the pool and actually doing exercises in the pool’ (Gail/Int)

‘So each week, I tried to do a little bit more, a little bit more. So adding - being able to lift heavier weights or do more repetitions was - that kept me going as well’ (Bruce/Int)

‘But I found that as the weeks went on I was gaining strength and I was becoming more agile. Yeah so there was a lot of positives in it’ (Trish/Int)

Others noted that their general wellbeing and ability to navigate through the activities of living in everyday life were easier:

‘The general feeling of just feeling a bit more bouncy and being able to get through the day more easily, you know’ (Bruce/Int)

‘Then the exercises - before I started I couldn’t - my car is parked down the back. Well this comes up and then there’s another rise. I couldn’t breathe by the time I got to this door. Doing the exercises, first time ever I walked up those steps out the back that come straight up. I felt marvellous because I could do it’ (Jill/Int)
Member checking with focus group participants demonstrated wholehearted agreement with the notion of the program improving strength and agility, and all the participants felt that this in turn impacted on improving functioning in normal daily activities of living. Participants of the focus group were all in agreement with Noel that they were:

‘bending down, and getting up quicker and easier’ (Noel/FG)

Encouraging lifelong physical wellbeing and habits

Some participants described the value of learning about exercises for everyday functioning, strategies that they could take home and use in their own environment to be mobile every day. Such strategies were considered meaningful for various reasons. These included raising awareness of the importance of exercise, knowledge of what could be done in the home environment and increased motivation as noted in the comments:

‘Well, because I did that it's made me a bit more conscious of doing more things myself. Since I did it, I've gone out and bought one of those balls to do things myself at home so that's a positive. The walking that I said I'd do - well, I'm more keen to go. I don't sort of get up and think, no it looks a bit overcast, I won't go today. Maybe I'm a little bit more motivated’ (Patty/Int)

‘It was good learning how to do things I could do at home and what have you’ (Pauline/Int)

‘But what I liked about the Lakelands was that they did exercises that you could take with you, so that was good, whereas at Beaton Park even though it might've been
more structured a lot of it was on the machines, so you couldn't take that with you, stuff that you could transfer to your home’ (Kerry/Int)

The virtues of learning to exercise independently also manifested as developing ongoing habits for exercise, which is particularly important as you get older, as Dawn and June expressed:

‘Oh, walk around the track. I did that then walk in Figtree. Learn from there and take to life, yeah, walk around Figtree oval, yeah, good thing’ (Dawn/Int)

‘A major thing I got was realising that I have to have some form of exercise, to make it into a routine so it’s part of my life, not added to it, it’s part of it. It’s like an appointment in my diary that I meet someone for lunch. I do exercise in the morning or afternoon or before I meet someone I go for a half an hour walk before. I just get there earlier and just go for a walk or after. I think you’ve got to have some type of - you’ve got to realise you’ve got to do something as you get older because you definitely do need it and you’ve got the time, you have got the time’ (June/Int)

An interesting finding from the personal interviews, and also in the focus group, that was expressed was with regard to participants’ physical changes to their body and other measureable benefits such as Blood Glucose Level (BGL) and Blood Pressure (BP). This was particularly expressed by women participants who were thrilled with visible changes they were seeing:

‘I really had quite a change in my body and everywhere I wanted to lose weight, it actually helped me. I think the most amazing thing was that, when you're 65, you're 65? I never believed how quickly the body can change, even when you're older. I found that quite astonishing actually. Yes. So, it made me feel younger. I suffer from high
blood pressure. Not madly but I reduced my medication to half and it's still the same. So that's pretty good. The feeling that I got. You felt good about it. You could see change’ (Beth/Int)

‘I think the combination and the working with the weights really helped a lot, in toning up my legs and my arms’ (Gail/Int)

‘In the three months with Beat It, it (BGL) had gone down a fair bit, by about from 8.6 to about 6.6. I actually wanted to get the sugar down and to get more flexible. That was the main thing. Even though weight is good and it’s best to get weight off, that wasn’t my prime criteria’ (June/Int)

As previously suggested, physical benefits were also discussed in the focus group. Member checking demonstrated that enhanced physical results and recognition of the need to be engaging in the program encouraged many to continue with exercise, as stated in the comments:

‘The major thing I got [from the results] was a sense that I could do something about my own physical health and a sense that I wanted to do something about my own physical health and a recommitment to take it up again more seriously’ (Lyn/FG)

‘I think the experience was realising that I was quite unfit, that there were exercises I could do that I could manage as per my age, my weight, my medical history and there was other people trying to do the same thing. So that was the main thing. It was a common denominator that we were all very similar in age, weight, not exercised for a while. So I think that helped me to continue the program’ (June/FG)

An aspect for some participants of the physical benefits was their enjoyment of exercise, which lead to consideration of the program as a form of recreation, not just a
program that ‘should’ be done. Recreation was viewed individually and held different meaning for different people. Some saw recreation as being associated with relationships and connections, others with time out and a break from routine, some with fun and enjoyment, and others with leisure. These are illustrated in the following comments:

‘I didn’t go into it as a recreation thing. I went into it as a means of trying to get myself motivated, into a routine, to continue it after it finished. So once I got there and I met the people and had nice friendships with them then it became more a recreation’
(June/Int)

‘Yeah, I’m coming out and not doing housework. I’m coming for my own benefit. Yeah, it was recreation and leisure. Then, after I have my yoghurt - my lunch, sometimes I go to the little kiosk, sit on a bench, have a coffee - yeah. No, it was leisure for me’
(Liz/Int)

‘I see exercise as a form of recreation. Sometimes when it’s strenuous it’s not that much fun, it’s not that much recreation, but you know it’s doing you good. So yeah, any sort of exercise I see as… Something that you enjoy doing. Yeah, I enjoy doing it. I enjoy the sorts of exercises that we did, I enjoyed learning, so yeah, I saw it as a learning process as well as actually improving myself’
(Kerry/Int)

The importance of seeing physical benefit for participants is very clear from interviews and the focus group. Every participant mentioned an improvement in an area of physical health, as a result of being a part of the TR program Beat It. This meant for many participants enhanced functioning and ability in everyday life, as well as improved strength, balance, agility, energy and/or weight loss as articulated in the following statements by Beth and June:
‘For me, it was just finding out that my body could just be young again, in such a short time’ (Beth/Int)

‘I did find I was feeling better, my joints and everything’ (June/Int)

2. Instructor

The TR program Beat It had an instructor with participants at all times – whether they were exercising or taking part in health promotion activities and education. All of the research participants spoke highly of the instructors facilitating the program Beat It.

Instructor fits into the theme structure as outlined below in Figure 18.

Figure 18: Instructor as element of theme Structure

There were various attributes about instructors that participants made mention of in interviews that were followed up in the focus group. The key characteristics of the instructors, raised by participants, were that they ensured each program participant was treated as an individual, provided ongoing encouragement to participants and exhibited professionalism. These aspects of the element instructor will be explored in this section.
Individualised attention and activities

Being ‘made to feel like an individual’ was reported by most participants who described being treated as an individual as very important to them. Lyn’s quote summed up the sentiments of the majority of participants:

‘I would like to say again how good the instructors were and how effectively they - I mean, they did want us to do the same thing but how effectively they tailored people’s difficulties and disabilities and so on to what they were doing. It wasn’t just me. There was a range of people with a range of things wrong with them, and they were always very encouraging and always very helpful. The other participants likewise were encouraging and helpful to each other. I felt like an individual. It wasn’t sort of like a boot camp or line up and parade and march and so on. It was good. You did feel like you got individual attention and understanding, and everyone knows how important that is in your terms of learning’ (Lyn/Int)

The capacity of the instructor to tailor activities to each person’s ability level was highlighted by most participants. This was expressed in a way that represented the personal value for participants of having tailored activities. Some of the participants expressed appreciation for their instructor extending them, through the tailored exercises they were given while others acknowledged that they were being given appropriate alternative exercises to suit their physical ability:

‘You didn’t stop doing something and she [instructor] realised when someone - I was probably better at doing a lot of things than some of them. She got me doing other stuff’ (Kathy/Int)
‘There was one instructor who took me out, and a couple of other women - took us out to the other machines - the free machines. That was good because we didn't need to wait around and we could try out new things. Yeah’ (Beth/Int)

‘They were very good at coming up with a different exercise that was suitable and appropriate. For example, they would say okay [Trish] this is balance so you just need to be careful doing this. I didn’t feel put down or anything like that. They all knew their stuff really well and they always knew an alternative to - oh well, if you can’t do this one, try that one. If people felt that they couldn’t do anything they just sat out. There was no feeling of oh you’ve let the group down or you’re a woos or whatever and she was quite clear in saying if it’s too much for you just walk up and down or sit down and do it, it’s nothing. So nobody felt that we were weak, if you like, yeah. Yeah so that was a really good point about it. I think she helped people improvise where they couldn’t do a particular thing, well like the balance thing, and she’d be very encouraging... This is me, and she acknowledged that as well’ (Trish/Int)

Many talked about how they felt like a ‘person’, an ‘individual’. They described feeling like the instructor knew them for who they were and what they could do:

‘I think just the individualisation of the training and general interaction with everybody’
(May/Int)

‘The instructors were - well, they seemed really good. I felt like it was about me’
(Patty/Int)

‘When we had nutrition, [instructor], says babababa. I want notepaper, he give to me and makes it easier. It’s very tiring for me otherwise to try to hear what he’s saying. I’m grateful he look after me’ (Dawn/Int)
Focus group participants spoke about the importance of the instructor’s role and treating them as individuals, re-affirming the emergence of this element as a finding:

‘...and it was the way she, well both of them, were able to adapt. You say ‘I can’t do that because my shoulder hurts – ‘OK do it this way then’. Constant capacity to adapt to each individual’s problems. It was really good’ (Lyn/FG)

‘Yes because we did all have individual problems, that’s for sure. And they managed to find an exercise that suited everyone’s need’ (May/FG)

‘I felt like an individual, like [instructor] was there for me only!’ (Liz/FG)

An aspect of individualisation that participants spoke about was their ability to ‘choose’ within the TR program Beat It. Choice is an important aspect of Therapeutic Recreation and seemed to be evident from participants’ comments in interviews:

‘I was happy because I could choose. I could choose, and I can go on a machine - I can go on the bike - whatever I wanted to. So that was good. They didn’t say, oh [Liz] you can’t do that - you’ve got to do this - to force me. I was free to do whatever. Yeah, even talking to [June] was ok even though she tell us off, you’re not here for talking! We had so much to talk about, yeah’ (Liz/Int)

‘Well... you chose to do what you could and if you felt it was too much I didn’t do it. So I didn’t push myself any harder. I just did what I felt was comfortable and then if it wasn’t I just stopped and I didn’t feel uncomfortable about that like I have in other classes’ (Patty/Int)

Choice was described as not being a priority for some participants, although they valued that they were able to modify various exercises or requirements of the program as required:
‘But in equipment if you didn’t feel happy doing something you could concentrate on something else’ (Pauline/Int)

‘I think a lot of it was set because with a group you’ve got to have set because it’s very hard to get 10 people or whatever it was to - even then it’s hard to get them into which machine. I think you’ve got to have some type of set thing otherwise there’s chaos and they might as well do it themselves. But I think we did have choices. But I think you do have to have some type of set thing, even with us all talking, like I said, otherwise people they’ll just go off on their own tangent. Our group were very good, but I think someone said, oh, half the time they’re talking as they go in and they’re not doing as much exercise. So [instructor] goes, [June] back to work – work and talk later. I think, I know, I know and I’d go, oh, sorry [laughs]’ (June/Int)

Another part of individualisation that participants discussed was the level of control they had, or wanted, within the program. Although participants agreed a program was required, they felt it was appropriate that they could control their level of engagement and how this helped them to feel more comfortable and capable. Lyn, Trish and May said:

‘The instructors, as all good instructors should do, they had set out a program. You know there were a certain series of steps which they wanted you to go through and a certain number of repetitions which they wanted you to do and I think that’s what a good instructor does. Because I have arthritis and I have fibromyalgia, at various times I was able to say to the instructor I can’t do that in that particular way and they would modify it for me. So I did feel, yes, I had some control over what I was doing. Yeah, I could say my hip’s aching today; can I do more arms today and more legs next time? So I did feel like I had some input and some control. I didn’t feel it was rigid or too controlling. I felt it was pretty appropriate the way they ran it’ (Lyn/Int)
'Well when you've got that sense of control over anything you feel strong and able to do what you can without feeling that you're a failure’ (Trish/Int)

‘I felt like the person who was running the group was working with us rather than on us, making us do things. I felt comfortable’ (May/Int)

When member checking was undertaken within the focus group about control and their sense of control within the program, participants discussed control as it related to structure. Participants described this as a positive aspect of the program. They spoke about how they liked the structure of the program and did not feel that they lacked control over their participation. Lyn most aptly stated:

‘I like that the program had structure because I might have walked into the room and stood in the middle of the room and thought about it for 10 minutes. I thought the whole program was well organised. I thought the structure was good, the instructors were good, the equipment was appropriate, the space was appropriate. I was quite impressed with the whole thing’ (Lyn/Int)

Another attribute of the instructors’ behaviors that participants discussed was their encouragement of them. Again, participants described how this felt like they were being treated as an individual and was taken as individualised, personal encouragement:

‘It wasn't so pressured. She [instructor] would sort of constantly say to you, look, just do what you can whereas I felt with those other classes it's just boom, boom, boom, boom and if you're not doing what they're doing you feel like you're a bit of a - well not loser, but you feel like you're a bit of a failure because everyone's doing this and you can't keep it up’ (Patty/Int)
‘Well I mean the staff were lovely. The people who took us through it were wonderful and very supportive of each of us as individuals’ (Pauline/Int)

Such encouragement of participants appeared to aid in developing trust in the instructors:

‘Have people I trust tell me the right way to use equipment and talk to me, show me. That was important for me. And the instructors I like. They tell me how to do things properly, with exercise’ (Dawn/Int)

Focus group participants strongly agreed and confirmed that encouragement was an important finding. They described how the encouragement provided by the instructors, assisted them to push harder, be consistent in attending, and learn how to manage their own exercise program:

‘Their expertise guided us to the point we felt we could just keep on… and do things at home’ (Bruce/FG)

‘…and what the instructors did, as you got stronger, and better, they’d say “well to stretch yourself a bit, try doing that” and that was actually quite good. It was more of the individualisation, along with more of their competence and their level of training and knowledge’ (May/FG)

Sometimes encouragement was spoken about in a tone of jest, that the instructors appeared to notice everything:

‘Well they certainly noticed when you stopped – a bit like kindergarten teachers, eyes in the back of their heads! But she doesn't let us stop. Gets from job to job to job to job and then how the hell she'd keep track of us I don’t know. Cause one minute you’d see
her and then she's gone and she's back to you again, but I spose that's experience as well’ (Noel/FG)

**Instructor professionalism**

All participants discussed the level of professionalism demonstrated by the instructors, which they considered important. This level of professionalism was described by participants in terms of the instructors’ approaches, but also was considered in terms of the variety of exercises offered by the instructor:

‘Just not losing - not getting involved in one thing and not seeing what's going on somewhere else. [Instructor] had a good overall picture of what was going on and there wasn't a wasted moment’ (Kathy/Int)

‘The instructors were very good. One instructor was particularly good. She was about the same age as me, if not a bit older, and she was very fit and - I liked her sessions because she kept an eye on what was going on and she had two people working together on this machine and this machine, another two people on this machine and this machine, and when you've done your three sets then you'd swap over. She kept an eye on everybody and she was - she knew what everybody was doing and moved people on’ (Kerry/Int)

Some participants regarded the instructor’s age, remarking how they were ‘older women’, as contributing to perceptions of their professionalism:

‘They were with us, if you know what I mean. I guess they were older women and they were more with us. The two girls that mainly took us were more down to earth. Oh yeah, well they put you through your paces and you have to do it because you have to do it [laughs], if you know what I mean’ (Pauline/Int)
General reference by participants of respect and appreciation for the instructors’ approaches and professionalism were made. Such comments indicating the importance of such qualities and the effect this had on the participants’ experience of the program:

‘And they were good; I really appreciated what they did. They were... well, professional is a word to say and good. And ah, put up with a hell of a lot from us’ (Noel/Int)

‘I thought it was great. So good work for everyone, great trainers, great dietician with [health promotion instructor] too. That was great. There was debate with the diet thing, which is good’ (June/Int)

Professionalism was linked to fun by most participants, which has been discussed previously in theme one People, and the element of element Connectedness. Beth though, succinctly stated it as:

‘They [instructors] made the classes, themselves - I think very quickly there was a nice feeling of people having fun together and doing things together’ (Beth/Int)

Clear and knowledgable teaching was considered as being an important aspect of the professionalism demonstrated by the instructors. Participants were grateful that they were being appropriately educated on how to engage in the exercises and found the nutrition sessions highly beneficial because information was being explained clearly and thoroughly:

‘I think because she knows what she's doin', she's directin' me through what she knows, she's teaching me, she's actually teaching me what she knows. It's just that it takes a long time to learn. With this program, I have no problem whatsoever with being shown, taught, told, and ah (pause) I haven’t been criticised a lot, which is a
good thing about teaching, because sometimes she probably wanted to hit us over the head with a hammer... but no, she'd come back and tell you what you were doing and what you were doin' wrong. Or on occasion, if you had a thing, like a bad shoulder, which I have, she'd sort me out’ (Noel/Int)

‘But it was all those - it's hard to explain because it was just enlightening in a lot of respects. You know because as I said you go to places where they're talking about diabetes and every frigging thing else and this - like we had one that you don't eat anything with sugar in it, nothing with sugar. Yeah and that was the good part about it. And having someone like [health promotion instructor], but he did, he explained it that I understood it. A lot of them don't. They tell you the facts but they won't listen to your questions. I like to - if they're going to teach me something, teach me, but don't go around it with all the bullshit. Just come straight out and say what you want to say. Like and we had a lot of laughs with [health promotion instructor]. Like because - well it's different things about food or drink or you know and that. But he answered the questions that I needed answered. Do you know - and a lot of them don't. As I said the dietician I couldn't understand half of what she was frigging saying. That really pisses me off when you pay money to go and see someone and no that was not on. So I didn't go back to her. Simple enough: if I don't like you I don't go back. I don't have the patience for that shit’ (Jill/Int)

Teaching was particularly discussed in terms of the health promotion aspects of the Beat It program. Nutrition talks were given every second week along with some goal setting work to help with nutritional planning. Many participants felt that the Australian Diabetes Council had not provided current information and they understood this caused difficulty for the instructor presenting this component of the program Beat It:
‘One of the problems were - this is going back to [health promotion instructor] again - was some of the information in that information session that he was running, was not the latest thing. [Health promotion instructor] knew it too [laughs]’ (Bruce/Int)

‘Yes. I’m not happy with them [Australian Diabetes Council] at all. I was looking forward to the whole three-month thing as an opportunity to learn a whole lot more about diet and nutrition and exercise, and it just didn’t happen because it was set at a level which was appropriate for some of the people in the group, but not appropriate for everybody in the group. That’s a difficulty for the people presenting it. For instance, my sister’s sitting there with a PhD in the subject being lectured on how to set a goal. I realise you’ve got to be able to reach the lowest common denominator. As a teacher I know that, that you’d sometimes be labouring what seems terribly obvious to half the class and is going right over the heads of the other half’ (May/Int)

Despite the perceived lack of currency of information that participants identified, they still acknowledged learning and having fun whilst doing it with the health promotion instructor who maintained professionalism throughout the sessions:

‘[health promotion instructor] laughed too, when we had to bring our - what we had eaten for the past week or something. Our diet or something like that. Then he said about wine too and, oh no. We’re not putting that down [laughs]. That’s not food’ (Bruce/Int)

‘Yeah, it made me feel good, and I look forward to seeing them next week. Then, especially [health promotion instructor] when he was telling us - about diabetic and all that, and I knew about portions and eating healthy, that was so helpful to listen to that. I think you need reminding all your life’ (Liz/Int)
‘[Instructor] realised that people were wanting to have input. He was able to pick up on that and give them more input but it was just - a lot of it people knew about already’

(Kathy/Int)

‘It was a learning curve because I’ve never understood anyone like I have with [instructor]. They’ve said the same things and put it - but they don’t want to listen to you. Of course there was arguments: one was saying you should do this and [instructor] disagreed, some of us would disagree’ (Jill/Int)

Overall, due to the participants perception of the professionalism of the instructors involved in the program Beat It, participants identified that they learned skills and gained knowledge that took them to the point of being able to do things themselves:

‘The program helped me to feel like I could do it. Yeah. Yeah, that it is - just ways to do it. One woman in particular gave us - you could work two parts of the body at the same time or if you’re doing a set of one - a set of exercise, you don’t really need to rest in between because you can be doing another part of the body while you’re resting the first part, so just little things like that’ (Kerry/Int)

‘Yeah and particularly as we got on. Sort of by about half way through the program, we all knew what we were doing - what we came for, what we were doing. By that stage, one of the instructors was called away because her daughter was sick at school and we just kept on going and kept on going until, I think, she turned up sort of for the last 20 minutes or something like that. We’d just done it all. We organised ourselves. So it didn’t really matter, you know’ (Bruce/Int)

Member checking in the focus group, regarding the role of the instructor and how they influenced the experience to the participant in the TR program, confirmed that participants could not speak highly enough of the instructors in the program Beat It.
This was in describing both the exercise and the health promotion instructor. When statements or comments were made about any of the instructors’ approaches, there was always strong agreement and confirmation by others within the focus group:

‘You need [instructor] there or someone of that ilk to push you. I’d have stopped coming if the instructors weren’t up to a good standard’ (Kathy/FG)

‘It was good having the two (instructors) there because they had two different styles and that was good’ (Bruce/FG)

‘It was obvious she (instructor) teaches a lot of older people’ (Noel/FG)

The above discussion of the element, Instructors, illustrates how valuable these roles are to the efficacy of a TR program. Instructors ensured the participants were engaged meaningfully and treated in a person-centred way. Gail summed up the general feeling about the instructors in her comment:

‘I suppose they demystified the gym aspect for me and also made me realise well there’s other people in my situation that are sometimes worse off than me, but also made me realise that I could do more than I thought but I need to keep it up’ (Gail/Int)

The elements of Physical Benefits and Instructor have now been reported under the theme Structure, as seen in the figure below.
This chapter has presented the research findings as a result of van Manen’s methodical, systematic and analytical six step approach to data interpretation. The meaning of the TR program Beat It, for people with diabetes, emerged through methodical synthesis of participant voices in interviews and a focus group. How person-centred program efficacy gave meaning to participants’ experiences of being involved in the TR program Beat It was revealed. This was a constitutive pattern in the research study, which consisted of two themes: people and structure. People entailed three elements: motivation, connectedness and psychological benefits. Structure consisted of two elements: physical benefits and instructor.

The voices of the participants were intentionally privileged to understand the essence of meaning attributed to being involved in the specialised TR program Beat It. A
summary statement resulting from the synthesis is offered in Figure 20. Many of the original words delivered by participants in their interviews have been used to embody this meaning.

The essence of meaning that people with diabetes attribute to being involved in a specialised TR program is about personal value, about feeling like an individual. It is about learning new things; doing exercise within personal capacity; ability to be involved; and interacting with other people. The opportunity to interact with other people and have a bit of chat and work up a bit of a sweat is important. The sense of doing things that would not normally be accessible and enjoying the process helps the individual form habits and routines that lead to improved physical, emotional and mental health. All of these aspects lead to empowerment, self-efficacy and feeling valued as an individual.

Figure 20: The meaning of the TR program *Beat It* for participants
Chapter 5 – Discussion

Introduction

This chapter builds on Chapter 4 Findings and uses existing literature to demonstrate alliance of meaning. The aim of the research was to provide understanding of the essence of meaning that people with diabetes attribute to being involved in a specialised TR program. That is, to theorise what it is like for the participants to experience the phenomenon of the TR program. The use of van Manen’s (1990) methodical structure enabled me to reflect the participants’ voices as unique and an expression of their lived experience or embodiment of being involved in a TR program.

This discussion will “interpret the meaning of something (by) actually interpreting an interpretation” (Gadamer 1986, p.26). That is, the discourse within this chapter will invite new thinking as the reader opens themselves to the “experience and origin of lived meaning, and the meaning of meaning in human life” (van Manen 2014, p.213), where human life represents the participants lived experience in the TR program.

Chapter 4 presented a description of the participants’ lived experiences, that is, the findings of what the TR program meant to them as an individual. In many ways, it was factual in nature, presenting the results of data analysis. This chapter discusses the meaning of these findings by focusing on an exploration of what the identified phenomena means for participants. This is achieved by offering considered interpretations of results and by engaging in dialogue with existing literature. van Manen (2014, p.391) describes this type of approach as “reflect(ing) on life while reflecting life”. He explicates that the phenomenologist will not outline a categorical
argument, but will be more allusive, guiding the reader to reflect on the lived experience portrayed.

In order to effectively achieve this, the chapter is presented in two sections. The first section focuses on the essence of meaning and has been organised in a way that mirrors the findings, illustrated in Chapter 4 as themes and elements that were identified. The themes being *people* and *structure*. Each of the associated elements relating to the themes are explored and discussed in relation to existing literature. The elements that will be discussed are, *motivation, connectedness, emotional and mental benefits, physical benefits* and *TR facilitator/instructor*. These elements informed the essence of meaning, which was to provide understanding of the meaning that people with diabetes attribute to being involved in a specialised TR program.

The second section of this chapter focuses on theoretical links and contributions of theory to the research study. Within this chapter some tables and/or figures that were previously presented in the findings chapter will be repeated. This is deliberate and intended to contribute to ease of reading.

The predicking assumption of this discussion chapter is that phenomenology is a philosophic mode of questioning rather than answering or discovering definitive conclusions (van Manen 2014). The phenomenological approach, as elucidated in the Research Design chapter (Chapter 3), is hermeneutic. That is, it reflects upon the pre-reflective lived experience and then interprets it to bring about possible description that is meaningful of human existence as living through it (van Manen 2014). Therefore, as a researcher who is eager to be faithful to this approach, I relied upon each participant’s story as told by them. This appreciation and presentation of
embodiment enables deeper understanding of the nuances of the lived experience. As van Manen (2014, p.36) reminds us, we see “the ordinary and the extraordinary, the quotidian and the exotic, the routine and the surprising, the dull and the ecstatic moments and aspects of experience as we live through them in our human existence”.

Through this pre-reflective experience the essence of the participant’s story is sought. van Manen (1997 & 2014) describes this essence as description of phenomenon that enables an uncovering of internal meaning structures within the lived experience, such that significance of the lived experience is grasped.

Lived experience in this research was explored in people with diabetes undertaking a TR program involving exercise, healthy eating and health promotion. All participants were over 55 years of age, with the majority being over 60, and retired from paid employment. As such, they were classified as older adults. I am cognisant that the use of the phrase older adults is fluid, with definitions varying and knowing that it is a contested space.

The term older adult was used in a recent systematic Cochrane review that examined the effects of exercise interventions on balance in 94 randomised controlled studies with 9821 people over 60 years of age living in the community (Howe et al. 2011). Gilroy (2008) undertook a review of international literature to examine the impact of dwelling environments on older people. Her review found that people over 55 years are considered to be younger older adults, as members of the first Baby Boomer generation who are retiring and moving into the older adults group (Gilroy 2008). Participants in my research described themselves as ‘older’ adults, frequently using the
term ‘older’ when referring to themselves. Respecting their choice of nomenclature, this is the term I have used for the participants in this research study.

The literature establishes that older people benefit physically, cognitively and socially from being engaged in community recreational activities (Huang et al. 2015; March et al. 2015; Ng et al. 2015; Nishiguchi et al. 2015; Patil et al. 2015; Stanley et al. 2010). Community recreational activities “support healthy ageing” (Young et al. 2015, p.2). Therapeutic recreation is an excellent means of enabling older people to participate in community programs, allowing them “to be more productive, useful members of society and more independent in their life choices, while at the same time reducing the level of community expenditure and burden” (Stumbo et al. 2015, p.36). Stumbo et al. (2015) also assert that older people with chronic conditions (such as diabetes) participating in TR in the community experience opportunities that allow them to maintain abilities, contribute to a cause or to others, draw on past roles and skills, and improve their self-belief.

Although TR has traditionally been used in institutional settings, it is globally being used more frequently in community settings with older people (Fogarty, Farrell & Gutmanis 2014; Stumbo et al. 2015). Community based TR programs have demonstrated benefit to individuals, with key considerations being to help people regain function, stability and/or independence (Zabriskie, Lundberg & Groff 2005). TR programs are increasingly being used for health promotion (Austin 2004; Stumbo & Peterson 2009) and the TR program in this research (Beat It) is an example of this. It is, therefore the Beat It program that is contemplated, when considering the essence of meaning.
Section 1 – The essence of meaning

People

![Figure 21: People theme and elements]

The first theme, *people*, consists of three elements: *motivation*, *connectedness* and *psychological benefits*, see Figure 22. *People*, refers to stories by participants that centred on concepts that were meaningful to them as a person. That is, these concepts had significance for them as an individual. The theme *people* is about how the identified elements impacted the individual and made a difference to them in their daily life and to the way they engaged in the TR program. The three elements reflect meaning at a personal level. The theme *people* relates to the three identified elements in a positive and person-centred way, in a manner that emphasises the participants’ conceptualisation of health and wellbeing. That is, what health and wellbeing means to the individual undertaking the TR program and how the program contributes to establishing meaning relating to these things.
Motivation

Many chronic diseases in developed countries, as defined in the Definition of Key Terms, can be attributed to behaviour choices and lifestyles (Hagger et al 2014). Diabetes is an example of a chronic health disease that can be influenced and managed with exercise and good nutrition in any age group, including older people (Waterman et al. 2014; Apostolopoulos et al. 2014; Stessman & Jacobs 2014). Given the disease can be prevented through lifestyle and behaviour, it is important to understand how to get people to exercise and eat well. This research examined this issue and contributes to this knowledge gap. To understand why an individual will engage in and adhere to an exercise and health promotion program (or not) is inextricably linked to the individual’s motivation (Ryan et al 2008). Understanding motivation and its contributing factors is essential when planning for maintenance and improvement of an individual’s health (Hagger et al. 2014; Linmans, Knotterusu & Spigt 2015; Ng et al. 2012), as it has been found to determine how likely a person is to engage in an activity or program (Boudreau & Godin 2014; Centis et al. 2014; Delahanty et al. 2006). The participants in this research described factors that
motivated them as an individual, both internally and externally, which gave personal meaning to the TR program they were involved in.

The participants expressed that their primary motivation to join and participate in the TR program *Beat It* was because the program was accessible. For participants, accessibility meant that it was ‘free’. That is, they did not have to pay to attend the *Beat It* program. Although the original intent of the TR program was to appeal to people with diabetes of any age, it attracted older people who were retired. These participants described being conscious of ‘having to manage their money carefully’. The appeal of a program that was free was significant to this group. Such an accessible program, as participants described it, enabled them to act on internal drivers, or an intrinsic motivation that had previously not been able to be acted upon due to cost. As a group of people with generally lower financial provision (see Table 9 below), Bukman et al. (2014) remind us that older people often have less opportunity to be a part of lifestyle programs due to monetary constraints. Participation in exercise programs is influenced significantly by cost (Barrett et al. 2007; Lascar et al. 2014; Penn et al. 2013). Engagement in physical activity that assists people to age in good health while enjoying quality of life are critical considerations for practitioners and policy-makers (Cheng, Pegg & Stebbins 2015). Opportunities to be involved in a program such as the TR program *Beat It* can contribute to quality of life in terms of better-quality health, sense of empowerment, improved physical ability, and engaging in social networks (Gilroy 2008). Eliminating issues associated with cost facilitates opportunity to be involved. Once cost is removed, personal motivation takes effect, according to participants in this research.
Table 9: Payment rates for age pension

<table>
<thead>
<tr>
<th>Pension rates per fortnight (&gt;65 years of age)</th>
<th>Single</th>
<th>Couple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum rate (after income and assets testing)</td>
<td>$788.40</td>
<td>$1188.60</td>
</tr>
<tr>
<td>US dollar equivalent amount</td>
<td>$567.86</td>
<td>$856.12</td>
</tr>
<tr>
<td>Euro equivalent amount</td>
<td>€525.10</td>
<td>€791.65</td>
</tr>
</tbody>
</table>


Older people are often in a lower socioeconomic group and their lifestyle decisions are often determined by the cost of things (AIHW 2007; American Psychological Association (APA) 2015). As such, they will not engage in an exercise and health promotion program, no matter their level of motivation if they cannot afford it. Participants in this research spoke about many exercise programs being ‘just too expensive’ and not affordable ‘for people on our income’, even though they described how it would be ‘good for our diabetes’. As described in Chapter 2 in more detail, income is a determinant of physical activity engagement. Participants described how the Beat It TR program being free enabled them to be involved. No associated costs facilitated them to act on their internal motivation to exercise, as many had ‘never been able to afford to pay to join a gym’. The participants spoke of how the program being free was ‘attention getting’ and ‘was definitely a motivator’, as illustrated in the comment:

‘There was a poster in the doctor's surgery and so I took down the number and I rang. It was saying have you got diabetes? So, yes, I have. Then it said, do you want to do
something about it? Exercise does help for diabetes, that type of diabetes. So I thought, yes, and they said, it's a free program because I'd just kind of left work, so financially, I thought, no, I've got to do something and I thought, I'll give it a go and see what happens’ (June/Int)

During phase two of the research, when data was synthesised and member checked during the focus group interview, some participants described how they were unable to continue to exercise following the completion of the TR program due to cost. In fact, only one person indicated that he had continued to access the gym and be a part of an older persons program. Cost is a significant barrier for older people and people on lower incomes to accessing gyms or exercise programs (Penn et al. 2013; Gilroy 2008). It was clear from participants’ narratives that the cost of gym access inhibited formal maintenance of exercise and physical activity. They lamented that they would have loved to continue the program or something similar to engage them socially and physically, however, discretionary money to spend on this was not always available:

‘As I said I loved every minute of it, loved it. If I can and if I can afford I will be going back. I’ve actually thought of hinting to my daughter that she can give it to me for a mother’s day present’ (Jill/Int)

Participants valued the availability of the TR program at no cost. They spoke about how they appreciated the opportunity to be involved in it and how the very fact that it was free was ‘a big incentive to be involved’. Some appreciated this accessibility from an intrinsic perspective of affording them the opportunity to be ‘able’ to ‘be healthy’ and to enjoy ‘leisure’. That is, it enabled them to participate, which was the motivator. Others viewed it as a motivational strategy. Participating in the Beat It program meant
they could ‘exercise more’ which would result in less health ‘claims’ to the government by people with diabetes in the future. Keeping people with diabetes in the community is a priority, with a focus being on self-management and facilitative behaviours to maintain a healthy lifestyle and thereby prevent potential co-morbidities (Shields et al. 2013). Cogswell and Negley (2011) advocate that by increasing opportunities to support individual autonomy, the potential to increase internal motivation for improving healthy lifestyles can occur.

Despite free access being suggested by all participants as an important motivator in this study, Waterman et al. (2014) found in her study in the USA with 1254 women with chronic conditions (e.g. diabetes, obesity, hypertension) that this was not the primary motivator. Waterman et al. (2014) used quantitative data methods including Chi square tests and logistic regression with the aim of determining program participation and then subsequent gym membership activation for the women that participated. The authors found that only 40 percent of participants with chronic conditions joined an exercise program once given free access. This study did not find that eliminating financial barriers had the same impact as I found in my research.

Participants spoke of a motivating factor to join and attend the TR program being ease of access to the centre where the Beat It program was being conducted. The convenience of the program being ‘close by’ and being ‘easy to get to’ with ‘easy parking’ and bus stops nearby for the ‘free bus’, were described by participants as motivating factors. Indeed, the Beat It program was situated in a leisure centre that is bypassed by the city’s ‘free bus’. This ‘free bus’ does continuous loops around the city with multiple bus stops. The ‘free bus’ or Gong Shuttle as it is known comes along
every 10 minutes. See figure 23 below for a map of the free bus route and location of the leisure centre.

Figure 23: Free Bus Route
Public transport enables older people to mobilise within the community more freely, particularly when the transport is affordable, reliable and stops near services used by the older person (Gilroy 2008). This is of particular importance in a population that may need to give up driving due to health conditions. Poor transport can increase social isolation and loneliness for the older person (Stanley et al. 2010), thereby hindering opportunities for access to programs that may be beneficial, such as those for the person with diabetes. Perceived access to the facility is positively connected with initiation (and maintenance) of exercise and health promotion programs (van Stralen et al. 2009; Guicciardi et al. 2014). Research by van Stralen et al. (2009), Sallis et al. (2007) and Barrett et al. (2007) suggests that in adults over the age of 50, environmental factors are particularly relevant to their sense of safety and therefore linked to their motivation to join exercise programs.

‘Yeah, and they were easy places to go to, easy parking and everything was easy which made it easy to get to’ (Kerry/Int)

Stumbo et al. (2015) suggests that any people with chronic conditions such as diabetes can experience more barriers to engaging in TR programs than those who do not have such conditions. Factors that make participation difficult include decreased physical strength, coordination, social isolation, or lack of awareness of opportunities for people with their condition (Stumbo & Peterson 1998; Darawad et al. 2016).

Within the element of motivation that participants discussed as being an external motivator, was the sense of safety they felt inside the centre, where the TR program was being conducted. Participants described how they wanted to join an exercise and health promotion program but felt ‘intimidated’ to enter a gym, or ‘put off’ by the
‘body beautifuls’. This sense of safety, which was talked about as physical but also emotional, was important to the participants’ motivation in this research study. Many said they felt a sense of self-consciousness due to their age and weight and they didn’t want to be ‘judged’. Feeling embarrassed or uncomfortable is a common reason for failure to participate in an exercise program (Guicciardi et al. 2014; Penn et al. 2013). In this study, once the participants joined the program and saw the environment and the people they would be with, they said they felt ‘safe’. This then gave them ‘confidence’ and ‘motivation’ to continue with the program. Barriers to engaging in TR programs such as not feeling ‘safe’ can be overcome with well designed programs that cater for individuals and allay fears (Stumbo & Peterson 1998). Safety in the Beat It program was enhanced because other group members shared the same ‘issues’ and were able to understand mutual physical conditions and life experiences.

‘I didn’t want to be with a lot of younger people that didn’t have the same preconditions we’ve got or the same body shape and limitations and things’ (Lyn/int)

The connection with others (which will be discussed in the next element connectedness) contributed to participants feeling ‘safe’. This in turn meant they felt comfortable to walk into the gym and confident to workout as they ‘felt included’ and had their own ‘group’. Barrett et al. (2007) discuss this and highlight the importance of ensuring participants feel comfortable with others in the environment so that they will engage meaningfully with a program. The environment, says Gilroy (2008), in which people gather to exercise and socialise must accommodate the older persons’ concerns around self-consciousness and needs to ensure they feel comfortable so there is smooth interplay between the ageing body and the environment. Participants
spoke of how the safety felt by connecting with others was enhanced by the physical ‘space’ in the gym, the physical environment in a separate room. This was particularly due to their physical capacity and challenges of ageing, such as decreased balance. Sylvester (2011) promotes the importance of environmental physiognomies, which have been recognised in the TR literature as critical to a program’s success, where the environment is not just about geographical layout or architectural design. This feeling of being ‘safe’ contributed to motivating participants to continue coming each week. It enabled them to feel competent and therefore to increase in confidence. Ryan et al. (2008) claim that these factors affect a person’s experience and contribute to people feeling motivated.

Participants described how their families played a part in stimulating their motivation to join the TR program. They described this as being ‘motivated by others’. Social support and prompting from family members to manage their diabetes or their weight (or both) encouraged participants to join the program. They described this type of encouragement as an ‘external force’; one which roused their enthusiasm and reinforced underlying internal motivation. As such, it played a strong role in participants’ enrolment in the TR program. Some participants said they had been ‘nagged’ to join, others used the word ‘encouraged’, but all were appreciative of the family support in the management of their diabetes. Receiving support from significant others has been identified as a very influential means of assisting motivation to join an exercise program (van Stralen et al. 2009; Tulloch et al. 2013), particularly in older people with lower financial capacity (Bukman et al. 2014). When family are involved in the program with the person in some capacity, whether physically or in a supportive role, sustaining commitment to the program is better, self confidence is improved, and
better habits are formed as the person feels more supported and understood (Hu et al. 2014; King et al. 2010; Rosal et al. 2011).

‘My granddaughter saw it in the paper and started nagging me, and the result was (laughs)… I’m definitely out of condition, definitely overweight, definitely... I don’t know... I was thinking about some exercise program, this one just, this one... I didn’t know what it was but I thought I’d try it’ (Noel/Int)

A number of participants stated that the routine of the TR program - going to the gym twice a week to exercise and once a fortnight for healthy eating and health promotion sessions – was also an external motivator. The participants described seeing the ‘value’ of a routine to motivate them to attend so that they ‘got out’ and ‘did it’. Otherwise a number of participants confessed they would ‘do nothing’. Graffigna et al. (2014) and Grandes et al. (2009) highlight that ensuring efficacy of any exercise and/or health promotion program is reliant on the individual finding regularity in exercise and making it part of their routine. Routine contributed to a number of elements that had meaning to the participant, as they were involved and as they committed to be involved, this was affirmed in comments such as:

‘I find I do things better in a group or if they’re more structured than what I’d do myself...saying I’ll be there at 11 o’clock meant I was more inclined to do it’ (Gail/Int)

Commitment to the TR program was linked to motivation, almost in a cyclical way with each bolstering the other (see Figure 25 below). Participants spoke of needing to ‘honour’ the decision to attend and how they were motivated to attend because they had ‘agreed to something’. Participants regularly referred to the ‘commitment’ they had made and how they didn’t miss classes unless they ‘had a bloody good reason’.
They explained this as ‘the way (we) do things’. Even when they didn’t feel like attending, they would still do so, because ‘the commitment was there’, even if that meant ‘forcing’ themselves to attend. The focus group described this as being related to ‘their generation’ where ‘verbal contracts’ meant something. Deal (2007) identified that older generations of people believe they are hard working and consider younger generations as having less work ethic and hence lower levels of commitment to complete processes. Henry (2015) adds that older people have been described as being more concerned with process than results, and are portrayed as having a strong sense of loyalty. In this study, participants’ loyalty was their commitment to the program and this loyalty was a motivating factor.

Figure 24: Motivation to commit to the Beat It program

Marketing of the Beat It program, through advertising and word of mouth, were outlined by participants as strong attractors to join. This initial prompt stimulated an
underlying internal motivation, so although advertising may not be described as a motivator per se, it should be considered important in raising awareness and perhaps giving the individual a prod (Smith 2013). Yang, Kim and Yoo (2013) found that individuals are able to discriminate information quality in advertising and so will choose to follow-up when it is perceived as useful to them. When advertising is emotionally based it can drive internal motivation, associating this with the concept of autonomy that is a central tenet of motivation within self-determination theory, discussed later in the chapter (Yang, Kim & Yoo 2013; Deci & Ryan 1985).

Internal motivation was a strong driver for participants to join the TR program Beat It. All participants described factors about Beat It that were meaningful to them. These included personal desires they had regarding their health and wellbeing. Participants discussed that they thought that these desires would be met by joining the TR program. Personal desires included a number of factors such as, wanting to exercise and/or lose weight, wanting to improve blood glucose levels, wanting to try a gym and/or resistance work, wanting to be with others and share experiences with people at a similar stage of life and with a shared condition, wanting to get out of the house, wanting to develop a habit of exercise and make lifestyle changes and wanting to be involved in health promotion and receive nutritional advice.

Physical benefits are discussed later in the chapter as bringing meaning to the individuals participating in the TR program. However, participants also identified that physical benefits were a motivator to join Beat It. Participants expressed how they wanted to ‘lose a bit of weight’. Older people with diabetes, when motivated, according to Valencia, Stoutenberg and Florez (2014), are able to lose weight and by
doing so can experience considerable mobility benefits. Lascar et al. (2014) found a key factor to motivating people with diabetes to exercise is an improvement in body image. The research team established this by interviewing 26 people with diabetes in the United Kingdom and developing a matrix of themes. Initiation of physical activity has been linked with a person’s desire for good physical health, feeling that they are overweight and wanting to lose weight (van Stralen et al. 2009). Participants knew that by improving ‘blood sugars and weight’ that their health would improve. Exercise, say researchers like Stanton, Reaburn and Happell (2013) and also Balducci et al. (2014a), has been proven to improve glycaemic control and weight control. Hence, when participants recognise this, and take ownership for their own health, they are likely to initiate exercise with an expectation of weight loss and better management of blood glucose levels (Tulloch et al. 2013).

Ability to access a gym and undertake resistance work was described by participants as a strong motivator for them to join the TR program. A belief existed in the participants that resistance work (using weights to improve strength, power, endurance and stamina) (Stanton, Reaburn & Happell 2013) was required, particularly as you ‘got older’. Literature supports this belief, with research demonstrating that resistance work in older people improves physical functioning by increasing strength and improving functional ability, such as balance and stair climbing, preventing osteoporosis and decreasing falls and fractures (Liu & Latham 2009; Stanton, Reaburn & Happell 2013; Wimalawansa 2013). Both the Australian Diabetes Council (2014) and the American Diabetes Association (2016) recommend resistance training at least twice a week (where there are no contraindications), to contribute toward substantial health benefits (Annuzzi et al. 2014). Health benefits of undertaking resistance
training also contribute to mental health and quality of life indicators (Balducci et al. 2014a; Nicolucci et al. 2011).

Participants also identified being able to ‘interact with other people’ as a motivator to join the TR program. Connecting with others is an element of the findings that is discussed later in this chapter as bringing meaning to participants. However, it is relevant to note that many participants were seeking this type of connection before joining the TR program and so it is also a motivating factor (Johnston et al. 2012). Evidence such as that offered by Armstrong and Sigal (2013) suggests that exercising with a friend or in a group is a motivating factor in helping people to form a habit of exercise. More older people choose to exercise if they can do it with others in a social manner with the possibility of forming friendships (Skov-Ettrup et al. 2014; van Stralen et al. 2009).

‘Coming in and doing it by yourself that’s hard’ (Lyn/FG), Others agreed ‘it is, it is; that’s true; yes…’ ‘Equally coming in a group and doing it together, I enjoyed that and kept coming because I like the group dynamic.’ (Lyn/FG)

Graham (2012) argues that habits of exercise can be difficult to establish, particularly so for older people and especially once they have retired. For people with diabetes, habits of exercise are essential, and described in literature by researchers such as Wilmot (2014) and Ferriolli, Pessanha and Marchesi (2014), as necessary for management of diabetes by reducing postprandial glycaemia. Some participants spoke of the desire to establish ‘lifestyle habits of exercise’ as motivating them to join the TR program. This was often spoken of in conjunction with social connections. Habits of
exercise are essential to prevent a sedentary life, which may then lead to social isolation (Graham 2012).

With this backdrop of creating a healthy habit, participants saw health promotion, nutrition and exercise as a ‘holistic’ approach to health. They suggested this to be a ‘habit’ that they wanted to be a part of. This, they said, would ‘contribute to their own health and wellbeing’. Shields et al. (2013) asserts that a holistic approach should be the focus of all diabetes programs where participants can take control of the management of their disease to create the best physical, mental and emotional state possible for the individual. Taking control and being supported to be autonomous in managing their disease and their health generally, is essential for people so they can make internalised decisions and integrate their motivation towards positive action (Hill & Sibthorp 2006; Cogswell & Negley 2011). Having choice and a locus of control is identified in the TR literature as crucial to growth and behaviour change (Stumbo & Peterson 2009). Locus of control is defined as “the degree to which the reinforcement is contingent on one’s own behaviour rather than on control by other persons, chance, fate, or luck” (Laffrey & Isenberg 2003, p. 453). It is strongly associated with motivation and engagement in health promoting activities and behaviours (Laffrey & Isenberg 2003; Russell et al. 2015).

Positive experiences in TR programs have been asserted in literature as increasing the participant’s sense of internal control, and this, suggests Fogarty, Farrell and Gutmanis (2014), positively affects change within their life. Community based health promotion TR programs should encourage participants to take responsibility for their own wellness and thereby foster an internal locus of control and an increased ability to
manage change (Stumbo & Peterson 2009). Even where a TR program is fairly prescriptive (as Beat It was), the individual needs to be encouraged to be as autonomous as possible, so as to promote the outcomes of the program. When personal choice is increased within a TR program, life and leisure satisfaction is enhanced and participants are far more likely to benefit and see results (Stumbo & Peterson 2009; Stumbo & Peterson 1998). This has been concurred in research by Graffigna et al. (2014), which explored reasons for disengagement in exercise and self-management of diabetes. Using narrative enquiry with 29 people with diabetes and analysis using an interpretative frame, found that it is only when a person with diabetes feels they have a sense of control in managing their choices, interactions and participation in the TR program in a behavioural, cognitive and emotional sense, that real engagement will occur and personal health will be prioritised. The importance of accommodating participant choice within a program and enabling flexibility for people with diabetes is, according to Morrison, Lowe and Collins (2014), paramount so that people are able to engage at their own level and not feel like they are being stereotyped with no individuality. Collaboration with participants by program designers increases participants locus of control so they are more likely to maximise the opportunity of the TR program (Fogarty, Farrell & Gutmanis 2014). Participant choice is strongly associated with locus of control. This will be discussed within the element TR Facilitator/Instructor. Being supported to be competent and autonomous, enables control and Hagger et al. (2014) along with Bailey, Kang and Schmidt (2016) suggests, nurtures growth and maintenance of positive behaviours. This will be expanded in section two of this chapter where theory is explored in relation to the findings.
Success in attaining, maintaining and self-regulating changes to health, depends on an individual’s motivation (Linmans, Knottnerus & Spigt 2015). Without internal and external motivation, it is unlikely that initiation of exercise and/or joining an exercise and health promotion TR program will occur. Without involving people in the process of communication about what in fact motivates them to exercise and seek an improved health status, it is unlikely that a TR program will be successful. Strategies may be targeted at the wrong people. If individuals do not feel some type of engagement, commitment and maintenance will not occur (Linmans, Knottnerus & Spigt 2015). Even if the program appears to be efficacious to the program developer, March et al. (2015) suggest that if the people involved in the program are not finding personal meaning then efficacy is not achieved. Achieving sustainability of a TR program and having a positive impact on clinical factors relating to diabetes is important. Enabling people to find meaning through being involved in the TR program will in turn have an effect on clinical factors. For both to occur, the people who undertake the TR program must be proactively involved in program development to ensure their needs are met (March et al. 2015; Riddell & Sigal 2013).
The findings offered in Chapter 4, illustrated that the experiences among the participants and reasons for engagement in the TR program were strongly related to factors associated with connectedness. Connectedness, which is presented as an element under the theme people, in the findings (Figure 26) has been informed by the factors of: social connection with others, shared understanding and experiences, and having fun. All of the factors informing connectedness were identified as key to enjoying participating in the TR program with participants describing that it became a motivator to attend the group (as identified in element motivation), ‘The internal motivation came from being with the other people’ (Bruce/FG).

Social support and connection with others has been reported to be an influential aspect of engaging in physical activity (Guicciardi et al. 2014; Gallagher et al. 2014). So too is the experience of exercising with others in a program, as it has been found to be enjoyed more when people are connected (Armstrong & Sigal 2013; Skov-Ettrup et al.)
All of the participants in this research identified that they ‘looked forward’ to attending Beat It, as they felt ‘included’. Meeting, talking and interacting with ‘like minded’ others, on a regular basis was seen as valuable. This value of engagement was viewed in both a social capacity and from an educational perspective, where participants received feedback and had accountability. Being part of a group can help people feel more accountable and this can contribute to their motivation to continue (Bukman et al. 2014). Ryan et al. (2008) claim that when people feel connected in a group setting, trust ensues which facilitates internalisation to occur. Ng et al. (2012) conducted a meta-analysis of literature related to self-determination theory as a workable, conceptual motivational framework for understanding the internalisation of health-related behaviours and their outcomes. They found that relatedness with others heightened people’s openness to information and hence commitment to recommendations, actions and behaviours. Participants in my study talked about how they ‘wanted to hear from other people’ about how they were managing their diabetes, and how they maintained discipline with diet and exercise.

‘Just meeting the people and there was all - there was so much in it really that it meant to me the learning process. It was interacting with the other people’ (Jill/Int)

People with lower incomes (for example, older people who are retired) identify that they prefer to undertake exercise with others and they also like to receive health promotion and nutritional advice in the company of others (Bukman et al. 2014). ‘Listening’ to the instructor and to ‘others’ (group members) about the ‘different things with diet’ was spoken of as important to learning and engagement, ‘it was nice to hear
it in a group’. This, coupled with ‘getting positive reinforcement’ and ‘positive feedback’, were clearly outlined as meaningful to participants. Participants described the notion of doing things together and learning together as an experience of feeling ‘included’.

‘The group kind of bonded after a few weeks and people talked to each other and told each other their stories and setbacks and steps forward and achievements and accomplishments and, oh crap, I had a cream cake yesterday and that kind of thing’ (Lyn/Int)

Being included built a sense of community and often friendship. Participants talked about ‘missing’ the ‘community feeling’ now that they were retired. Retirement is often associated with a sudden lack of structure in one’s life and as a result social identity and roles are questioned, and opportunities for social connection and relationships are missing (Penn et al. 2013). Participants reflected on how the TR program gave opportunity for relationships with others. Relationships are thought to be the foundation of society and according to Sylvester (2011), Evans, Hartman and Anderson (2013), and Hutchinson (2011), TR programs are a key facilitator of relationships. Schleien et al. (2014) conducted research on how TR programs contribute to the development of relationships and friendships and how such programs are able to foster social bridging and bonds amongst participants. In earlier research, Sylvester (2011) and Devine and Parr (2008) also found relational connections are established in TR programs as participants share common bonds and seek similar outcomes. The TR program in my research attracted a range of ‘different people’, but all of whom had diabetes as the common bond. This then, was the point of homogeneity, which the participants described as ‘really good’, being able to
interact and ‘encourage’ each other. Despite differences, a ‘very real sense of community, of camaraderie’ (June/FG) developed, as did friendships. Trish illustrated this when she said:

‘People struck up friendships. This woman she had low vision but she walked everywhere. I used to pick her up and bring - I said don’t walk I’ll bring you and she said oh I don’t mind walking, but it was hot and I said let me pick you up. I value the program that gave me the opportunity to do that and I value meeting the other people’ (Trish/Int)

The sense of community led participants to feel comfortable and be able to enjoy themselves more freely and openly with people other than their family. Participants identified that they had fun and developed camaraderie with others as a result of being involved in the TR program. Participants articulated that ‘having fun together’ was pivotal to their experience and engagement in Beat It. All participants reminisced in interview about the ‘laughs’ and ‘giggles’ they had, the ‘fun’, and the ‘hilarious times’, with comments such as:

‘We had a lot of laughs and giggles you know, which - and even the men, like [person named], he was one of them that was in there. He used to also torment me about being Hercules. Every day there was a laugh about something’ (Patty/Int)

Fun and enjoyment are often cited in literature as being positively associated with engaging in physical activity with others (Porter, Shank & Iwasaki 2012; Skov-Ettrup et al. 2014; Lascar et al. 2014; Tulloch et al. 2013). It is projected that enjoyment and fun are outcomes of personally meaningful experiences (Porter, Shank & Iwasaki 2012; Porter, Iwasaki & Shank 2011). People are not completely homogenous and, despite
having some aspects of homogeneity like having diabetes, what is meaningful to one person may differ to another. However, in my research, all participants described how it was the ‘people’, the ‘group’ that made the experience meaningful and fun to them personally. Participants discussed how they enjoyed getting to know the other participants and spending time with them. This, they said, facilitated commitment to attending the TR program and to exercising, essentially so they could connect with others, and feel like they did ‘belong’. By experiencing personal meaning through being a part of the TR program, many participants expressed a heightened sense of positivity (Porter, Shank & Iwasaki 2012; Fogarty, Farrell & Gutmanis 2014), a ‘nice feeling’, a sense of ‘hope’ that they did not have prior to being a part of Beat It. Johnston et al. (2012) along with Bailey, Kang and Schmidt (2016) remind us that positive experiences occur when social connections are made with others in a group setting. Finding meaning in the activity allows for promotion of health in older people living in the community and thereby improves a leisure lifestyle (Fogarty, Farrell & Gutmanis 2014).

Older people (over 65) desire social engagement and as such, says Stumbo et al. (2015), seek opportunities to be involved with others. The social aspect of a TR program is attractive to this population, and this sense of connectedness often means more than the actual exercise component (Johnston et al. 2012). To have fun and be with others is an instigator and motivator, in this sense, the activity of exercising is done for the sake of the activity itself, although the benefits of exercise are recognised (Skov-Ettrup et al. 2014). Although not all participants enjoyed exercise, they said they enjoyed being a part of the TR program. Integral to the Beat It program though, were two exercise sessions per week. The exercise sessions ensured connections with others
and concomitantly meant they had fun with those people. ‘Being with like-minded people made the experience enjoyable and exercise bearable’ (Pauline/Int).

Participants explained that people were important in terms of connection, and that connections were enhanced as the group had shared understanding and experiences. Being with ‘like-minded’ people assists with overcoming embarrassment (Penn et al. 2013), increasing empathy and understanding (Johnston et al. 2012) and facilitates the development of mutual support and encouragement (Song & Kong 2015).

‘You could relate to what others were saying, we had shared experiences and understood where we were at in life. I felt like I belonged’ (June/FG)

Participants, although heterogeneous in many aspects, had numerous common life experiences, which appeared to enrich the sense of connection with the others in the TR program. When people described how they ‘told their stories’ to each other, they recounted how a ‘bond’ developed between them as they shared their mutual experience of diabetes, and of their lives. This further enhanced their confidence and feeling comfortable with each other (Lascar et al. 2014). This ‘company’ where ‘body shape’ and ‘limitations’ didn’t matter, and where participants were able to understand each other, subsequently enriched the TR program for participants as they exercised and learned together in a community group setting (Justine et al. 2013; Roberts & Bailey 2011; March et al. 2015). This was affirmed in comments such as:

‘Knowing it was a group too, people with diabetes, also in the older age group where you don’t got a lot of younger people that hadn’t got the same preconditions we’ve got or the same body shape... and the same limitations and things...’ (Lyn/FG)
Other research studies have found that physical outcomes and benefits are often not the key reasons for participating in a TR program, although this is generally how such programs are justified, but that it is the connectedness with others that is sought. Johnston et al. (2012) undertook a mixed methods exploratory study in Canada where 20 participants with a chronic disease were surveyed prior to attending a focus group to explore the influence of attending a self-management exercise and support program. The research team found that although participants enjoyed the program, they valued the social connectedness most highly and therefore it was social engagement that motivated them to continue to attend the group. In research conducted by Iwasaki et al. (2006), 26 people with diabetes from a western Canadian town were involved in one of three focus groups to examine the meaning of active living and its relation to stress. The research team used a phenomenological approach to determine meaning as it connects to physical activity and coping with stress. They found that meaning associated with physical activity was related to social, spiritual, cultural and empowering factors rather than physical benefits for this group of people. Connection with others is often more highly sought than any potential physical benefit of engaging in programs involving physical activity. Emotions and perceptions are more positive when stemming from ‘getting out’ into the community, ‘meeting others’, making ‘new friends’, and exercising (Ryan et al. 2008; Malpass, Andrews & Turner 2009). Therefore, understanding participants’ perspectives is necessary and should be included in the design and evaluation of a TR program. Doing so will ensure person-centred interventions are more likely to occur. This will be discussed later in the chapter.
Within the element of psychological benefits (Figure 27), participants spoke of a number of factors that had meaning for them whilst in the TR program. Psychological benefits are inclusive of emotional and mental benefits that were identified by participants. Positive feelings and enhanced positivity, were spoken about by participants as emotional benefits. Improvements in clarity and thinking were described by participants as mental benefits. Thus, participants thought of mental benefits in terms of physical changes like better memory and clearer thinking whilst they thought of emotional benefits in terms of affect, such as feeling more positive. Both emotional and mental benefits inform psychological benefits and are thus discussed as such.

Delaney, Crandell and Barfield (2014) found in their research that non-competitive exercise based TR programs can enhance the mood and self-confidence experienced by participants as they undertake a TR program. Additionally, Ferriolli, Pessanha and
Marchesi (2014) and Skov-Ettrup et al. (2014) discovered in their research that self-esteem and perceived quality of life were enhanced during TR program participation.

Participants spoke of how being a part of the TR program made them feel good about themselves. They verbalised that they felt, ‘so much better about myself’. This then led to coming ‘along the next time’ as ‘doubt’ was left behind and ‘positivity’ replaced it. This was often attributed to personal effort and control:

‘I felt like I was doing something to take control of my wellbeing. I liked the thought that I was doing something for my own wellbeing and my own good’ (Lyn/Int)

Increased confidence was a psychological benefit outlined by participants. Confidence is often linked with coping and adaptation skills in TR literature (Stumbo & Peterson 2009), particularly in relation to the participant’s illness or disease; in this case diabetes. According to Hebblethwaite (2013) and Song and Kong (2015) feelings associated with increased wellbeing and improved self-determination and coping contribute to successful and healthy ageing in older people. Participant 2 illustrated this when she said:

‘As you get older your confidence goes I think. You tend to say, well, I can’t do this, I can’t do that and you end up - I think if you’re with a group like that who have had the same type of experience as in not being as fit, I think emotionally you don’t feel so isolated because if you go somewhere else or to other things you tend to feel, oh, they don’t know what I’m feeling or talking about. I said there was overweight people, there was slimmer people but a lot of us have got problems and I think emotionally we all knew that. I think if you have that, that same common denominator, it helps. I
think exercise does make you feel better emotionally too. It does... But no, I think emotionally and physically it's good for you’ (June/Int)

Acceptance of self, coping with illness (diabetes) and adapting to undertaking the TR program whilst feeling in control, led participants to speak about how they felt more ‘positive’ during their TR program. This was sometimes related to accepting personal limitations due to their diabetes and then ‘just getting on with it’. This concept is discussed in literature by researchers such as Song and Kong (2015), as realistic optimism and enables older people to adapt and continue to experience good health (Ebrahimi et al. 2012; From, Johansson & Athlin 2007), as can be gleaned from the comment:

‘I think I just got more confident in myself in knowing what I was doing and so I felt like - you know, it was like saying well, I may be not slim, taut and terrific but I know what I’m doing and I’m getting there’ (Trish/Int)

Older people frequently discuss health in terms of mental or cognitive ability and emotional energy as well as physical ability (Song & Kong 2015), thereby conveying a real sense of ‘wellbeing’, which was frequently mentioned by participants, such as:

‘Well, it helped my overall health- as I said, because getting out and constantly being with other people instead of just sitting at home and doing nothing. So all of that’s good for your health and your wellbeing’ (Patty/Int)

Participants spoke of ‘wellbeing’ and ‘positive’ emotional benefits as extending meaning to their experience in the TR program. These benefits are influenced by positive thoughts, which contributed to enjoyment and fulfillment in ‘having done it’.

Older people with chronic diseases (diabetes) who are more physically active,
commonly express more positive thoughts than negative ones which, say Guicciardi et al. (2014), encourage the individual to carry out and commit to the TR program. The participants spoke of the positive outcomes; the ‘pros’ of doing the program and how they ‘loved going’. Such positivity resonated in all participants, many of whom expressed they were ‘sorry when it ended’ as they didn’t feel the same level of positive emotion and thoughts. After cessation of the program, the psychological benefits were not present anymore to the same degree according to participants.

‘I was really disappointed when the program finished because I loved going... Like, I've kind of gone back to feeling the way I did before now because I'm not doing that anymore’ (Gail/Int)

Some participants talked about how they had ‘better emotions’ during the TR program. Typical psychological benefits from engaging in TR programs are decreased symptoms of anxiety and depression and increased emotional control (Stumbo & Peterson 2009). Huang et al (2015) undertook a study in Taiwan that involved 57 elderly adults (over 70) who were randomly allocated to one of three groups – physical activity, cognitive behaviour therapy, or a control group. Following a twelve-week time period, results indicated that participants in the physical activity group had less “depressive symptoms” and a raised “quality of life” (Huang et al. 2015, p.1549). The research team considered how the participants perceived more social support and as a consequence felt more positive. Hermanns et al. (2015) and also Gallagher et al. (2014) contributed to discourse that people with diabetes are more prone to forms of depression, which can be linked with poorer long-term management and prognosis.
active, there is a higher incidence of positive thoughts (Guicciardi et al. 2014). This is particularly connected to their diabetes management and they are more likely to be engaged in other aspects of their health, such as diet and nutrition (Gallagher et al. 2014). Reduction in depressive symptoms in the older person can lead to improved quality of life by reducing social isolation and loneliness (March et al. 2015). By engaging in physical activity and group education, health promotion interventions such as the Beat It program, have been found to reduce loneliness and social isolation in older people (Cattan et al. 2005).

In addition to increased risk for depression, research such as that undertaken by Ferriolli, Pessanha and Marchesi (2014), Umegaki (2010) and Chau et al. (2011) identifies that older people with diabetes are also at greater risk for cognitive decline. For many older people, some aspects of memory and attention start to decline due to decreasing white matter in the brain associated with ageing. As a result of these physiological changes, the processing of information can become more difficult (Fogarty, Farrell & Gutmanis 2014; Filley 2012; Glsiky 2007). However, it is known that the brain remains plastic in older people (Fogarty, Farrell & Gutmanis 2014; Law et al. 2014) and so any intervention that encourages brain health should always be promoted. Nishiguchi et al. (2015) studied 48 older people in Japan who were randomly assigned to an exercise group or a control group. Those allocated to the exercise group undertook a 12-week exercise program. The research team used pedometers, a cognitive ageing test (MMSE), other tests to assess memory and cognitive flexibility, and magnetic resonance imaging (MRI) to assess participant’s physical and cognitive function. Nishiguchi et al. (2015) found the participants in the exercise group had increased physical performance, better memory and improved
executive function. People with higher levels of physical activity report enhanced mental health (Law et al. 2014), greater quality of life (Apostolopoulos et al. 2014; Conn, Hafdahl & Mehr 2011; Valencia, Stoutenberg & Florez 2014), and improved cognitive function (Lautenschlager et al. 2008; National Institute for Health and Clinical Excellence, 2014; Yardley et al., 2013). Participants in my research talked about feeling more ‘clear minded’ whilst undertaking the TR program. Some described how their family thought that they were ‘more with it’ when they were participating in Beat It. TR programs can help older people to engage in strategies that improve memory, that promote positive attitudes, and that assist in emotional awareness and care which can promote an increased quality of life (Fogarty, Farrell & Gutmanis 2014; Stumbo & Peterson 2009).

Psychological benefits were spoken of by participants in terms of the emotional benefits that had meaning to them, more than the mental benefits. They particularly related the mental aspect of psychological benefits as meaningfully associated with positivity and having ‘space’ from the mental pressures of life, as highlighted in this comment:

‘Well it just - you just seemed to be able to switch yourself off. Just like I felt so much better. So much better and meeting the other people, even the like [instructors] and that, they’re all lovely people. It was an outlet sort of thing. Like while I was there I wasn’t thinking of anything else. Yeah, it’s you know - all I was worried about is whether I was going to pull the next weight down or push it up with my legs. There was nothing else, you weren’t thinking of anything else. That was the good part for me. Yeah. Time that no one else could get to me because I’d come out - each day come out
and open the phone up and here there would be the messages you know. I think well serve you frigging right, you just couldn't get me’ (Jill/Int)

Participants talked about how they felt ‘less stressed’ when they were exercising as part of Beat It. Indeed, physical activity has been demonstrated to improve psychological resilience and hence reduce and manage stress (Apostolopoulos et al. 2014; Lavie et al. 2011).

‘I did feel happier. Stressed less. I felt I was doing something for myself’ (June/FG)

Delahunty et al. (2006) and then again in 2013, suggest that perception of personal stress has been demonstrated to be lower in people who exercise regularly and who are open to being involved in group or intervention programs. When support is present in such programs, self-efficacy is increased and management of diabetes improves, including meeting recommended exercise guidelines (Hu et al. 2014; Strom Williams et al. 2015).

‘I think emotionally and kind of psychologically it helped because we were with a group, we felt we were doing something. Yeah, so I think it was good psychologically for everyone’ (Gail/Int)
It is clear in the literature, and is discussed by researchers such as DeWeese et al. (2015), that the structure of a training program and the manner in which it is delivered can strongly impact the individual’s experience and performance outcomes. All 15 participants in this current study described how aspects of the structure of Beat It impacted on their lived experience of the TR program. Structure enabled physical benefits and it was influenced strongly by the instructor approach and relationship with them as an individual (Figure 28). Each of these will now be explored.
Physical benefits

Physical activity is beneficial for healthy ageing (Young et al. 2015), enabling an individual to grow older in good health with independence in daily living and interacting within society (Murtagh et al. 2014). Multiple studies by various researchers, some of which are cited below, have demonstrated that regular exercise in older people with diabetes leads to significant improvements in physical functioning (Patil et al. 2015; Apostolopoulos et al. 2014; (NICE) 2014; Villareal et al. 2011; Ferriolli, Pessanha & Marchesi 2014; Balducci et al. 2014b; Wozniak et al. 2015). When people with diabetes see physical benefits from exercise, they are more likely to be motivated to continue (Lascar et al. 2014). Physical ‘results’ identified by participants in this research encouraged their ongoing ‘commitment’ and for them to exercise ‘more seriously’. The person’s physical experience during exercise and then the ensuing results were important in terms of making sustainable lifestyle changes (Toft & Uhrenfeldt 2014). Merleau-Ponty, a prominent phenomenologist from the 20th
Century, states that the lived body is habitual (van Manen 2014) and hence physical benefits drive ongoing motivation and commitment. Participants in TR programs typically state that by engaging in the program they have a healthier physical condition, evident by such things as better mobility and improvement in other health indicators such as joint mobility and blood pressure (Stumbo & Peterson 2009). The participants in this research identified multiple physical benefits associated with balance, strength and agility as meaningful to their lived experience.

**Balance**

When balance is reduced in older adults, Howe et al. (2011) remind us that there is higher risk of falls and generally a higher likelihood of decreased physical functioning, increased dependency, and illness. These risks are increased in older people with diabetes and Ferriolli, Pessanha and Marchesi (2014) suggest that this can lead to a decreased quality of life due to possible loss of independence and increased frailty.

Gilroy (2008) and Song and Kong (2015) uphold that healthy ageing and quality of life are aligned to health, empowerment, mobility, functional abilities and independence. Participants in my study spoke of all these aspects and how they contribute to them being able to ‘age better’. They appreciated their improved balance as a means of reducing the risk of injury and providing ‘confidence’ to be more mobile – in the gym exercising, at home, and in the community. They described their balance as much improved, and of being able to ‘stand on one leg and not fall over!’ The importance of balance was highlighted in comments such as:

‘Yeah, having had parents who got older, they fell, and broke hips and things like that, and it was simply that they didn’t really trip over anything, it was simply balance. So
the idea of getting my balance, getting on top of it and making it good, because I don’t want that to happen to me’ (Bruce/FG)

Gilroy (2008) suggests that decreased balance and mobility leads to muscle wastage as well as cognitive decline. In older people with diabetes, a common condition is neuropathy, where sensation to the feet is diminished due to chronic damage of the nerves caused by microvascular complications, and consequently balance is impaired (Weber, Weberova & Meluzinova 2014). So for participants, seeing improvements and managing daily activities with confidence was ‘valuable’. Participants described how they were able to ‘coordinate better’ and that they felt ‘stronger’ in their daily living activities.

**Strength**

Participants described how their strength had improved as a result of being part of the Beat It program. Older people with diabetes have increased risk for loss of muscle mass, which results in decreasing strength. This, asserts Ferriolli, Pessanha and Marchesi (2014), is more pronounced in women. Getting ‘more strength’ was perceived by the research participants as important and of benefit to their life generally. Further, the participants saw value in doing resistance exercises for strength building. Resistance training is a good option for older people with diabetes as it enhances physical functioning and leads to greater strength and balance (Howe et al. 2011). This is particularly so for lower body strength, which assists walking, sitting and other functional activities (Ferriolli, Pessanha & Marchesi 2014; Porter, Shank & Iwasaki 2012; Patil et al. 2015).
Researchers such as Apostolopoulos et al. (2014), Gunnell et al. (2014) and Verwey et al. (2014), recommended that resistance training is undertaken twice a week, which the TR program Beat It ensured in combination with some aerobic training. Aerobic training improves short and long term glycaemic control (Ferriolli, Pessanha & Marchesi 2014) and as such, is an important part of exercise programming. Some participants described how ‘dancing’ (aerobic training) was ‘the best’, but recognised that not everyone thought this.

A number of participants discussed resistance training and the enjoyment this evoked as well as the physical benefits they experienced. Resistance training is commonly recommended as a strategy to improve muscle mass, strength and power. These aspects of an exercise program are all recognised by researchers such as Brady and Straight (2014) and Yardley et al. (2013) as positively influencing physical function and independence in older adults.

‘Gaining strength’ was especially mentioned as contributing to activities of daily living and improving agility to assist in daily function. Participants spoke about being able to ‘get up off the floor’, ‘stand straighter’, ‘walk better’, ‘walk up stairs’ without getting out of breath, having ‘more energy’, feeling ‘energised’ to increase other forms of exercise, particularly as body parts like shoulders and knees ‘don’t hurt as much’. The ability to do things independently and complete activities of daily living is strongly associated with health (Song & Kong 2015). The lived experience of participants was that activities of daily living were generally easier and so the physical benefits gave direct meaning to the individual and how they lived their life with diabetes.
Individuals who are in supervised exercise programs have demonstrated improvement in joint function, which Balducci et al. (2014b) suggests enhances their ability to walk more easily and with less pain in their feet, hips and knees. Participants in this research, shared stories of how their joints ‘felt better’ and their knees, feet and shoulders ‘didn’t hurt as much’. Participants shared that as a consequence of exercise, their posture and gait were ‘better’. These health benefits were viewed as meaningful and reason to continue with the TR program notwithstanding all the other stated benefits.

‘I felt, and people said I was looking fitter, I was walking better. That was the other thing. Even my mother, who’s 87, said you’re walking better, and the balance’
(June/Int)

Physiological changes such as decreased blood glucose levels (BGL) and decreased blood pressure (BP) were expressed by participants as meaning lower levels of medication and more wieldy management of their diabetes. Exercise, says Malpass, Andrews and Turner (2009), is an important part of providing a sense of control over a period of time of such physiological signs. The Beat It program incorporated aerobic and resistance training, which are known to improve and control BGL and blood pressure. The combination of these two modalities of exercise has been shown to affect significant improvement of diabetes in older people with the disease (Ferriolli, Pessanha & Marchesi 2014; Evert & Riddell 2014; Yardley et al. 2013). Glycaemic control achieved through regular exercise contributes to decreased mortality risk (Brown et al. 2014). Participants spoke about ‘feeling younger’, how their lives were ‘easier’ and that they had reduced their medication, some ‘to half’. Pride was evident
as participants shared their stories of achievement in making changes that meant a better, healthier and ‘easier’ lifestyle.

Other physiological changes that were specifically mentioned by female participants was the toning of their bodies that they (and others) had noticed. Women valued ‘toning up arms and legs’, whereas men valued strength for functional activity such as ‘bending down and getting up quicker and easier’. When participants talked about specific results that had meaning to them, they attributed them to the behaviour changes and commitment to the TR program that they had made. Penn et al. (2013) and Tulloch et al. (2013) report similar responses in their research studies, which explored participant perspectives. Participants in both studies had diabetes and undertook an exercise intervention. Penn et al. (2013) interviewed 15 participants in the United Kingdom about their behavioural changes and maintenance of new behaviours after completing a ten-week exercise program. Tulloch et al. (2013) interviewed 28 people who participated a 6-month exercise program in Canada. Both research teams confirmed that analysis of recurring themes from interview highlighted positive feedback and that results led to participants continuing in the program. The Beat It program had similar positive effects as described in the comment:

‘I really had quite a change in my body and everywhere I wanted to lose weight, it actually helped me. I think the most amazing thing was that, when you’re 65, you’re 65? I never believed how quickly the body can change, even when you’re older. I found that quite astonishing actually. Yes. So, it made me feel younger... The feeling that I got. You felt good about it. You could see change’ (Beth/Int)
Because participants could ‘see change’ and they ‘felt marvelous’ and ‘more bouncy’, they were able to ‘get through the day more easily’. These results were described as valuable by all participants.

**Habits of exercise**

Another physical benefit identified by participants as valuable to their lifestyle and management of their diabetes was learning about exercises to take home and do in their everyday environment. They said this led to ‘habits’ in exercise and often changed their perception of exercise from ‘work’ and ‘effort’ to a form of recreation and leisure:

> ‘Yeah, I’m coming out and not doing housework. I’m coming for my own benefit. Yeah, it was recreation and leisure. Then, after I have my yoghurt - my lunch, sometimes I go to the little kiosk, sit on a bench, have a coffee - yeah. No, it was leisure for me’

*(Liz/Int)*

Fogarty, Farrell and Gutmanis (2014) investigated a community based TR program in London in which 46 older people were engaged. They interviewed seven of the participants about their perceptions of exercise and recreation and using t-tests found significance in the results. The research team found that when exercise is perceived and appreciated as a form of recreation, it can lead to decreased mortality, a delay in the onset of cognitive deficits, and increased wellbeing. A few years earlier, Berger (2011) had results with older people with chronic disease, finding that when participants’ viewed exercise as recreation or leisure, it contributed to successful ageing and quality of life. The meaning behind the leisure experience is imperative to understanding activities that can be done to achieve personal and program goals. In
older people, the meaning of leisure has generally been found to be associated with enjoyment, connecting with others, learning, and taking time out (Pereira 2008; Pereira & Stagnitti 2008). TR programs are also sometimes referred to as leisure programs, particularly in the USA (see Definition of Key Terms).

Stumbo and Peterson (1998) in their Leisure Ability Model state that focus in TR programs should be more about leisure and not physiological health outcomes. This implies improved independence and satisfaction in undertaking leisure activities, making them a lifestyle. Leisure enables opportunities to try new things, practice new behaviours, meet new people, and learn safely (Stumbo & Peterson 2009).

Riddell and Sigal (2013) remind us that in order to maximise physical benefits, progress in helping people incorporate more exercise into their lives in an age and disease appropriate way, is essential. Physical benefits were meaningful to the participants in my research study as it gave them a greater ability to perform activities of daily living. They enjoyed the exercise, saw it as a form of leisure or recreation and started to make it a part of their life and routine.

Instructor

Figure 29: Instructor element
Instructors in the TR program *Beat It* were personal trainers with a Certificate IV in Fitness (see Definition of Key Terms). These trainers had also completed a two-day specific training course with the Diabetes Council of Australia and successfully undertaken a practical, oral and written exam to be accredited to work with this population of people (ADC 2011).

Support from the instructors was described by all participants as crucial to enabling a meaningful experience during the *Beat It* program. Participants spoke of how the instructors treated them as individuals and encouraged them personally throughout the TR program. All participants expressed how they valued the ‘professionalism’ of the instructors as it helped them to feel like they were in ‘good hands’. There is strong evidence that the manner in which the program is presented to participants can make a profound difference to the outcomes (DeWeese et al. 2015). The role of the instructor is therefore, critical to the lived experience of the participants, helping them to achieve desired personal and program outcomes and reduce barriers that may exist (Stumbo & Peterson 1998).

The role of the instructor is one that enables internal control in participants, increases personal motivation, enables choice and alternatives when required, facilitates a sense of “flow” in the individual (Stumbo & Peterson 2009, p.22), and “optimal experience” (Stumbo & Peterson 1998, p.85). In my research study, these were evident in the form of attention, encouragement and participants’ personal control and choice. These are discussed below.

Participants spoke about feeling ‘valued’, being treated as an ‘individual’. They talked about feeling like the program was ‘tailored’ for them around their own abilities and
their ‘individual problems’. This meant instructors had to adapt and modify as required. Instructors also extended those who could ‘do more’, as explained in the comment:

‘Constant capacity to adapt to each individual’s problems. It was really good...You did feel like you got individual attention and understanding, and everyone knows how important that is in your terms of learning’ (Lyn/Int)

Some participants said they felt like the program was ‘about them’, as though the instructor was there for them ‘only’. This sense of personal attention and consideration of the individual by the instructors contributed to person-centredness within the TR program. Such an approach, says researchers such as Ferriolli, Pessanha and Marchesi (2014), Muller-Riemenschneider et al. (2008) and Rousseau (2014), helps to improve physical parameters along with functional independence, self-esteem and quality of life. One participant affirmed:

‘The instructors were - well, they seemed really good. I felt like it was about me’

(Patty/Int)

Participants described that the individualisation within the TR program meant they felt they had choice. Choice is an important aspect of Therapeutic Recreation that the literature discusses in terms of self-efficacy and contribution to individual health and wellbeing (Stumbo & Peterson 2009; Siegenthaler 1997; Centis et al. 2014). Being able to ‘choose’, and not feel ‘forced’ was identified by participants as important. They appreciated the fact that the Beat It program was not like a ‘bootcamp’ where they were ‘ordered’ around or ‘marched along’, for example the comment:
‘I wasn’t pressured. I could control it, and the leader - [instructor] - they would always keep an eye on everyone. That made me happy, and if I was doing it the wrong way, they would correct you; this is the way how to do it’ (Liz/Int)

Some participants said they were not looking for choice but could see how the instructors weaved structure and personal choice together to cater for individual needs and requirements. This further supports the person-centred approach taken to the TR program as noted in the comment:

‘I think you’ve got to have some type of set thing otherwise there’s chaos and they might as well do it themselves. But I think we did have choices. But I think you do have to have some type of set thing, even with us all talking, like I said, otherwise people they’ll just go off on their own tangent’ (June/Int)

It appeared that participants found that individualisation and choice could be given almost surreptitiously. They appreciated structure and direction, which the instructor gave, but felt in control as the instructor built individual allowances into each session without making a big deal of it. These allowances were tailored to each person according to disease or age-related barriers they may have been facing and further contributed to commitment to the program (Valencia, Stoutenberg & Florez 2014; Balducci et al. 2014b).

‘I sort of obeyed and listened - whatever. Yeah, I didn’t want to change anything - any other choices, no, I didn’t want to do anything different, because sometimes [instructor] used to take us outside for a walk, or inside - so everything was perfect. Yeah, I didn’t want any changes’ (Gail/Int)
Choice is strongly associated with locus of control, an important facet of therapeutic recreation that TR literature discusses. TR literature recognises a personal sense of control as important so that the individual is motivated to achieve the desired end and take responsibility for their own behaviour and results (Stumbo & Peterson 2009), or perhaps be more accountable for their actions (Schulte, Rothaus & Adler 2014). van Stralen et al. (2009) and Strom Williams et al. (2015) assert that older people who perceive they have control over their actions and choices are more likely to commit to programs and find personal success, in whatever form that looks like to them. This concept was discussed earlier in the chapter in the element psychological benefits.

Finding flow is described as matching the challenge of the activity to the participant’s skill level and ability (Stumbo & Peterson 2009; Stumbo & Peterson 1998). The instructor needs to be able to accurately and appropriately assess the participant’s skill level, ability and activity requirements and bring these into harmony. Comments by participants such as ‘I felt like an individual’ demonstrated the instructor’s aptitude in enabling this flow to occur in the Beat It program. Flow has also been linked to extending and growing capacity in the participant (Csikszentmihalyi 1990; Nakamura & Csikszentmihalyi 2002).

Participants discussed the structure of the TR program as being of good quality, which gave them ‘confidence’, but also a ‘time’ and ‘place’ to be each week. This sense of routine gave ‘inclination’ to be there and ‘do it’. van Stralen et al. (2009) found similar responses in their literature review that examined the determinants of physical activity initiation in people over 50. The authors examined 59 studies that were randomised controlled trials, quasi-experimental studies, intervention studies or observational
studies. van Stralen et al. (2009) were particularly interested in exploring participant perceptions of the quality of programs to maintenance of exercise throughout the program. They found an association between the instructor’s efficacy and participants’ maintenance of exercise.

Participants in my research expressed appreciation about how the instructor was there ‘with’ them. They reported this as ‘encouraging’, and they valued the support and guidance given by the instructors. This was also highlighted as helping participants feel less embarrassed or intimidated (Tulloch et al. 2013). Janiszewski, O’Brian and Lipman (2015) and van Stralen et al. (2009) also found that instructors who individualised support were highly regarded. The participants in my study said they felt like a ‘person’ rather than a collective anonymous part of the TR program. Participants talked about how they appreciated and valued the teaching that instructors gave them during the TR program – both formally in the nutrition/health promotion sessions, and more informally during the exercise sessions. The instructors were appreciated for their knowledge, for ‘knowing what they were doing’ (Noel/Int).

The nutrition sessions in the TR program were criticised by some participants as not being current from their perspective and knowledge. That said, they were quick to defend the instructor and say that they thought it was the Australian Diabetes Council who had not provided current material for use in the program, which made it difficult for the instructor to deliver current information. Ongoing education in nutrition and healthy eating has been outlined in literature as crucial in managing diabetes and as being more effective in group settings for older people (Janiszewski, O’Brian & Lipman 2015; Huang et al. 2014; Evert & Riddell 2014). This opportunity in the TR program
could have been enhanced with more current information, particularly since estimates suggest that three out of four adults with diabetes are overweight (Evert & Riddell 2014). When appropriate nutritional learning is activated in conjunction with exercise, sustainable habits are developed (Valencia, Stoutenberg & Florez 2014). Despite this, some participants reported the nutrition education sessions in Beat It as ‘fun’ and ‘helpful’.

‘It was a learning curve because I’ve never understood anyone like I have with [instructor]. They’ve (dietitians) said the same things and put it - but they don’t want to listen to you. Of course there was arguments: one was saying you should do this and [instructor] disagreed, some of us would disagree, but we’d all have a laugh’ (Jill/Int)

Summary

All participants spoke of the person-centred way they were treated during the TR program, and how valuable that was to them. They felt like individuals. A key characteristic of person-centredness is relationship, where the individual feels empowered and finds meaning in the interaction (Jacobs 2015). My research identified the essence of meaning as person-centred program efficacy. As demonstrated above in each of the elements and the factors that informed them, there is a need to move away from conventional diabetes programs where an ‘expert’ directs the content, to one where people with lived experience of diabetes are heard and thus empowered. After all, these are the consumers of the program and they are the ones who will gain benefit from the program and for whom the programs are meant to be designed. People with diabetes must have an audible voice; a voice that is both heard and listened to (McQueen 2015), acknowledged and incorporated into structuring and
planning programs. It is clear that TR programs can play a meaningful and important role in dealing with diabetes and how to surmount associated difficulties of the chronic disease (McCormick & Iwasaki 2008). TR programs have long been associated with working with and enabling the “whole person” (Carruthers & Hood 2007, p.27), focusing on ability to build on personal strengths and thereby enhance positive emotion and capacity (Stumbo et al. 2015). Building strengths supports people to create a life of meaning despite challenges and limitations associated with chronic disease (Stumbo & Peterson 2009).

To examine the lived experience of people with diabetes undertaking a TR program, involving exercise and health promotion, a phenomenological approach was used. Phenomenology seeks to understand the essence of the human experience by considering a phenomenon from the individual perspective of the person experiencing it (Finlay 2013). This methodology enables insight into individual’s motivations and actions, making them valid and, according to Kingswell, Shabon and Crilly (2015, p.184), unveiling the “true nature of the phenomenon”.

Diabetes is a chronic disease that necessitates lifelong engagement in and commitment to healthy living – exercise, nutrition and general health promotion so as to augment health and wellbeing (ADA 2015; Linmans, Knottnerus & Spigt, 2015). Despite this, many people with diabetes do not follow recommended guidelines for exercise or nutritional eating. This can be partly attributed to inadequate support for such activities, and can also be due to ineffective programs for people with diabetes (Wozniak et al. 2015).
This research facilitated my capacity to hear participant’s voices on important aspects of the TR program *Beat It* and highlighted their lived experience. This is critical for gaining perspective and understanding the influence of diabetes on engaging in TR programs. Therapeutic recreation, says Delaney, Crandell and Barfield (2014), is a continuum of deliberate programing options that intend to increase quality of life for participants of the program. By understanding and appreciating this perspective of the person with diabetes, relevant and appropriate TR programs can be provided for this population.

Older people with diabetes are known to have low levels of engagement in exercise (van Stralen et al. 2009; Porter, Shank & Iwasaki 2012; Valencia, Stoutenberg & Florez 2014). Baker et al. (2015) in their systematic review, which aimed to evaluate the impact of community wide interventions on engaging people in exercise, found that these programs generally did not reach people and lacked individual effectiveness. When people are not involved in the process of planning for an intervention or program, then the criteria will be matched to the provider only. Phillips, Schneider and Mercer (2004) agree that engagement will not be effective when programs are not tailored to meet individual needs. It is critical that people with diabetes engage in regular exercise, and it seems from my research study that a collaborative, person-centred approach is the best way to go about this.

Participants reported personal challenges in sustaining exercise and healthy nutrition once the TR program was complete due to cost. They wanted to continue attending the gym and meeting with the group so they could maintain motivation and connectedness, but were unable to do so as they were ‘pensioners’ who needed
financial ‘help to come here’. Only one participant was able to continue following the TR program -

‘For me I’ve continued and it’s working for me’ (Noel/FG)

Participants described difficulty in maintaining exercise and healthy eating where there was not the same level of ‘support’ and ‘feedback’ they received when they were in the TR program. This was associated with cost, but also with motivation to continue without the ongoing support they had received and valued throughout the TR program (Wozniak et al. 2015).

Ma and Ma (2014) remind us that diabetes care incurs a cost burden, particularly as the number of people with diabetes is increasing (Ferriolli, Pessanha & Marchesi 2014). Diabetes is associated with increasing costs to the healthcare system (AIHW 2014b, 2014c, 2014d), and is one of the main geriatric syndromes along with its related complications (Kirkman et al. 2012; Porter, Shank & Iwasaki 2012). Diabetes expenditure is rising in healthcare, with more than 75 percent of this expenditure being spent on people between fifty and eighty (Hodge et al. 2013; Zhang et al. 2010). To effectively counter this, healthcare needs to be proactive in establishing exercise programs that promote healthy and active ageing (March et al. 2015). Exercise programs for older people with diabetes have been demonstrated to have good cost-benefit ratios as well as effectively reducing the frequency of complications associated with diabetes (Coyle et al. 2012; Otterman et al. 2011; Valencia, Stoutenberg & Florez 2014) and associated hospitalisations (Gadsby 2011).

If funding is not going to be provided to ensure continuity of TR programs such as Beat It, then approaches are required to encourage people with diabetes in their everyday
lives to maintain exercise as well as healthy behaviours and eating, outside of such program support (Janiszewski, O’Brian & Lipman 2015). TR programs targeting people with diabetes, who often have lower incomes, need to be, says Bukman et al. (2014), mindful of and account for cost concerns and look to support participation.

Practical implications

The Ottawa Charter of Health Promotion (WHO 1996) advocates that health promotion occurs when people are able to improve and practice more successful control over their health. The concept of health promotion was founded on the notion of community action – raising awareness and instilling community accountability and involvement in one’s own actions. In 2007, the World Health Organization also promoted person-centred approaches to healthcare – “the overall vision for people-centred health care is one in which individuals, families and communities are served by and are able to participate in trusted systems that respond to their needs in humane and holistic ways” (WHO 2007, p.7). Despite this international charter and framework, community interventions and in particular community TR programs, involving health promotion and exercise, are underdeveloped, certainly in Australia. TR programs, such as Beat It, have proven to be effective in promoting self-care and increasing levels of exercise in people with diabetes and other chronic illnesses. Interventions where groups are involved in participatory pedagogy have demonstrated many benefits, including the ones found in this research – social connection, physical and emotional benefits and general improvement in quality of life (March et al. 2015).

Understanding what people with diabetes consider meaningful in engaging in TR exercise and health promotion programs, is critical to understanding the purpose and
benefit of such a program (Ma & Ma 2014). It is imperative to consider and acknowledge how an individual perceives a TR program such as Beat It to assist engagement and appreciation of the benefits of recreational exercise and personal health (Morrison, Lowe & Collins 2014; Picton 2015). Skov-Ettrup et al. (2014) assert that when we understand the participant perspective, we are far more likely to succeed in increasing motivation to participate. Not only that, older people’s perceptions and experiences of health promotion programs are often different to those of health providers and program initiators (Song & Kong 2015; Matthews, Kirk & Mutrie 2014). Health is judged to be an important motive to participate in an exercise and health promotion program, being even more important to older people than younger people (Skov-Ettrup et al. 2014). Song and Kong (2015) and Weber, Weberova and Meluzinova (2014) report that older people’s perception of their personal health is judged more subjectively than objectively. This may be a reason why they are able to positively perceive their health, despite their diabetes (and other potential and real co-morbidities). Vähäsarja et al. (2012) claim that health perception seems to be influenced by subjective impressions. Therefore, listening to and including people with diabetes is integral to planning for health promotion programs rather than focusing on objective health measures.

Beginning with the “end in mind” says Covey (2005, p.96), is a practice that should be considered when planning future programs for people with diabetes, specifically older people (Phillips, Schneider & Mercer 2004). Determining what the ‘end’ is (the desired outcome, what brings meaning) can be achieved by listening to participants of previous TR programs, such as Beat It. Their voices highlight what is meaningful to them when participating in a program and hence programs can be developed around
those concepts. TR programs aim to enable health, quality of life, resilience, and wellbeing (Stumbo & Peterson 2009; Carruthers & Hood 2007), which are all good things to aspire to and achieve. However, it is only the participants who can truly identify how to reach those things. Including participants, says Iwasaki et al. (2006), will ensure diversity and holism is achieved for future programs. Program developers and planners need to be alert to the lived experiences of people with diabetes who have previously engaged in a TR program such as Beat It. By shifting the focus to the person involved, self-management and self-determination are encouraged, bringing a positive conception of health and empowerment to the individual (Jacobs 2015). Such person-centredness will enhance the aims TR programs strive to achieve.

Diabetes is widespread among older people and current lifestyles of obesity, unhealthy nutritional habits, lifestyle and socioeconomic disadvantages, and low levels of exercise, contribute to this prevalence (Ferriolli, Pessanha & Marchesi 2014; Huang et al. 2014; Valencia, Stoutenberg & Florez 2014; Weber, Weberova & Meluzinova 2014). Low levels of exercise can in turn lead to waning of physical and mental health, along with a decreased social network, as sedentary behaviours become the norm (Valencia, Stoutenberg & Florez 2014). Consequently, how we engage older people with diabetes into exercise programs becomes even more of a challenge.

Enjoyment in exercising has been found to be a key factor in motivating people to adhere to exercise programs (Porter, Shank & Iwasaki 2012). Despite this realisation, it is not generally considered when programs are being written and promoted to target groups (Porter, Iwasaki & Shank 2011). Certainly if a researcher was seeking funding for a program, listing ‘enjoyment’ as an outcome may not be considered favourably.
Indeed, more focus is likely to be given to enhanced physical outcomes. Enjoyment though, is very important. Enjoyment is an outcome of an individual’s meaningful lived experience; therefore understanding what brings meaning to an individuals experience cannot be underrated. The findings from this research indicate that for people with diabetes undertaking a TR program, meaning is found through *people* and *structure*. Specifically, this includes how individuals are motivated, the social connectedness they sense, the mental, emotional and physical benefits they gain, and the instructor’s role in treating them as a person, an individual. The experience of these meanings is linked to person-centredness, essentially feeling like an individual with individual needs and nuances being addressed. This attention to individual needs is crucial in ensuring person-centred program efficacy (Donnelly & Kuriakose 2015).

Person-centredness acknowledges the individual as someone who experiences, despite their chronic disease. Person-centredness chooses to be strengths based, to consider ability, individual values and beliefs. It sees all behaviour as meaningful (Hebblethwaite 2013; Edvardsson, Winblad & Sandman 2008). Person-centredness places the individual at the heart of all interventions and choices (McCormack 2003). It has been recently defined by McCormack et al. (2015, p.3) as:

“An approach to practice established through the formation and fostering of healthful relationships between all care providers, service users and others significant to them in their lives. It is underpinned by values of respect for persons, individual right to self-determination, mutual respect and understanding.”

This concept has been criticised in literature by researchers such as Hebblethwaite (2013) and McCormack et al. (2015), as one that is not well defined and too idealistic,
yet it can be intimately linked to the philosophy of TR. Therapeutic Recreation focuses on enabling autonomy and choice in its practices and programs and it speaks about the importance of enjoying what it is that one is engaged in. This sits neatly with the practice of person-centredness where self-determination and empowerment, according to McCormack, Manley and Titchen (2013) and Hebblethwaite (2013), are emphasised for individuals.

Section 2 – Theoretical links and contribution of theory to the research

Diabetes related behaviour and motivation

The World Health Organization (2009; 2015) asserts that diabetes, along with other chronic illness and diseases can directly or indirectly have behavioural roots. Health choices such as exercise and appropriate nutrition for diabetes management are outlined as behaviours that can protect the individual from further consequences of the disease and minimise risk of other chronic conditions associated with diabetes (Hagger et al. 2014; Linmans, Knottnerus & Spigt 2015; Graffigna et al. 2014; Beaglehole et al. 2011). The increasing prevalence of diabetes internationally, poses the question of how to engage people with diabetes into programs that will effectively improve their health related behaviour and consequently their health and wellbeing. When people with diabetes are able to align and incorporate their values and preferences into a program, they are likely to be better engaged, be more responsive and be more motivated to self-regulate their behaviours (Tulloch et al. 2013). This leads to greater internalisation and accountability to maintain healthy lifestyle choices.
and behaviours, rather than relying on external sources for prompting, reinforcing or providing encouragement and motivation (Hagger et al. 2014). It is well established within the literature that people with diabetes often do not engage in healthy behaviours and lifestyles that would manage their diabetes more effectively (Tulloch et al. 2013; Graffigna et al. 2014). Therefore, it is critical to understand how to assist the person with diabetes to increase self-efficacy and motivation, particularly since these are fundamental for lifestyle changes and increased levels of self-care and self-regulation in terms of diet and exercise (Sarkar, Fisher & Schillinger 2006; King et al. 2010; Centis et al. 2014). However, engagement and motivation are not individual qualities that are either present or absent. Graffigna et al. (2014) says they are more complex and can be developed or hindered depending on the experience. Levels of engagement and motivation should be assessed regularly with the person so that the program can be regularly adapted and tailored, which will, argues Linmans, Knottnerus and Spigt (2015), meet the individual’s need and current circumstances.

**Self-Determination Theory**

The TR program *Beat It* was designed to assist participants to establish conducive behaviours of regular exercise and healthy eating habits that would maintain and improve their diabetes health. To do this effectively, the participant’s motivation to engage needs to be understood. A significant problem with such programs, according to Ryan et al. (2008) and Hagger et al. (2014), is the poor commitment to maintaining changes and behaviours once the program has completed and the reinforcing agent is removed. Therefore, when contemplating how to engage people in a program that builds strengths and encourages intrinsic motivation to continue with health
behaviour, the Self-Determination Theory (SDT) is an important construct to consider. SDT is a theory of motivation that promotes self-regulation of behaviours and actions (Deci & Ryan 2000). It will be discussed in relation to the TR program Beat It for people with diabetes.

SDT resonates with key principles of TR, namely autonomy and self-determination, which encourage participants to reflect upon and plan how they would ideally like to live their life (Sylvester 2011). SDT supports the process of acquiring motivation to initiate and maintain health related behaviours. This is possible by developing a sense of autonomy and competence, so that health related behaviours and actions are internalised, prompting self-regulation and sustainability of those behaviours (Ryan et al. 2008; Deci & Ryan 1985). Hence, the TR program Beat It needed to facilitate autonomy and encourage competence in individuals to enhance commitment to exercise and healthy eating. Morgan et al. (2015) purport that for an individual to modify their behaviour, three core psychological needs must be met, each of which are inherent within self-determination theory. They are:

- The need for autonomy (having control and choice)
- The need for competence (feeling capable about doing something)
- The need for relatedness (feeling connected to and supported by others)

SDT is the only theory of motivation that is clear about identifying autonomy as a human need that can be supported to assist in the process of internalising behaviours and self-regulating them to achieve better health and wellbeing (Ng et al. 2012; Hill &
This stands SDT apart from other health behaviour theories. It asserts that intrinsic (or autonomous) motivation reflects the individuals motives for engaging in behaviours and actions (exercise and nutrition) for the interest and/or satisfaction of undertaking them (Hagger et al. 2014). When this is cultivated through environmental supports (TR program, instructors, other participants), then autonomous reasons for self-regulation will occur. That is, the person will be more likely to take ownership of their behaviour and then, according to Deci and Ryan (2000b), behave in a healthy way and maintain the changes.

Likewise, relatedness is integral to the internalisation process according to SDT. People are more prone to accept and adopt values and behaviours that are promoted in exercise and health promotion programs when they feel connected and trust others involved in the program (Ryan et al. 2008; Deci & Ryan 2002).

Despite the many benefits associated with exercise and healthy eating, including glycaemic control, there remains low rates of engagement and participation in lifestyle activities by people with diabetes (Fortier et al. 2012; Sweet et al. 2009; Tulloch et al. 2013). It is therefore crucial to increase understanding of why exercise adoption and maintenance, along with healthy eating, is not prioritised by this population of people. By seeking such understanding, better designed and implemented programs for people with diabetes can occur. As previously asserted, this cannot be done without the person with diabetes being involved in the process. Motivational variables need to be considered, with Sweet et al. (2009) suggesting they have been demonstrated to influence engagement in exercise and healthy eating. SDT as a motivational theory is being increasingly used to help understand behavioural aspects of engaging in exercise.
and healthy eating generally, and in people with diabetes (Tulloch et al. 2013; Senecal, Nowen & White 2000; Williams et al. 2004). SDT promotes the concept that when motivation to improve personal health (through exercise and healthy eating) is autonomously directed, people are more likely to engage in those behaviours that will promote health. That is, autonomy will be an outcome of internalising regulatory behaviours that Hill and Sibthorp (2006) suggest, foster a healthy lifestyle.

SDT avers that factors which enhance competence, autonomy and relatedness lead to increased internalisation and therefore self-determined behaviour to engage, which is more likely to be maintained (Hagger et al. 2014; Hill & Sibthorp 2006; Ng et al. 2012) as it is consistent with mental and emotional needs (Deci & Ryan 2000). Figure 30 below outlines an adapted version of the SDT Model of Behaviour Change by Ryan et al (2008).
Autonomy enables an individual to feel they are the responsible for their own behaviours, that is, they value and believe in the behaviours for themselves and own the importance of them (Hill & Sibthorp 2006; Ng et al. 2012; Ryan et al. 2008). This is especially important in TR programs such as Beat It, as people with diabetes do not routinely exercise (Balducci et al. 2014b). This is largely due to not inherently enjoying exercise or not being intrinsically motivated (Ryan et al. 2008), or it can be due to the perception of barriers to engaging in a program such as fear of injury or low self-efficacy (Tulloch et al. 2013).
‘I know now that I did it, and I know what to do - what to expect... I managed and I was so happy when I came home, and I tell my kids what I've done and they were happy I’m joining gym for first time in my life’ (Liz/Int)

An important aspect of motivation within SDT is where it sits on a continuum from extrinsic (external or controlled) to intrinsic (internal or autonomous) (Ryan et al. 2008). The lowest level of self-determined behaviour is extrinsic or controlled where actions are performed and influenced by an external pressure. Many people engage in exercise and healthy eating due to this motivation and indeed as described in an earlier section of this chapter, some participants explained that they felt pressured by family. They conformed to the pressure to avoid negative consequences (for example, exercising to avoid censure from a loved one) or to gain reward (for example, to enhance ones appearance) (Fortier et al. 2012; Ryan et al. 2008; Tulloch et al. 2013). Engaging in programs for these reasons will not lead to long term sustainability.

In contrast, the highest form of self-determined regulation is intrinsic or autonomous motivation where the individual engages in the behaviour(s) and action(s) because they are important to them, enjoyable and consistent with personal values and goals (Ryan et al. 2008). Participants described ‘feeling younger’, being ‘happier’, and ‘valuing the program a lot to keep us healthy’. Autonomous motivation is exemplified when a person with diabetes exercises because they value being healthy. As Lyn stated, she wanted to ‘establish a better habit of exercise so [I] could continue afterwards’. SDT claims that autonomous self-determined exercise and healthy eating motivation leads to more positive outcomes. This includes affordances such as improved diabetes self-management (‘blood glucose level had gone down a fair bit... I
wanted to get the sugar down... that was the main thing’ (June/Int)). It is also more likely to be sustained when motivation for exercise and healthy eating are intrinsic (e.g. enjoyment – ‘it was good exercise. I enjoyed it’ (Pauline/Int)), rather than extrinsic (e.g. general practitioner advice) (Senecal, Nowen & White 2000; Sweet et al. 2009; Tulloch et al. 2013). In my study, intrinsic motivation was evident over and over, in participants giving personal examples of why they chose to participate in the program and continue to come each week.

Intrinsic motivation may take time to develop, so supportive instructors, says Tulloch et al. (2013), such as those who were involved in this research, as well as supportive environments are critical. Chapter 2 described in more detail the importance of a supportive environment for participant engagement and motivation. This is reinforced in this study when participants described the program as being undertaken in a ‘safe environment’. This enabled active participation, rescinding self-consciousness and enabling intrinsic motivation to be actioned. ‘The internal motivation came from being with the other people and feeling safe’ (June/FG). When an individual feels intrinsically motivated, feels they have choice and control of their environment and health, and that the optimal experience has been possible, then independence and functional ability will improve as well as the individuals attitude to the activity being undertaken (Stumbo & Peterson 1998). This should enable the individual to engage in self-directed activity, as evidenced in my research when the participants reported self-directed engagement in the TR program.

‘Sort of by about half way through the program, we all knew what we were doing - what we came for, what we were doing. By that stage, one of the instructors was
called away because her daughter was sick at school and we just kept on going and kept on going until, I think, she turned up sort of for the last 20 minutes or something like that. We'd just done it all. We organised ourselves. So it didn't really matter, you know' (Bruce/Int)

The process of internalisation requires that the individual experience confidence and feelings of being effective to change and sustain behaviours for exercise and healthy eating (Hill & Sibthorp 2006; Ng et al. 2012; Ryan et al. 2008). This occurs when instructors give relevant and effective feedback to enhance skills and tools within the individual, stimulating and challenging them to a point that is manageable for them personally and helps them to engage in the health behaviours (Ryan et al. 2008). This was expressed by participants:

‘I was getting positive reinforcement every time I came’ (May/FG)

‘I think, oh do I need to push myself to do this, and I thought yes you need to go because it was with this really good instructor. It was full on and she really - but she was so helpful’ (Trish/Int)

SDT identifies that feeling competent in one’s abilities to undertake exercise and eat healthily can foster autonomous motivation, which will in turn, says Sweet et al. (2009), positively influence behaviour. Comments consistently supported this feeling of being ‘helped’, which then led to behaviour change:

‘When [health promotion instructor] was telling us - about diabetic and all that, that was so helpful to listen to’ (Liz/Int)

‘The program helped me to feel like I could do it’ (Kerry/Int)
In SDT competence is only possible when facilitated by autonomy (Ryan et al. 2008). This means that when people are actively engaged and want to be involved in the program to improve their diabetes health, they are more likely to learn and apply strategies and competencies. Competence alone will not guarantee commitment to exercise and healthy eating, it must be complemented with autonomy (Deci & Ryan 2000). When SDT is considered, autonomy and competence are essential in supporting the process of health care and change. These factors lead to participants experiencing a greater desire to engage in health promotion programs and maintain outcomes over time (Ng et al. 2012; Ryan et al. 2008). Therefore when an instructor is able to challenge participants slightly above their skill level, they are encouraging a sense of mastery:

‘...and what the instructors did, as you got stronger, and better, they’d say “well to stretch yourself a bit, try doing that” and that was actually quite good. It was more of the individualisation, along with more of their competence and their level of training and knowledge’ (June/FG)

SDT holds the premise that autonomy and competence alone will not effectively create change in individuals, rather in order for change to occur, relatedness needs to be present (Ng et al. 2012; Deci & Ryan 1985). Relatedness is the sense of connection and belonging, the feeling of being respected, understood and cared for (Hill & Sibthorp 2006; Ryan et al. 2008):

‘Perseverance of some of the people there was really quite - and it was really good to watch them do it. They were feeling better about themselves. We’d joke about, you know, have you had any ciggies this week? That made me feel quite good too, just talking to different people. I think because we did a lot of mutual encouragement, I
think, and they - you got it from everybody, sort of telling you, you were good. You felt respected, like they cared’ (Bruce/Int)

When autonomy, competence and relatedness are supported and promoted within a program, psychological needs in people are met. Individuals are then more motivated to initiate and maintain health behaviours. van Stralen et al. (2009) argue that realising one’s potential for improved physical and mental outcomes enhances maintenance of exercise and commitment to a group within a program. Ryan et al. (2008) propose that when these three aspects are met, subsequent improved mental health is supported:

‘To come out - to come out of the house - come out of the house and move and meet people at the centre. Yeah, and I was looking forward for next week because I met a few people and they said, oh hope we’ll see each other next week - and things like that. Important for me getting out of the house, and being with people... get ready, put my gym clothes, get ready and come out of the house, do my hair. That was good. That was a good experience. Then, when I come out at finish - I sit on a bench in the park and have my yoghurt and my fruit - eat that. So that was good. If I was home probably I wouldn’t do that. Maybe I would have a piece of pizza or something. See and I was sort of motivated to be healthy and continue’ (Liz/Int)

Ryan et al. (2008) also assert that behaviours leading to improved physical health will occur. When health behaviours were altered in participants they saw change:

‘I never believed how quickly the body can change, even when you’re older’ (Beth/Int)

SDT reinforces that people will be more engaged in the TR program, internalise behaviours and therefore maintain better outcomes over time when undertaking it in a supportive environment.
With SDT and the findings from my research in mind, it is paramount to step back and consider the program and how best to engage individuals from the perspective of the person who will be participating in the program. Valuing the person with diabetes viewpoint, suggests Hill and Sibthorp (2006), will provide understanding and empathy for this population. Individuals however, may have bias around their intention to engage in a TR program according to their motivational foci towards the behaviours, actions and program elements (Hagger et al. 2014). These need to be taken into consideration.

There is a need for person-centredness in establishing, planning and delivering programs for people with diabetes. This will help individuals feel part of the process and be more engaged, to ensure that what is delivered is what they need rather than what they are told they need. The shift from being told what to do, to one of enabling autonomy in a supportive environment is critical. The SDT constructs of autonomy, competence and relatedness need to be from the person with diabetes’ perspective. SDT can be used as a theoretical foundation for the development of TR programs for people with diabetes and aligned with person-centredness to enable the programs to be effectual, cost efficient and sustainable. Careful attention to the persons experience and motivation will effect change in individuals (Deci & Ryan 2000). This will lead to a more genuine consideration of people with diabetes as people, and not a disease, and will assist them, says Graffigna et al. (2014), to positively plan for their own health and wellbeing.

Figure 31 demonstrates how SDT principles can be applied to the TR program Beat It where autonomy, competence and relatedness for diabetes health promotion through
an autonomy supportive environment can facilitate person-centredness. This figure is not intended to represent causal relationships, as indicated by the dotted lines stemming from person-centredness, which denote potential for internalising habits and movement to self-care and self-management of the disease diabetes. Table 10 (page 284) demonstrates this connection between SDT and person-centredness.
Figure 31: TR opportunities for people with diabetes

- Person-centredness
  - Internalisation
  - Self-management of health
  - Autonomy for diabetes health (E.g. supportive instructors; choice)
  - Competence for diabetes health (E.g. feelings of achievement)
  - Relatedness for diabetes health (E.g. social connectedness with others)
  - Person-centred program efficacy
  - TR program *Beat It*
Table 10: Similarities between SDT and person-centredness

<table>
<thead>
<tr>
<th>SDT</th>
<th>Person-centredness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>Encourage individual empowerment and wellbeing (Hebblethwaite 2013)</td>
</tr>
<tr>
<td></td>
<td>Values the individual right for self-determination (McCormack et al. 2015)</td>
</tr>
<tr>
<td>Competence</td>
<td>Individuals use multiple intelligences to establish best learning methods (Dewing 2008)</td>
</tr>
<tr>
<td></td>
<td>Enables individual to feel valued in their context and create foundations for progression and growth (Weman-Josefsson 2014)</td>
</tr>
<tr>
<td>Relatedness</td>
<td>Healthful relationships (McCormack, Manley &amp; Titchen 2013)</td>
</tr>
<tr>
<td></td>
<td>Mutual respect of people (McCormack et al. 2015)</td>
</tr>
<tr>
<td></td>
<td>Understanding and accepting others in their context (McCormack, Manley &amp; Titchen 2013)</td>
</tr>
</tbody>
</table>

These aspects of autonomy, competence and relatedness in the TR program *Beat It* are summarised below.

Autonomy for diabetes health and management was achieved in the TR program by fostering choice and an individual locus of control, and also through supportive instructors.

Competence was facilitated in the TR program *Beat It* through education – formal and informal in exercise and in nutrition and healthy eating. It was encouraged and enabled by the instructors individualising appropriate routines and levels of difficulty for each person. Modifying the program to the individuals’ level of activity and ability also promoted competence. Thus instilling competence and building confidence in the participants:
‘I would like to say again how good the instructors were and how effectively they tailored people’s difficulties and disabilities and so on to what they were doing. It wasn’t just me. There was a range of people with a range of things wrong with them, and they were always very encouraging and always very helpful. The other participants likewise were encouraging and helpful to each other. I felt like an individual. It was good. You did feel like you got individual attention and understanding, and everyone knows how important that is in your terms of learning. I felt like I could do it.’ (Lyn/Int)

Relatedness was attained by encouraging a sense of belonging amongst people with the same disease. Social connections and shared experiences enhanced this further:

‘Well you got to talk to other people, other diabetics, and their lives - like what their daily life was like and that sort of thing. Just to hear the kids they had and like talk about our kids and this sort of thing and the exercises. Just being able to talk to them about diabetes, the exercises and what they were doing for us more than anything because all of us really benefited from it’ (Jill/Int)

The aspects of autonomy, competence and relatedness were enhanced by instructors who provided an environment of choice, took the perspective of the individual, and offered reasons for why they wanted participants to try exercises or undertake dietary modifications. An autonomy supportive environment is essential in leading to internalisation (Ryan et al. 2008; Deci & Ryan 1985; 2000a). However, instructors should be looking to increase an individuals perception of their own autonomy, competence and relatedness, and this, according to Hill and Sibthorp (2006) should be undertaken prior to internalisation. This can be done by providing choices about
exercise and diet, rather than directing and telling people what to do. Another important factor in doing this is for instructors to minimise controlling language.

‘Well when you’ve got that sense of control over anything you feel strong and able to do what you can without feeling that you’re a failure’ (Trish/Int)

Applying the three principles of SDT to my research, it is clear that meeting these three psychological needs, which are pertinent to diabetes health, should lead to more self-determined diabetes behaviours and actions. Approaching both the program and the participants in a person-centred manner, optimises participant’s opportunities to internalise the information and behaviours and apply them to their own life. Approaching a program from this perspective will make it more meaningful and personally appropriate. This supports literature that suggests theory-based programs addressing specific outcomes are required (Bullock 1998). It also asserts that programs need to be intentional in providing opportunities to internalise diabetes health behaviours and thereby contribute to minimising complications that may progress or arise. Participant’s subjective experiences of being engaged in such programs are essential to highlight how to develop more appropriate and targeted diabetes programs in the future.

**Summary**

depth.

van Manen (2014) discusses how people experience disease differently and do so as individuals with varying physical, mental and emotional responses. On the illness to health continuum, people can become “out of step with the body” and need to
“recover a liveable relation with his or her psycho-physical being” (van Manen 2014, p.326). When working with people with diabetes or planning for an exercise and health promotion program, the phenomenological approach is to continually consider and measure our understanding and comprehension of the lived experience of the person with diabetes, including its complexities and unique occurrences. This means inquiring from dependable sources to develop insights into what is required. A dependable and reliable source in this study and who were purposively recruited, was people with diabetes who have lived experience of the disease and who have undertaken an exercise and health promotion program. Information gathered from this purposive sample will enable planners and providers to understand and have a “reflective awareness of what modalities of body experience are disturbed and what may be done to develop meaningful, worthwhile and livable relations between the lived body, between the embodied being and the world” (van Manen 1998, pp.23-24). Disease has the ability to change the person’s physiognomy of the world, disturbing their wellbeing and relation to and with their realm. Body and mind are complex aspects of the person’s being as both exist in the world and must be considered together (van Manen 2014). Neither can be separated when developing a meaningful program that will meet the needs of the individual and help them to manage their diabetes.

Instructors facilitating a TR program must therefore, have awareness of difference that individuals experience and what they find meaning in. Further, instructors must recognise heterogeneity within a seemingly homogenous group and regularly reflect on what the impact of diabetes to the individual’s body has. In doing so, they need to consider “what may be done to develop meaningful, worthwhile, and livable relations between the physical body and the lived body, between the embodied being and the
world” (van Manen 2014, p.341). This is critical since the body experience is intimately tied to feelings – either of pleasure, meaning, satisfaction and other positive emotions, or of emptiness, threat, meaninglessness, purposelessness and other negative emotions (van Manen 2014).

By involving people with diabetes in the process of planning and delivery of TR programs comprising exercise and health promotion, the essence of meaning behind engagement and commitment to such programs will be uncovered. This gives rise to an increased capacity to positively influence behaviours and lifestyles. By ensuring that programs are tailored to meet actual needs of people with diabetes, meaningful foundations for future programs that will build improved health and wellbeing should be established.

It seems that current approaches to managing diabetes in the community are not entirely effective, with Colagiuri (2014) confirming that obesity and complications of diabetes continue to rise. Successful ageing necessitates the prevention of physical disability and the cornerstones of diabetes management are diet and exercise, particularly in older people so that independence and quality of life are maintained as long as possible (Weber, Weberova & Meluzinova 2014). TR programs incorporating exercise and health promotion, including nutrition are important in the management of this chronic disease (Ng et al. 2015). In order to be successful and sustainable, programs must be designed and delivered in an individualised person-centred manner that integrates the concept of what people with diabetes want, that is, what is meaningful to them. Knowledge about how to design inclusive TR programs, says Schleien et al. (2014), continues to evolve and must include and consider the
experience of personal meaning, particularly in how it relates to exercise and health behaviour generally. It is clear that meaning occurs through engaging in the TR program, and that the meaning that is inherent to the individual is more important than the actual TR program (Berger 2011).

This research study purports that people with diabetes engage in TR programs to enhance their health when they find meaning in people and structure. The findings of this research offers new knowledge about people with diabetes and insights into the meaning gained through their lived experience. These are linked strongly to self-determination theory but do not neatly fit into this theory. In addition, this research outlines five elements – motivation, connectedness, psychological benefits, physical benefits, and instructor - that are not emphasised in current literature. The results demonstrate what it is that people with diabetes find meaningful when engaging in a TR health promotion program. TR program planners and facilitators, say Matthews, Kirk and Mutrie (2014), should not assume what is meaningful for people with diabetes. Rather, they should include them as partners in planning to ensure health needs and preferences and that meaning is established and can be actioned effectively. This will have implications for policy makers and those in large national diabetes corporations, as they need to have an understanding of what is meaningful to people with diabetes in terms of engaging in a TR health promotion program. This is required so that establishment and implementation of effective person-centred programs can be achieved.

By engaging people with diabetes in the processes and planning for TR programs involving exercise and health promotion, which are supposedly designed for them, the
interventions will be more enjoyable and hence ensure commitment to the program. This will then, asserts the National Institute for Health and Care Excellence (2014), promote personal health and wellbeing, and the impact on health services can be reduced (Law et al. 2014; Colagiuri 2014).

The impact on health services is an important consideration from this research as the participants were all older adults who had diabetes and engaged in the TR program. The World Health Organization (2011) declares that throughout the world the number of older adults (aged 65 and over) is projected to nearly triple from 2010 to 2050, therefore healthcare will be stretched with this population. In Australia, in the 25 years from 1989-90 to 2013-14, the ratio of spending to the size of the population aged 65 and over has increased by 69 per cent (AIHW 2016). This, combined with the increasing number of people with diabetes, means a shift in perspective from a medical focus to person-centredness and self management where prevention is required (Johnston et al. 2012). If older people with diabetes can maintain their health and independence within the community then the burden to the healthcare system can be reduced. Exercise and nutrition contributes to the health of people with diabetes. Ensuring engagement in TR programs will enhance health and wellbeing by minimising preventable health conditions associated with diabetes and therefore reducing the need for more acute care.

This chapter has explained the findings of this research study by exploring the key themes and elements that evolved from the stories of people with diabetes who had undertaken a TR program involving exercise and health promotion. It carefully
examined each theme, element and factor and then elucidated these in light of Self-
Determination Theory. The links between findings and SDT were elucidated.

The next chapter, Chapter 6, will provide a summary and make recommendations for
future studies and programs that service people with diabetes. Limitations will also be
discussed and the chapter will conclude with a personal reflection.
Chapter 6 – Conclusion and Recommendations

Introduction

The preceding chapters presented a detailed overview of the study, provided a comprehensive background and justification of the research design, and revealed the findings and discussion of these in the context of the research literature. This chapter summarises the central goal and aim of this research study and offers contributions to knowledge, makes recommendations for TR programs for people with diabetes, and offers recommendations for future research. Some literature, such as that contributed by Pereira (2012) and Beck, Keddy and Zichi Cohen (1994), suggests that recommendations based on comparatively small-scale research studies should be cautious. That said, findings and recommendations of smaller scale studies are valid and, considering the nature of hermeneutical discourse, recommendations are not prescriptive but suggestions and proposals for further conversation, discussion, critique and innovation (van Manen 2014; Guba & Lincoln 1994). The recommendations of the research study and recommendations for further research are followed by limitations of the research.

My intention in undertaking this PhD research was to contribute to new knowledge. Fulfilling this goal was achieved by meeting the aim of the research, which was to understand the essence of meaning that people with diabetes attribute to being involved in a specialised TR program. Engagement in the research process enabled me to privilege the voices of the people with diabetes who were a part of a TR program Beat It. Writing the thesis made it possible to present the meaning these individuals
ascribe to being involved in such a program. The research was designed so as to answer the question of *what does it mean for people with diabetes to be part of a therapeutic recreation program involving exercise and health promotion?* The findings suggest that the essence of meaning that people with diabetes attribute to being involved in a specialised TR program is embedded in *person-centred program efficacy.* This was seen to enable motivation, which supports and builds connectedness, physical, and psychological benefits, and confidence in instructors and the program so that diabetes is managed confidently in the community. This is diagrammatically represented below in Figure 32.

![Figure 32: Essence of meaning](image-url)
Theoretical Contribution to knowledge

It is evident that diabetes is an increasingly prevalent disease with 346 million people globally currently having diabetes and an estimation of double this by 2030 (WHO 2015; Weber, Weberova & Meluzinova 2014). The importance of exercising and healthy eating for people with diabetes is evident through literature. Hence, the significance of programs such as Beat It, which can enhance engagement in physical activity, cannot be underestimated. Previous chapters in this thesis have clearly elucidated how researchers have explored the physical benefits of exercise and nutrition programs for people with diabetes. Findings are unanimous; exercise is a good means of controlling diabetes. However, very little is known about what these programs mean to the people undertaking them; and, if we can appreciate what programs mean we can understand why they do or do not engage in such programs.

Using the Heideggerian interpretive phenomenological approach and van Manen’s six step method of data analysis, employed in this research, enabled the voice and the perspective of the person experiencing the Beat It program to be illuminated. Silent voices became audible and participants had a lot to say. The understanding that this brings enables programs to be written appropriately for the intended population and hence maximise opportunities and benefits for those involved.

This research does not define how a therapeutic recreation program should be written or delivered and that was never the intent. What it does do is provide a starting point in assisting the construction of how programs can be built and provided. Understanding the essence of meaning that people with diabetes attribute to being involved in a specialised therapeutic recreation program, facilitates the development
of programs that can better enhance health and wellbeing in this population of people. The development of person centered diabetes TR programs can then help to minimise preventable health conditions associated with the disease.

This PhD study thereby provides an important contribution toward building the evidence for future programs. This evidence is drawn from the people that utilise the programs; it is lived experience evidence. The findings may also be useful for people to understand the meaning and value of health promotion therapeutic recreation programs for other disease or illness states.

In examining the essence of meaning that people with diabetes attribute to being involved in a specialised therapeutic recreation program, this study has highlighted many key areas that need to be addressed regarding the development of TR, and/or health promotion/health education programs. The recommendations are linked to the particular theme and finding that informed each one.

**Recommendations**

Considerations for TR programs and people with diabetes encompasses the findings that people will engage more with programs that are individualised and enable choice.

- Exercise and health promotion TR programs for people with diabetes must be person-centred. Incorporating those people who the program targets at the centre of planning and where possible delivery of the program is essential.
• TR programs for people with diabetes must accommodate participant choice and enable flexibility. This enables individuals to engage at their own level and not feel like they are being stereotyped with no individuality.

• Shift the mindset of seeing people with diabetes as ‘clients’ or ‘patients’ who require ‘care’ to one of seeing people who have lived experiences that can meaningfully contribute to programs.

• Establish healthy relationships with the people (including family), organisations, and materials (including the built environment) required to contribute to good health.

• Continue to educate people with diabetes, through public health campaigns, about the value of them engaging in physical activity and exercise as a positive means of managing their disease. Many public health campaigns target the community broadly but perhaps more targeted campaigns may be beneficial.

• Exercise should be prescribed as a treatment/therapy for people with diabetes.

• Programs should be ‘fun’.

• Diabetes exercise programs must include both resistance and aerobic training elements. Programs should be inclusive of a minimum of two sessions per week involving physical training (resistance and aerobic). Programs should also include one session every week or second week for health promotion and
education appropriate to diabetes, along with opportunity for social engagement outside of exercise.

- Education sessions must include relevant, current, evidence based information. Information and discussion need to be delivered to participants in a forum and manner that is inclusive and informal.

- Self-determination theory should be used as a theoretical framework when creating a health promotion program. This should be aligned with person-centredness to enable the program to be successful, cost effective and sustainable.

**Recommendations for further research work**

- Undertake a study to explore the meaning of exercise and health promotion TR programs for those who develop and instruct such programs. This would be important for understanding the underlying values and beliefs of the professionals involved. Both participant and professional meanings should be considered when designing and developing future TR programs.

- Explore participant engagement in TR programs and how Self Determination Theory can enhance this.

- Explore how Self Determination Theory can impact motivation of people with diabetes more effectively.
• Investigate the long-term implications of health impacts and benefits for people with diabetes who engage in exercise and health promotion programs. A longitudinal study of these outcomes could inform financial implications associated with being a part of a program.

• Undertake a cost analysis comparing cost of participating in an exercise and health promotion program versus hospitalisation costs of associated health conditions arising from diabetes.

• Undertake a large-scale study that would enable generalisability of findings.

• Conduct a study that explores the sense of social connectedness experienced by people at similar stages of life who share the disease of diabetes.

**Limitations**

All research has limitations (Creswell 2009). This study used a Heideggarian approach to phenomenology, thus acknowledging that as the researcher I am interconnected with the research and cannot separate myself or my own experiences and understandings from the research. The findings are interpreted through the lens and analysis of a single researcher (albeit with supervision), rather than through accord of several researchers.
Participants were recruited from a single Beat It program in the Illawarra, and the sample size of 15 may be considered small but enabled lived meanings of the participants to be explored. Although this sample size is consistent and adequate for phenomenological research methodology, it does not allow for generalisation of findings. The intent of this research is not to generalise findings but to contribute knowledge for those actively involved in the processes of therapeutic recreation exercise and health promotion programs for people with diabetes.

**Final statement**

Diabetes is a prevalent disease that is increasing in Australia. Exercise and healthy lifestyles support good health and independent living. Based on this study’s findings, recommendations as to how to support therapeutic recreation exercise and health promotion programs for this population have been made. Overall, it is hoped that the findings of this research will inform and ultimately contribute to person-centred, effective future practice and promotion of health for people with diabetes. Empowering end users by including them in program design and delivery will enhance their motivation and facilitate their own going commitment and motivation to engage in physical activity. This will be of great benefit to them and to society more generally.

On a personal note, this journey, like all PhD journeys has not been all smooth sailing. Holding down a full time job and juggling family life whilst studying has been a challenge. This journey has taught me a lot about myself as a person but has also exponentially increased my knowledge about research. By no means do I think I have
become an expert. I commenced this PhD as a complete novice, and as a result of the rigorous process of doing a higher degree by research, I think I have moved along the continuum on my research training scheme journey. I have indeed learned how complex, comprehensive but exciting doing research can be.

Finally, it has been a privilege to listen to the participants’ stories and hear what being involved in the Beat It program meant to them individually. Their generosity has enabled me to make a contribution to new knowledge and I hope that this will make a difference for people with diabetes in the future.
References


Aggarwal, B, Liao, M & Mosca, L 2010, 'Predictors of physical activity at 1 year in a randomized controlled trial of family members of patients with cardiovascular disease', Journal of Cardiovascular Nursing, vol.25, no.6, pp.444 - 449.


American Diabetes Association (ADA) 2014a, Type 1 diabetes, American Diabetes Association, viewed 24 April 2014, URL http://www.diabetes.org/diabetes-basics/type-1/?loc=util-header_type1


Annuzzi, G, Rivellese, A, Bozetto, L & Riccardi, G 2014, 'The results of Look AHEAD do not row against the implementation of lifestyle changes in patients with type 2 diabetes', *Nutrition, Metabolism and Cardiovascular Diseases*, vol.24, no.1, pp.4-9.


Aquadro, M 2011, 'President's farewell message', *ATRA Newsletter*, vol.27, no.3, p.10.


Ashworth, NL, Chad, KE, Harrison, EL, Reeder, BA & Marshall, SC 2005, 'Home versus center based physical activity programs in older adults', *Cochrane Database of Systematic Reviews*, Issue 1, pp.1-43.


Australian Institute of Health and Welfare (AIHW) 2014c, *Cardiovascular disease, diabetes, chronic kidney disease responsible for 20% of hospitalisations*, AIHW, Canberra.


Bergström, G, Behre, C & Schmidt, C 2012, 'Increased leisure-time physical activity is associated with lower prevalence of the metabolic syndrome in 64-year old women with impaired glucose tolerance', Angiology, vol.63, no.4, pp.297-301.


established vascular disease or poorly controlled vascular risk factors', *Diabetes Research in Clinical Practice*, vol.87, no.3, pp. 372-378.


Buchman, AS, Wilson, RS, Yu, L, James, BD, Boyle, PA & Bennett, DA 2014, 'Total daily activity declines more rapidly with increasing age in older adults', *Archives of Gerontology and Geriatrics*, vol.58, no.1, pp.74-79.


Colagiuri, S 2014, 'Diabetes prevention and care: we know what to do, so why aren't we doing it?', *MJA*, vol.201, no.9, pp.501-502.


Covey, SR 2005, *The 7 Habits of Highly Effective People*, Covey Leadership Center, Utah.


Deci, E & Ryan, R 2000a, 'Self-determination theory and the facilitation of intrinsic motivation, social development, and well being', *American Psychologist*, vol.55, no.1, pp.68-78.


Denham, S, Ware, L, Raffle, H & Leach, K 2011, 'Family Inclusion in Diabetes Education. A Nationwide Survey of Diabetes Educators', *The Diabetes Educator*, vol.37, no.4, pp.528-535.


Department of Health 2013, *Healthy Communities Initiative*, Department of Health, Canberra.


Desveaux, L, Beauchamp, M, Goldstein, R & Brooks, D 2013, 'Community-based exercise programs as a strategy to optimize function in chronic disease: A systematic review', *Medical Care*, vol.52, no.3, pp.216-226.


Foster, C, Hillsdon, M & Thorogood, M 2013, 'Interventions for promoting physical activity (Review)', Cochrane Database of Systematic Reviews 2005, Issue 1, Art. no.CD003180, pp.1-90.


Gadsby, R 2011, 'Keeping people with diabetes out of hospital', *Diabetes & Primary Care*, vol.13, no.6, p.330.


Grbich, C 2013, Qualitative data analysis. An introduction, Sage, London.


Heidegger, M 1962, Being and time, Blackwell Publishing, Malden USA.


Hennink, M, Hutter, I & Bailey, A 2011, Qualitative research methods, Sage, London.

Henry, A 2015, Inspiring tomorrow's leaders today: breaking down generational barriers at work, Avril Henry Pty Ltd, Rozelle.


Hillsdon, M 2013, 'Brief health professional-provided interventions may lead to small improvements in physical activity', Evidence Based Medicine, vol.18, no.1, p.e1.


Kemeny, E & Arnhold, R 2012, "'I can do it, you can do it": collaborative practices for enhancing physical activity', Therapeutic Recreation Journal, vol.46, no.4, pp.268-283.


Ku, GMV & Kegels, G 2015, 'Knowledge, attitudes and perceptions of people with type 2 diabetes as related to self-management practices: Results of a cross-sectional study conducted in Luzon, Philippines', *Chronic Illness*, vol.11, no.2, pp.93-107.


Law, KH, How, CH, Ng, CS & Ng, MCW 2013, 'Prescribing health: Exercise', Singapore Medical Journal, vol.54, no.6, pp.303-308.


Linmans, JJ, Knottnerus, JA & Spigt, M 2015, 'How motivated are patients with type 2 diabetes to change their lifestyle? A survey among patients and healthcare professionals', *Primary Care Diabetes*, vol.9, no.6, pp.439-445.


Lobiondo-Wood, G & Haber, J 2013, *Nursing Research: Methods and Critical Appraisal for Evidence-Based Practice, 8th edn*, Elsevier - Health Sciences Division, St Louis.


Martin, CK, Church, TS, Thompson, AM, Earnest, CP & Blair, SN 2009, 'Exercise dose and quality of life: A randomized controlled trial', *Archives of Internal Medicine*, vol.169, no.3, pp.269-278.


Mobily, K 2013, 'Exercise and Functional Disability in Older Adults', *Therapeutic Recreation Journal*, vol.47, no.1, pp.47-60.


Morse, J & Field, P 1996, *Nursing research, the application of qualitative approaches*, Nelson Thomas, Cheltenham.


Murtagh, E, Murphy, M, Murphy, N, Woods, C & Lane, A 2014, *Physical activity, ageing and health*, Centre for Ageing Research and Development in Ireland (CARDI), Belfast.


National Health and Medical Research Council (NHMRC) 2009, *NHMRC additional levels of evidence and grades for recommendations for developers of guidelines*, viewed 29 January 2014, URL http://www.nhmrc.gov.au/_files_nhmrc/file/guidelines/levels_grades05.pdf

National Health and Medical Research Council (NHMRC), Australian Resuscitation Council (ARC) & Australian Vice Chancellors Committee (AVCC) 2013, *National Statement on Ethical Conduct in Human Research*, Australian Government, Canberra.


from the American College of Sports Medicine and the American Heart Association',
_Circulation_, vol.116, no.9, pp.1094-1105.

Ng, J, Ntoumanis, N, Thogersen-Ntoumani, C, Deci, E, Ryan, R, Duda, J & Williams, G
2012, 'Self-Determination Theory applied to health contexts: A meta-analysis',
_Perspectives on Psychological Science_, vol.7, no.4, pp.325-340.

Ng, TP, Feng, L, Nyunt, MS, Feng, L, Niti, M, Tan, BY, Chan, G, Khoo, SA, Chan, SM, Yap,
P & Yap, KB 2015, 'Nutritional, Physical, Cognitive, and Combination Interventions and
Frailty Reversal Among Older Adults: A Randomized Controlled Trial', _American Journal
of Medicine_, vol.128, no.11, pp.1225-1236.

Nicholson, VP, McKean, MR & Burkett, BJ 2014, 'Low-load high-repetition resistance
training improves strength and gait speed in middle-aged and older adults', _Journal of
Science and Medicine in Sport_, vol.18, no.5, pp.596-600.

Nicolucci, A, Balducci, S, Cardelli, P, Cavallo, S, Fallucca, S, Bazuro, A, Simonelli, P,
Iacobini, C, Zanuso, S & Pugliese, G 2012, 'Relationship of exercise volume to
improvements of quality of life with supervised exercise training in patients with type
2 diabetes in a randomised controlled trial: the Italian Diabetes and Exercise Study
(IDES)', _Diabetologia_, vol.55, no.3, pp.579-588.

Nicolucci, A, Balducci, S, Cardelli, P, Zanuso, S & Pugliese, G 2011, 'Improvement of
quality of life with supervised exercise training in subjects with type 2 diabetes
mellitus', _Archives of Internal Medicine_, vol.171, no.21, pp.1951-1953.

Nishiguchi, S, Yamada, M, Tanigawa, T, Sekiyama, K, Kawagoe, T, Suzuki, M, Yoshikawa,
and Cognitive Exercise Program Can Improve Cognitive Function and Neural Efficiency
in Community-Dwelling Older Adults: A Randomized Controlled Trial', _Journal of the

Noble, H & Smith, J 2015, 'Issues of validity and reliability in qualitative research',
_Evidence Based Nursing_, vol.18, no.2, pp.34-35.

'Associations between economic hardship and markers of self-management in adults
with type 2 diabetes: results from Diabetes MILES - Australia', _Australian And New
Zealand Journal Of Public Health_, vol.38, no.5, pp.466-472.

Otterman, N, van Schie, C, van der Schaaf, M, van Bon, A, Busch-Westbroek, T &
Nollet, F 2011, 'An exercise programme for patients with diabetic complications: a

Paley, J 2014, 'Heidegger, lived experience and method', _Journal of Advanced Nursing,
vol.70, no.7, pp.1520-1531.

Park, S, Goodpaster, B, Strotmeyer, E, Kuller, L, Broudeau, R, Kammerer, C, De
Rekeneire, N, Harris, T, Schwartz, A, Tylavsky, F, Cho, Y & Newman, A 2007,
'Accelerated loss of skeletal muscle strength in older adults with type 2 diabetes: the health, aging, and body composition study', *Diabetes Care*, vol.30, no.6, pp.1507-1512.

Park, SW, Goodpaster, BH, Strotmeyer, ES, De Rekeneire, N, Harris, TB, Schwartz, AV, Tylavsky, FA & Newman, AB 2006, 'Decreased Muscle Strength and Quality in Older Adults With Type 2 Diabetes: The Health, Aging, and Body Composition Study', *Diabetes*, vol.55, no.6, pp.1813-1818.


Penn, L, Dombrowski, SU, Sniehotta, FF & White, M 2013, 'Participants’ perspectives on making and maintaining behavioural changes in a lifestyle intervention for type 2 diabetes prevention: a qualitative study using the theory domain framework', *BMJ Open*, vol.3, no.6, pp.1-10.


Plotnikoff, R 2013, 'Behavioural interventions targeting physical activity to increase activity and improve glucose control in adults with type 2 diabetes', *Evidence Based Medicine*, vol.18, no.6, pp.213-214.

Polgar, S & Thomas, SA 2013, *Introduction to research in the health sciences, 6th edn*, Elsevier Health Sciences, St Louis.


Rousseau, AS 2014, 'Factors influencing the prescription of physical activity in the therapeutic management of patients with type 2 diabetes', *Nutrition Clinique et Metabolisme*, vol.28, no.4, pp.310-320.


Streubert, H & Carpenter, D 2011, Qualitative research in nursing: Advancing the humanistic interpretation, Lippincott Williams & Wilkins, Philadelphia.


Sweet, SN, Fortier, MS, Guerin, E, Tulloch, H, Sigal, RJ, Kenny, GP & Reid, RD 2009, 'Understanding physical activity in adults with type 2 diabetes after completing an


Thome, B, Esbensen, BA, Dykes, AK & Hallberg, IR 2004, 'The meaning of having to live with cancer in old age', *European Journal of Cancer Care*, vol.13, no.5, pp.399-408.


Toft, B & Uhrenfeldt, L 2014, 'Facilitators and barriers to physical activity experienced among morbidly obese adults: a systematic review protocol of qualitative evidence,' *JBI Database of Systematic Reviews & Implementation Reports*, vol.12, no.6, pp.12-23.


Umegaki, H 2010, 'Pathophysiology of cognitive dysfuntion in older people with type 2 diabetes: vascular changes or neurodegeneration?', *Age Ageing*, vol.39, pp.8-10.


van Manen, M, Higgins, I & van der Riet, P 2016, ‘A conversation with Max van Manen on phenomenology in its original sense’, *Nursing and Health Sciences*, vol.18, pp.4-7.


Verwey, R, van der Weegen, S, Spreeuwenberg, M, Tange, H, van der Weijden, T & de Witte, L 2014, 'A monitoring and feedback tool embedded in a counselling protocol to increase physical activity of patients with COPD or type 2 diabetes in primary care: study protocol of a three-arm cluster randomised controlled trial', *BMC Family Practice*, vol.15, no.1, p.93.


Yorston, LC, Kolt, GS & Rosenkranz, RR 2012, 'Physical Activity and Physical Function in Older Adults: The 45 and Up Study', *Journal of the American Geriatrics Society*, vol.60, no.4, pp.719-725.
Young, J, Angevaren, M, Rusted, J & Tabet, N. 2015, 'Aerobic exercise to improve cognitive function in older people without known cognitive impairment', *Cochrane Database of Systematic Reviews*, Issue 4, pp.1-3.


Appendix 1 – Ethics approval

INITIAL APPLICATION APPROVAL
In reply please quote: HE14/057
Further Enquiries: Phone 4221 1386

26 February 2014

Mrs Rebekkah Middleton
Building 41, Room 218
School of Nursing & Midwifery
University of Wollongong

Dear Mrs Middleton,

I am pleased to advise that the application below has been approved.

Ethics Number: HE14/057

Project Title: The meaning of involvement in an exercise and health promotion program for people with diabetes

Researchers: Mrs Rebekkah Middleton, Professor Lorna Mosham, Dr Dominique Parrish

Documents Reviewed/Approved:

1. Initial application
2. Participant Information Sheet – version received 24 February 2014
3. Consent Form – version received 24 February 2014
4. Letter of Introduction – version received 24 February 2014
5. Interview script – version received 24 February 2014

Sites/CIs reviewed:

<table>
<thead>
<tr>
<th>Site</th>
<th>Principal Investigator for site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beaton Park Leisure Centre</td>
<td>Mrs Rebekkah Middleton</td>
</tr>
<tr>
<td>Lakeside Leisure Centre</td>
<td>Mrs Rebekkah Middleton</td>
</tr>
</tbody>
</table>

Approval Date: 25 February 2014

Expiry Date: 24 February 2015
The University of Wollongong/ISLHD Health and Medical HREC is constituted and functions in accordance with the NHMRC National Statement on Ethical Conduct in Human Research. The HREC has reviewed the research proposal for compliance with the National Statement and approval of this project is conditional upon your continuing compliance with this document.

A condition of approval by the HREC is the submission of a progress report annually and a final report on completion of your project. The progress report template is available at http://www.uow.edu.au/research/rso/ethics/UOW009385.html. This report must be completed, signed by the appropriate Head of School and returned to the Research Services Office prior to the expiry date.

As evidence of continuing compliance, the Human Research Ethics Committee also requires that researchers immediately report:

- proposed changes to the protocol including changes to investigators involved
- serious or unexpected adverse effects on participants
- unforeseen events that might affect continued ethical acceptability of the project

Please note that approvals are granted for a twelve month period. Further extension will be considered on receipt of a progress report prior to expiry date.

If you have any queries regarding the HREC review process, please contact the Ethics Unit on phone 4221 3386 or email rso-ethics@uow.edu.au.

Yours sincerely,

Associate Professor Sarah Ferber
Chair, UOW & ISLHD Health and Medical
Human Research Ethics Committee
This report must be completed, signed by the appropriate Head of School and returned to the Research Services Office prior to the expiry date.

If you have any queries regarding the HREC review process, please contact the Ethics Unit on phone 4221 3586 or email rso.ethics@uow.edu.au.

Yours sincerely,

Associate Professor Sarah Ferber
Chair, UOW & IS-EHD Health and Medical
Human Research Ethics Committee
Appendix 2 – Consent form

CONSENT FORM

PROJECT TITLE: The meaning of involvement in an exercise and health promotion program for people with diabetes

RESEARCHER: Rebekkah Middleton

SUPERVISORS: Professor Lorna Moxham, Dr Dominique Parrish

UNIT: School of Nursing & Midwifery – University of Wollongong

PROJECT

I have been given information about the research project titled ‘The meaning of involvement in an exercise and health promotion program for people with diabetes’, have read the participant information sheet and have had the opportunity to discuss the research project with Rebekkah Middleton who is a PhD student within the School of Nursing & Midwifery at the University of Wollongong.

I have been advised of the potential risks and burdens associated with this research, which include inconvenience (up to 60 mins of my time), the procedures required for the project and the time involved. I understand that if I consent to participate in this project the contributions I make will be used in this study but will be kept confidential. I have had an opportunity to ask Rebekkah Middleton any questions I may have about the research and my participation.

I understand that my participation in this research is voluntary, I am free to refuse to participate and I am free to withdraw from the research at any time. My refusal to participate or withdrawal of consent will not affect my relationship in any way with the School of Nursing & Midwifery or my relationship with the University of Wollongong or with Beaton Park or Lakeside Leisure Centres.

If I have any enquiries about the research, I can contact Rebekkah Middleton on rmiddle@uow.edu.au or ph: (02) 42213724 or if I have any concerns or complaints regarding the way the research is or has been conducted, I can contact the Ethics Officer, University of Wollongong on (02) 4221 3386 or email rso-ethics@uow.edu.au.

By signing below I am indicating my consent to participate in an audio recorded interview for the study titled ‘The meaning of involvement in an exercise and health promotion program for
people with diabetes.’ I understand that the data collected from my participation will be used as part of the research required for Mrs Middleton’s PhD and inform future program development. It will also contribute to the submission of journal articles and papers which will be presented at conferences and I consent for it to be used in that manner. I understand that I will not be identified in any publication or report that arises from this research.

Name: ______________________________

Signed: ______________________________  Date:________________________
Appendix 3 – Participant information sheet

PARTICIPATION INFORMATION SHEET

PROJECT TITLE: The meaning of involvement in an exercise and health promotion program for people with diabetes.

PURPOSE OF THE RESEARCH: This is an invitation to participate in a study conducted by the University of Wollongong. The research is being undertaken by Mrs Rebekkah Middleton a PhD student studying in the School of Nursing & Midwifery. The purpose of the research is to develop an understanding of the meaning the exercise and health promotion program Beat It has to you. The study will be looking at how you and the other participants perceive, experience and attribute meaning to the program.

RESEARCHER: Rebekkah Middleton
PhD Candidate (Education)
School of Nursing & Midwifery
University of Wollongong
02 42213724
rmiddle@uow.edu.au

SUPERVISORS:
Professor Lorna Moxham
Professor Mental Health
School of Nursing & Midwifery
University of Wollongong
02 42212559
lmoxham@uow.edu.au

Dr Dominique Parrish
Associate Dean
SMAH
University of Wollongong
02 42215492
dparrish@uow.edu.au

METHOD & DEMANDS ON PARTICIPANTS: If you choose to be included you will be asked to talk about your experience of being involved in the Beat It program and what it meant to you. There are no right or wrong answers – just ‘what it meant to you to be involved’. To gain this information the researcher will conduct an interview that will be audio recorded to ensure accuracy of information related to your personal experience. The interview time and place will be negotiated with you to ensure convenience and should last for up to 60 minutes. Typical questions in the interview include: What did it mean for you to be involved in the Beat It program? Tell me about the reason(s) you decided to be involved in Beat It; What did it mean for you to be involved in a program involving exercise and health promotion?

There are no expected responses, rather your opinions, thoughts and experiences are what is sought. The purpose of recording the interview is to ensure accuracy of information related to your personal experience and responses. Your involvement in the study is voluntary and you may withdraw your participation from the study at any time. Refusal to participate in the study will not affect your relationship with the University of Wollongong, the School of Nursing & Midwifery, Beaton Park Leisure Centre or Lakeside Leisure Centre. All data collected will be stored in a locked cabinet or on a password protected computer and will be destroyed following transcription.
POSSIBLE RISKS, INCONVENIENCES & DISCOMFORTS: Apart from the 60 minutes of your time for the interview we can foresee no risks for you. It is important to note that any identifiable data will be de-identified before being used in the research and the researcher Rebekkah Middleton has no dependent relationship with the participants involved in this research. If you do become distressed as a result of participating in this research, help is available from Lifeline 13 11 14 or the UoW Student Counselling service on 4221 3445 or in person at the Counselling Service on Level 3, Building 11. Your involvement in the study is voluntary and you may withdraw your participation from the study at any time. Refusal to participate or withdrawal from the study will not affect your relationship with the University of Wollongong, the School of Nursing & Midwifery, Beaton Park Leisure Centre or Lakeside Leisure Centre.

FUNDING & BENEFITS OF THE RESEARCH: This study has not been funded by any university or external bodies. This research will provide information to assist the researcher in improving the writing of future programs for people with chronic health conditions so that they are meaningful and relevant to the participants, based on the responses from the interviews. Findings from this study will be used for PhD thesis submission. It is anticipated that the findings will also be published in relevant journals and conference papers. You will not be identified in any part of the research or in anything that is disseminated as a result of the research.

ETHICS REVIEW & COMPLAINTS: This study has been reviewed by the Human Research Ethics Committee, Science, Medicine and Health (SMAH) of the University of Wollongong, reference no. HE14/057. If you have any concerns or complaints regarding the way this research has been conducted you can contact the Ethics Officer on 92 4221 3386 or email rso-ethics@uow.edu.au

Thank you for considering taking part in this study.
Appendix 4 – Focus group letter

Focus Group Discussion

Dear 

I am going to be conducting a focus group as a follow up to the interview I conducted earlier this year with you and others that had undertaken the Beat It program. I have done some preliminary theming that I want to check with those I interviewed to see if the themes resonate as correct for you. This will be in the form of a focus group.

I would love for you to come to the focus group if you are able. It will be held at Beaton Park Leisure Centre on Monday 23 June at 2:00pm and should last for no more than 60 minutes.

I will be presenting the themes that have emerged from analysing the individual interviews and asking you to verify if you agree. I am seeking your opinions and thoughts to check the findings from the individual interviews. I have included a participant information sheet and consent form for you to read further. There is no compulsion or expectation that you will come.

Afternoon tea will be provided. I hope to see you on the 23rd June at 2:00pm. If you are able to send me a text message or an email to let me know you will be coming that would be great. My details are below.

Thankyou,

Rebekkah Middleton

rmiddle@uow.edu.au
PARTICIPATION INFORMATION SHEET

PROJECT TITLE: The meaning of involvement in an exercise and health promotion program for people with diabetes.

PURPOSE OF THE RESEARCH: This is an invitation to participate in a study conducted by the University of Wollongong. The research is being undertaken by Mrs Rebekkah Middleton a PhD student studying in the School of Nursing & Midwifery. The purpose of the research is to develop an understanding of the meaning the exercise and health promotion program Beat It has to you. The study will be looking at how you and the other participants perceive, experience and attribute meaning to the program.

RESEARCHER:
Rebekkah Middleton
PhD Candidate
School of Nursing & Midwifery
University of Wollongong
02 42213724
rmiddle@uow.edu.au

SUPERVISORS:
Professor Lorna Moxham
Professor Mental Health
School of Nursing & Midwifery
University of Wollongong
02 42212559
lmoxham@uow.edu.au

Dr Dominique Parrish
Associate Dean
School of Nursing & Midwifery
SMAH
02 42215492
dparrish@uow.edu.au

METHOD & DEMANDS ON PARTICIPANTS: If you choose to be included you will be asked to talk about your experience of being involved in the Beat It program and what it meant to you. There are no right or wrong answers – just ‘what it meant to you to be involved’. To gain this information the researcher will conduct a focus group that will be audio recorded to ensure accuracy of information related to your personal experience. The focus group time and place will be held at Beaton Park Leisure Centre on Monday 23 June at 2:00pm and should last for up to 60 minutes. I will be presenting you with the themes that have emerged from analysing your interview and others interviews. Typical questions in the focus group include: Do you agree that it meant commitment for you to be involved in the Beat It program? Tell me about the social experiences you had being a part of Beat It; Can you tell me how the instructor influenced your experience of the Beat It program?

There are no expected responses, rather your opinions, thoughts and experiences are what is sought to check the findings from the individual interviews. The purpose of recording the interview is to ensure accuracy of information related to your personal experience and responses. Your involvement in the
study is voluntary and you may withdraw your participation from the study at any time. Refusal to participate in the study will not affect your relationship with the University of Wollongong, the School of Nursing & Midwifery, Beaton Park Leisure Centre or Lakeside Leisure Centre. All data collected will be stored in a locked cabinet or on a password protected computer and will be destroyed following transcription.

POSSIBLE RISKS, INCONVENIENCES & DISCOMFORTS: Apart from the 60 minutes of your time for the interview we can foresee no risks for you. It is important to note that any identifiable data will be de-identified before being used in the research and the researcher Rebekkah Middleton has no dependent relationship with the participants involved in this research. If you do become distressed as a result of participating in this research, help is available from Lifeline 13 11 14 or the UoW Student Counselling service on 4221 3445 or in person at the Counselling Service on Level 3, Building 11. Your involvement in the study is voluntary and you may withdraw your participation from the study at any time. Refusal to participate or withdrawal from the study will not affect your relationship with the University of Wollongong, the School of Nursing & Midwifery, Beaton Park Leisure Centre or Lakeside Leisure Centre.

FUNDING & BENEFITS OF THE RESEARCH: This study has not been funded by any university or external bodies. This research will provide information to assist the researcher in improving the writing of future programs for people with chronic health conditions so that they are meaningful and relevant to the participants, based on the responses from the interviews. Findings from this study will be used for PhD thesis submission. It is anticipated that the findings will also be published in relevant journals and conference papers. You will not be identified in any part of the research or in anything that is disseminated as a result of the research.

ETHICS REVIEW & COMPLAINTS: This study has been reviewed by the Human Research Ethics Committee, Science, Medicine and Health (SMAH) of the University of Wollongong, reference no. HE14/057. If you have any concerns or complaints regarding the way this research has been conducted you can contact the Ethics Officer on 92 4221 3386 or email rso-ethics@uow.edu.au

Thank you for considering taking part in this study.
Appendix 6 – Focus group consent form

CONSENT FORM

PROJECT TITLE: The meaning of involvement in an exercise and health promotion program for people with diabetes

RESEARCHER: Rebekkah Middleton

SUPERVISORS: Professor Lorna Moxham, Dr Dominique Parrish

UNIT: School of Nursing & Midwifery – University of Wollongong

PROJECT

I have been given information about the research project titled ‘The meaning of involvement in an exercise and health promotion program for people with diabetes’, have read the participant information sheet and have had the opportunity to discuss the research project with Rebekkah Middleton who is a PhD student within the School of Nursing & Midwifery at the University of Wollongong.

I have been advised of the potential risks and burdens associated with this research, which include inconvenience (up to 60 mins of my time), the procedures required for the project and the time involved. I understand that if I consent to participate in this project the contributions I make will be used in this study but will be kept confidential. I have had an opportunity to ask Rebekkah Middleton any questions I may have about the research and my participation.

I understand that my participation in this research is voluntary, I am free to refuse to participate and I am free to withdraw from the research at any time. My refusal to participate or withdrawal of consent will not affect my relationship in any way with the School of Nursing & Midwifery or my relationship with the University of Wollongong or with Beaton Park or Lakeside Leisure Centres.

If I have any enquiries about the research, I can contact Rebekkah Middleton on rmiddle@uow.edu.au or ph: (02) 42213724 or if I have any concerns or complaints regarding the way the research is or has been conducted, I can contact the Ethics Officer, University of Wollongong on (02) 4221 3386 or email rso-ethics@uow.edu.au.
By signing below I am indicating my consent to participate in an audio recorded interview for the study titled ‘The meaning of involvement in an exercise and health promotion program for people with diabetes.’ I understand that the data collected from my participation will be used as part of the research required for Mrs Middleton’s PhD and inform future program development. It will also contribute to the submission of journal articles and papers which will be presented at conferences and I consent for it to be used in that manner. I understand that I will not be identified in any publication or report that arises from this research.

Name: ______________________________

Signed: ______________________________  Date:_______________________