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# What's showing: film industry portrayals of autism spectrum conditions and their influences on preservice teachers in Australia

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**What's Showing: Film Industry Portrayals of Autism  
Spectrum Conditions and their Influences on Preservice  
Teachers in Australia**

A thesis submitted in fulfilment  
of the requirements for the award of the  
Degree of Doctor of Philosophy  
from the  
University of Wollongong  
by

**Andrea Roxanne Garner MEd, PGDE, BA**

November 2014

## **Declaration**

I declare that this thesis is wholly my own work unless otherwise referenced and acknowledged. The document has not been submitted for qualifications at any other academic institution.

Andrea Roxanne Garner

27 November 2014

## Acknowledgements

Many thanks are owed to my supervisors: Professor Sandra Jones and Associate Professor Valerie Harwood. Without their time, patience, persistence, and guidance I would not have been able to produce this body of work. Additionally, I would like to offer a special mention to Christine Carey who shared her time and expertise as the second rater in the film analysis, and Noelene Wetherby-Fell who championed the engagement of the participants for this thesis.

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*This thesis is dedicated to all of the families and individuals that I have had the privilege of working with over the years- your friendships have inspired this body of work.*

Gratefully,

Andrea

## **Abstract**

This thesis makes a significant contribution to understanding how exposure to entertainment media portrayals of characters with autism spectrum conditions influences the attitudes and knowledge of preservice teachers towards autism and students on the autism spectrum. Entertainment media contributes to the cumulative knowledge and attitude a teacher has about students with autism. The teacher's knowledge and attitudes towards students with autism will dictate their behaviour towards the students resulting in a direct impact on the student's education, social inclusion and personal perception. Additionally, the teacher's personal and professional behaviours resulting from their beliefs will create a model for all students and the school community as a whole.

This thesis reports findings from two successive studies. In the first study a search of gray literature, an in-depth analysis of the accuracy and dialogue produced through film and relates to autism, a survey of professionals working with individuals on the autism spectrum in education and support were conducted, and a ranking system for films featuring characters on the spectrum was devised. In the second study three surveys (pre-test, post-test, follow-up) were distributed to preservice teachers recruited from a Graduate Diploma in Education course in Australia in 2012. Participants were asked a series of questions to determine their previous exposure to spectrum conditions and their responses to a specific film exposure.

The findings reported in this thesis suggest that autism has become personified through dramatisations of severity and negatively valenced dialogue presented in film. The portrayals omit the individual in favour of the homogenous prototypical stereotypes that serve as plot functions or to create an opportunity for the neurotypical viewer to empathise with those dealing with the 'burden' (implied to be the individual on the spectrum). Additionally, exposures to film portrayals of autism that are highly emotive evoke an empathy response from viewers, increase stigmatising attitudes about autism.

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## **Abbreviations**

ABS	Australian Bureau of Statistics
AITSL	Australian Institute for Teaching and School Leadership
ASC	Autism Spectrum Conditions
ASD	Autism Spectrum Disorder
AS	Asperger Syndrome
CARS	Childhood Autism Rating Scale (Second Edition)
DSM	Diagnostic and Statistical Manual of Mental Disorders
EET	Entertainment-Education Theory
GDE	Graduate Diploma in Education
NSW	New South Wales (a state in Australia)
NT	Neurotypical
PDD	Pervasive Developmental Disorder
PDD-NOS	Pervasive Developmental Disorder Not Otherwise Specified
PRT	Personal Resistance Theory
SCT	Social Cognitive Theory
WA	Western Australia (a state in Australia)

## **Key Definitions and Terms**

### **ASD: Autism Spectrum Disorder**

Typically defined as lifelong developmental disabilities characterised by difficulties in social interaction, impaired communication, restricted and repetitive interests and behaviours, and sensory sensitivities. The word 'spectrum' is used because the range and severity of the difficulties people with ASD experience can vary widely. ASD includes Autistic Disorder, Asperger's Disorder and Pervasive Developmental Disorder – Not Otherwise Stated, which is also known as atypical autism. Sometimes the word "autism" is used to refer to all ASD.

### **AS: Asperger Syndrome**

Typically defined as a lifelong disability characterised by impairment in social interaction; restricted repetitive and stereotyped patterns of behaviour, interests and activities; significant impairments in social, occupational, or other important areas of functioning. There is no clinically significant general delay in language (e.g. single words used by age two years, communicative phrases used by age three years); there is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behaviour (other than in social interaction) and curiosity about the environment in childhood.

### **Autistic Community**

A term to describe a community of people with atypical neurology, specifically those on the autism spectrum.

### **CARS 2: Childhood Autism Rating Scale Second Edition**

An empirically validated autism assessment tool, effective in discriminating between children and adults with autism and those with severe cognitive deficits, as well as in distinguishing mild-to-moderate from severe autism. There are two versions, the Standard version and the High-Functioning version.

### **DSM-IV: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition**

A manual published by the American Psychiatric Association in 1994 to provide common terms and criteria for diagnosis of disorders including Autistic Disorder and Asperger's Disorder.

**DSM-IV-TR: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision**

A manual published by the American Psychiatric Association in 2000 to provide common terms and criteria for diagnosis of disorders including Autistic Disorder and Asperger's Disorder.

**DSM-5: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition**

A manual published by the American Psychiatric Association in 2013 to provide common terms and criteria for diagnosis of disorders including Autism Spectrum Disorder (ASD) rather than Autistic Disorder and Asperger's Disorder. The DSM-5 departed from the tradition of using Roman numerals.

**GDE: Graduate Diploma of Education**

A 10-month course to become qualified as a primary or secondary education teacher, which is offered at a post-secondary educational institution.

**Neurotypical**

A term coined by members of the Autistic Community to describe a typically developing person (a person with typical neurology). The term has been adopted by the mainstream culture to refer to those without autism.

**PDD: Pervasive Developmental Disorder**

Refers to five disorders that are characterised by delays in the development of multiple basic functions including socialisation and communication. Autism and Asperger Syndrome come under this umbrella term in the DSM-IV and the DSM-IV-TR.

**The Triad of Impairments**

A term coined by Lorna Wing to describe the three major areas of affectedness for people on the autism spectrum: impaired social interaction; impaired social communication; and impaired social imagination.

## **SECTION 1 – INTRODUCTION**

**“Houston, we have a problem”**  
(*Apollo 13*, Director Ron Howard, 1995)

## Chapter 1: Overview

### 1.1 The Problem

The challenge presented by the diverse needs of students is arguably the most prominent issue for new teachers in the current educational climate (Donald, 2001; Soto-Chodiman, Pooley, Cohen, & Taylor, 2012). One cohort of students, those with autism spectrum characteristics (often referred to as Autism Spectrum Disorders), has increased in prevalence in the last few decades, both in terms of general awareness of the term, and in the presence of students in mainstream classrooms (Soto-Chodiman, Pooley, Cohen, & Taylor, 2012; Williams, MacDermott, Ridley, Glasson, and Wray, 2008). In Australia in 2009, 47,100 students between the ages of 5-18 with spectrum conditions were in schools (Australian Bureau of Statistics, 2009) and the New South Wales Board of Education stated that in 2011 it provided support for 10,000 students with Autism Spectrum Disorders (ASD) (Roth, 2013). As the number of students with autism conditions in the classroom increases, it becomes essential to understand the knowledge and attitudes that teachers have about these learners.

There is an emerging field of study investigating the knowledge and attitudes of teachers who are supporting students with disabilities in mainstream classrooms. Knowledge and attitudes are, arguably, built on the marriage of beliefs and information. The few studies that have investigated teacher attitudes and knowledge regarding the inclusion of students with autism spectrum conditions in classrooms have found that teachers expressed resentment towards having the students in their classroom and had a tendency to overestimate the abilities of their students on the autism spectrum, leading to failures in inclusion (Helps, Newsom-Davis, and Callias, 1999). The resentment at having a student with autism in their classroom may be attributed, at least in part, to popular media presentation of autism as a 'devastating disorder', a 'burden', or a 'problem' (Draaisma, 2009; Sarrett, 2011). Literature shows that some teachers struggle to determine how to support communication and social

interaction challenges presented by a student affected by autism spectrum conditions, and do not feel that the support systems in place to aid them in working with these students are adequate (Glashan, Grieve, & Mackay, 2004; Kasa-Hendrickson, 2005).

My personal experience as a teacher, and teacher-trainer specialising in education for students with exceptionalities, is consistent with the above literature. I have often heard, and continue to hear, expressions of frustration and confusion from teachers because they have a desire to support students on the spectrum but do not have the tools and knowledge necessary to effectively provide that support. In addition to the hopeful but cautious attitudes of the teachers in professional development courses, common themes I have experienced include limited knowledge of characteristics associated with autism spectrum conditions, misunderstanding behaviours, and conforming to stereotyped myths about emotionless or 'locked away' children. Throughout my teaching related work I have encountered regular references to *Rainman* (1988), and unrealistic expectations of student performance or, worse yet, curious hope that the student may 'perform' a spectacular savant trick for the class. These misguided notions resulted in frustration on my behalf as a teacher-trainer. Teachers would leave my training seminars disappointed at the news that a majority of the students on the spectrum would not have a savant skill, but would have much to offer, equal to all other students in their class. Along with many of my colleagues, I have frequently used film clips in professional development seminars to illustrate concepts or to provide a visual support of characteristics and behaviours; however, the persistent references to *Rainman* and other films or media-promoted concepts have led me to question the value and actual influence of these films.

This thesis examines the influence that entertainment media, and specifically film, has on the knowledge and attitudes of teachers, when the film content involves portrayals of autism spectrum disorder (ASD)<sup>1</sup>. More specifically, the

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<sup>1</sup> Autism Spectrum Disorder (ASD) is the medical model diagnostic label commonly used in the public sphere and will be used in this thesis in the interest of continuity, although I prefer to refrain from using 'disorder' in favour of 'condition' (ASC) in my personal and professional life.

aim of this thesis is to use autism assessment tools, and deconstruction of the film dialogue to: firstly analyse how the experience of autism is represented through the cultural artefact of film; and secondly to explore the power of film to influence the attitudes and knowledge of spectrum conditions held by preservice teachers (student teachers). Though this thesis does not include the opinions of people from the Autistic Community I wish to acknowledge and maintain a respectful discussion of the people in the Autistic Community, as I do in my role as a practitioner. As the focus of this thesis is on neurotypical presentations of the experience of autism in film and how exposure to those presentations influences preservice teachers (none of whom identified themselves as being on the spectrum), I fully acknowledge that this research is conducted from, and explores representations through, a neurotypical lens.

## **1.2 Autism: Definition and Prevalence**

### **1.2.1 Classification**

The diagnostic terms Autistic Disorder and Asperger's Disorder are found in both the Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition (DSM-IV) and the Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition, Text Revision (DSM-IV-TR) (American Psychiatric Association, 2000). Commonly referred to as Autism Spectrum Disorders (ASD), Autistic Disorder and Asperger's Disorder are used to classify the presence of a specific number of observable characteristics in an individual. Individuals that exhibit the requisite number of these observable characteristics create the normal distribution curve for the autism-affected population, wherein the individuals within the bell of the curve share specific diagnostic similarities identified in the DSM-IV (American Psychiatric Association, 1994). There are a number of outcomes for an individual that has a diagnosis found in DSM-IV-TR, one of which, although not an intended outcome, can be stereotyping of the individuals to which the diagnosis is attributed (Butler & Gillis, 2011; Draaisma, 2009).

In 2013, half way through the writing of this thesis, the release of the DSM-5 changed both the diagnostic criteria and terminology surrounding autism. The new diagnostic manual has amalgamated autism and Asperger Syndrome into one diagnosis, Autism Spectrum Disorder (ASD). Throughout the thesis the terms autism, Asperger Syndrome, and ASD are used to refer to the characteristics described in the DSM-IV (and DSM-IV-TR). ASD is an all-encompassing term and where it is used in the thesis it can be assumed that both autism and AS are included. It should be noted that it is my preference to avoid the term 'disorder' and as such, I often refer to autism spectrum conditions, the spectrum, characteristics, or the Autistic Community.

### 1.2.2 Prevalence

Autism is ten times more common than cystic fibrosis and muscular dystrophy combined, and it is more common than multiple sclerosis, Down Syndrome and childhood cancer (The Autism Council of Australia, 2002). In spite of its commonality, Zaroff and Uhm (2011) claim, "perhaps the only unifying feature of ASD prevalence data worldwide is the well-publicized increase in prevalence over time" (p397). The prevalence rate of Autism Spectrum Disorder (ASD) in Australia in 2003, as reported by Buckley (2006), was 36 children per 10,000 age 0-4 years, and 90 per 10,000 age 10-14 years. However, Williams and colleagues (2008) reported a prevalence rate of 9.6-40.8 per 10,000 ages 6-12 for the same time period. The discrepancies regarding prevalence might be attributed in part to the interchangeable use of the terms ASD and autism<sup>2</sup>. Additionally, in some studies, Asperger Syndrome (AS) is included in the reported prevalence numbers, while it is counted independently by others (e.g., Matson & Kozlowski, 2011). According to Williams et al. (2005) this vague amalgamation of terminology might contribute to what they deem to be a misinterpreted increase in prevalence.

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<sup>2</sup>This confusion may be rectified by the singular diagnosis of ASD although practitioners generally still use autism, AS and ASD interchangeably.

Recent prevalence data for autism in school age children (ages 6-12 years) in Australia showed 1 in 160 children are 'afflicted with autism' (Autism Advisory Board on Autism Spectrum Disorders, 2006). The Advisory Board contends that the core findings of the report provide the best indication of the prevalence of ASD in the Australian population because primary school aged children are the group most likely to be recognised as having an autism spectrum disorder (*Autism Advisory Board on Autism Spectrum Disorders, 2006*). More recently, the Australian Bureau of Statistics (2009) estimated that 64,600 Australians 'had autism'. Regardless of which figures represent the actual situation, there is no doubt that the presence of autism is significant.

### **1.3 Teachers: Influencing Children**

Within the community of teachers, each of whom is responsible for the provision of more than 1,000 hours of education for 20 plus students each year (and possibly more in secondary schooling) there exists a 'power' to guide, direct, or model attitudes and behaviours. Teachers are responsible for the curricular and social education and development of all children in their care. They educate children both directly, through instruction and assessment based on their knowledge, and indirectly, through behaviours like modelling, attitudes and interactions.

One of the greatest challenges teachers face is supporting the needs of the diverse student population. Some students require varying levels of support, differentiated instruction, and specialised behaviour management techniques. This can be required, for example, in engaging with students with autism spectrum conditions. Current research is limited regarding the attitudes of mainstream teachers towards having students with autism in their classrooms. However, those studies that have explored teachers' experiences of students with autism conditions report themes of apprehension, frustration, anger, resentment, emotional exhaustion and anxiety amongst teachers at the beginning of the school year (Gaad, 2007; Glashan, Grieve, & Mackay, 2004;

Croasmun & Hampton, 1999; Soto-Chodiman et al., 2012). These negative emotions were often the result of feeling under-prepared or unfamiliar with the needs of the students and how to manage and support those diverse needs (Gaad, 2007; Glashan, Grieve, & Mackay, 2004; Croasmun & Hampton, 1999). In recognition of the intentions of the teachers in these studies it should be acknowledged that in spite of their initial reservations, most eventually accept the students and a positive relationship is established (Soto-Chodiman et al., 2012). While some teachers begin the school year with reservations, others report unrealistic expectations of students based on the belief that students with autism characteristics have special skills and talents and do not have learning difficulties (Helps et al., 1999). Such unrealistic expectations also result in feelings of frustration and resentment as the teachers' beliefs are contradicted and they reach the 'stark realisation of how little they actually know about autism' (Soto-Chodiman et al., 2012).

Barring specific training to the contrary, preconditioned ideas that teachers bring into the classroom will serve to guide them in their interactions with students. In particular, their personal beliefs generally guide how they respond to one student versus another (Dal Cin, Zanna, & Fong, 2004). For example, adults transmit their attitudes about children with special needs to other children (Wiens & Gilbert, 2000). This modelling occurs because children determine their impression of others, in part, through the observations of adult's reactions (Sigelman, Mukai, Woods, & Alfeld, 1995). In addition, the relationship between a teacher and a child can affect the child's social status in the class; this suggests the teacher not only directly influences the child on the spectrum but also influences the peers and the peer-child relationships (Robertson, Chamberlain, & Kasari, 2003). Thus, gaining an understanding of what attitudes teachers hold towards students with spectrum conditions is essential.

Knowledge about 'autism' and the 'spectrum' results from a range of experiences and exposures. Although some teachers might have personal experience with autism from interactions with their own children, relatives, previous students, and other similar exposures, they typically will not have a broad-ranging

exposure to the diversity of the autistic spectrum. Nonetheless, it would be difficult to find a teacher that has not heard of autism, and formulated some notion of what it means to 'be autistic'. Depending on what the teacher has heard through social discourse, print media, entertainment media or personal experience, he or she will arguably develop a set of beliefs regarding autism, as well as what people with autism spectrum conditions are like.

#### **1.4 Media: Film Influences People**

There is a 'collective awareness' of autism resulting from the multitude of media messages currently available that allow images to permeate situational boundaries. For instance, messages on bus shelters, in newspapers, or celebrity interviews are fleeting, but amass to corroborate or contradict 'ideas' or beliefs about specific topics, including autism (Sarrett, 2011; Singh, Hallmayer, & Illes, 2007).

Mention of the autism spectrum in media garners public intrigue. This intrigue is reflected in the increased production of media about autism, especially in film, over the last two decades (Conn & Bhugra, 2012; Murray, 2012). The selected medium for this thesis is entertainment film because it both reflects and creates societal beliefs surrounding current issues. Furthermore, the educational possibilities surrounding film content are particularly meaningful when the portrayals are of unfamiliar, but possible, experiences. This is to say that the influence of film on viewers is worthy of exploring because "what representations of autism do is to systematically form particular notions of 'autism' " (Jones & Harwood, 2009, p6).

The manner in which the media frames topics can contribute to the development of an inexperienced individual's understanding of that topic, because the media is often the main reference for new information for the inexperienced viewer (Santos, 2004). The inexperienced person's knowledge about a disability could range from a broad awareness to a simple definition of a term (for instance having heard of the term 'autism' while having no knowledge of what it means).

The media, especially entertainment media, often portrays evocative framing of disabilities (see for instance Russell Crowe's depiction of schizophrenia in *A Beautiful Mind*, 2001). Significantly, the viewer's reliance on the media's semantic descriptions, visual presentations, and modelling of interactions between characters will likely influence the cultivation and synthesis of 'new knowledge', as well as the construction of new ideas held by the novice viewer.

#### 1.4.1. How Does Film Work

This influence of film is derived from the collective experience of viewing film, which provides a safe environment to experience roles and emotions the viewer might not otherwise have the opportunity to experience (Uhrig, 2005). Collectively, viewers are exposed to varying archetypes, character relationships, likeable characters, despicable characters, humour, terror, despair, and hope all relayed relative to the character portraying the disability (Draaisma, 2009). The viewer is able to share the experience, making film viewing a 'wholly powerful experience' (Uhrig, 2005).

Furthermore, film draws the viewer in by creating a para-social relationship with the characters and giving a sense of 'living' the experiences they witness. It is this coercive power that will be explored in this thesis because the influence that a film has on viewers may directly impact real world individuals, groups, or societies (Butler & Gillis, 2011; Jamieson, Jamieson, & Romer, 2006; Rogers & Singhal, 2002; Scull & Peltier, 2007; Farnall & Smith, 1999). For example, Butler et al. (1995) surveyed adults prior to, and immediately after, viewing the film *JFK* and asked the same questions at both points; they found that the film aroused anger, as well as acceptance of the broad conspiracy theory. Most importantly, viewers decreased their intent to vote because of perceived helplessness in the political arena, which was a theme of the film. Likewise, exposure to a powerful portrayal of select autism characteristics could have an impact on a teacher's beliefs, attitudes, and behaviours towards students on the spectrum who are in their classroom.

## 1.5 Project Aims

The aims of this research project were to contribute to the existing limited knowledge base of filmic representations of autism, and to explore the influence of exposure to these representations on the attitudes and knowledge of preservice teachers. The project included two multistage studies; Study One - *The Discovery, Analysis, and Ranking of Films that Feature Characters with Autism Spectrum Conditions* and Study Two - *The Influence of a Single Film Exposure on Attitudes, Knowledge, and Recall of Preservice Teachers*, designed to determine:

- (1) the extent and nature of autism portrayals in entertainment film; and
- (2) how experience with autism and filmic exposure influences the knowledge and attitudes of preservice teachers.

Specifically, Study One - *The Discovery, Analysis, and Ranking of Films that Feature Characters with Autism Spectrum Conditions* involved:

- (a) An inventory of all films featuring a character with autism or Asperger Syndrome, as identified by the films' producers;
- (b) Determination of the nature of the representations of autism relative to the diagnostic criteria using a standardised autism assessment tool, specifically the CARS2;
- (c) Dialogue analysis of films featuring characters with autism and the source of that dialogue; and
- (d) The development of a four point weighted ranking scale to determine the most authentic framing of autism for potential educative purposes.

Study Two - *The Influence of a Single Film Exposure on Attitudes, Knowledge, and Recall of Preservice Teachers* involved:

- (a) Understanding sources of exposure and experience that preservice teachers have had concerning autism and Asperger Syndrome;

- (b) Examination of attitudes and knowledge towards autism prior to and after film exposure; and
- (c) Analysis of scenes the teachers recalled that contribute to their understanding of 'autism'.

## 1.6 Thesis Outline and Structure

Submitted in fulfilment of the requirements of a Doctor of Philosophy in Social Science, this thesis is in a traditional manuscript (University of Wollongong Style 1), and presented in sections describing the research and findings of two successive studies. Each study has multiple stages and the results from each stage informs the direction of the subsequent stage. For example, the first study, Study One - *The Discovery, Analysis, and Ranking of Films that Feature Characters with Autism Spectrum Conditions* begins with a search for all existing portrayals of spectrum conditions which informs the selection of films to be analysed in the second stage. Likewise, Study Two - *The Influence of a Single Film Exposure on Attitudes, Knowledge, and Recall of Preservice Teachers*, is informed by the findings from Study One and the first stage of Study Two (pre-activity survey) provides a baseline for the second stage of Study Two (post-activity survey).

The thesis is written in four sections, as seen in Figure 1.1, where sections one and four apply to the entire thesis, and sections two and three are specific to the study of films or the study of preservice teachers. Each section will be outlined in more detail below.

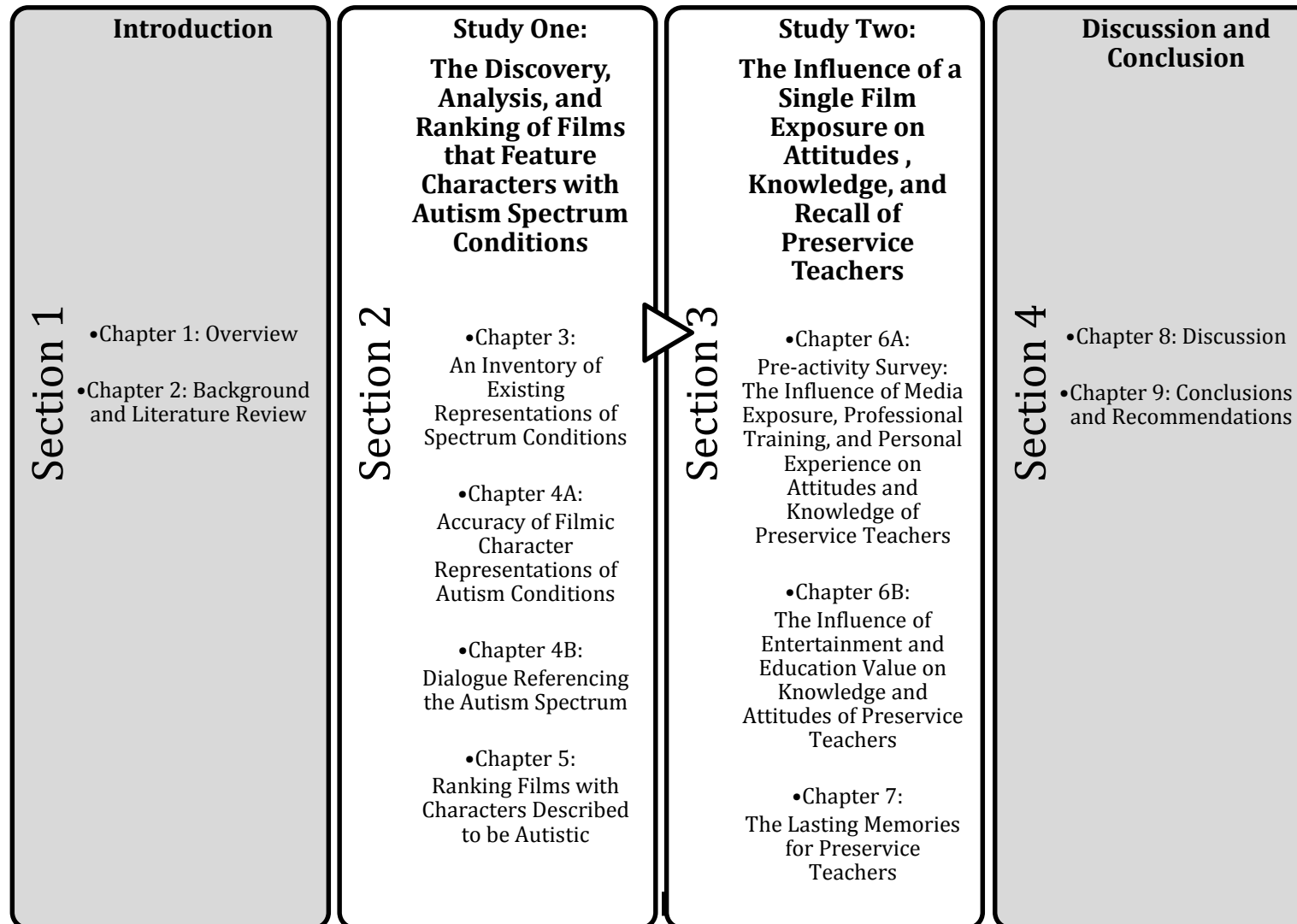


Figure 1.1: Thesis Overview

Section 1 is the Introduction and spans two chapters. Chapter 1 includes an overview of the issues investigated and the structure of the thesis. Chapter 2 covers the background literature that applies to the thesis as a whole. The chapters in section 2 and section 3 each contain a focussed literature review, methods, results, discussion, and conclusion specific to the stage of the study being discussed.

Section 2 (Chapters 3, 4A, 4B, and 5) of the thesis includes the study and analysis relating to films. Chapter 3 explores the contribution of film towards the heightened visibility, or the 'celebrity persona', of autism by examining trends over time, the representation of diagnostic characteristics, and the genre. These issues are deemed to be important as such representations have the power to educate and impact on the stigma surrounding individuals affected by this disorder (Owen, 2007; Scull & Peltier, 2007; Titchkosky, 2005).

Chapter 4 is composed of two parts, A and B. Following on from the identification of existing films, an empirical analysis of the accuracy of character portrayals described by the DSM-IV-TR<sup>3</sup> using the observational assessment tool (CARS2) is conducted. This novel approach assists in better understanding the range and severity of autism characteristics portrayed through film (Chapter 4A). To clarify the information about spectrum conditions presented through film, an analysis of the dialogue and sources of the dialogue from 12 films featuring characters portraying autism is conducted (Chapter 4B). Section 2 also includes a description of the weighted ranking system devised to determine the film with the 'best' overall depiction of autism (Chapter 5).

Section 3 follows on from the analysis of films and is composed of two chapters (Chapter 6A, 6B, and 7). This section explores the second study that includes an investigation of the influence of films on the attitudes and knowledge of preservice teachers, and the factors that impact the recall of scenes and the

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<sup>3</sup> At the time of data collection, the DSM-5 was not available and the CARS2 relates to the DSM-IV.

entertainment/education value of the film. Chapter 6A describes the baseline survey to determine the preservice teachers' prior exposure to autism and Asperger Syndrome, from media, through professional training, and through personal experience. Chapter 6B describes the teacher's attitudes towards spectrum conditions, which are measured by a three-factor scale. The scale is composed of select questions from three different studies to determine the participants' emotional responses to people with autism, their comfort with proximity, and their perceptions of capability of people with autism. Knowledge is measured by a 15-question list in true/false format to determine understanding of common characteristics and myths. Chapter 7, explores, through qualitative analysis of an open-ended question, what scenes and dialogue the teachers recall from the film immediately after watching it, and again four weeks later.

The concluding section (Section 4) provides a summary and discussion of the overall findings of the thesis, as well as the limitations and the strengths of the methodology (Chapter 8) while Chapter 9 presents the conclusions of the combined studies and recommendations for future research.

## **1.7 Significance and Originality**

A limited body of literature exists that discusses the stereotyped representations of Autism Spectrum Disorders (ASD) in film. Existing literature questions the integrity of filmic representations of disability, noting a number of contentious issues including: stereotypes in image; formulaic plots; homogeneous archetypes; and unrealistic relationships. This thesis offers some insight into how cultural artefacts like film communicate new information about autism to novice teachers with a particular focus on:

- (a) the picture and persona of autism presented through film, and
- (b) the effect of preservice teachers consuming filmic representations on attitudes and knowledge.

To investigate these two foci two novel approaches are used. Firstly, to shed an objective light on how the film industry represents the idiosyncrasies of individuals on the spectrum the Childhood Autism Rating Scale (CARS2) (Schopler, Van Bourgondien, Wellman, & Love, 2010) (an accepted assessment tool used by professionals working with people on the spectrum) is applied to the characters in selected films.

Secondly, to provide new insight into what potential information viewers could gain from exposure to the films featuring characters portraying autism characteristics analyses of the dialogue and the sources of information are carried out.

The films are ranked by applying an entertainment-education assessment perspective; the impact of viewing the highest and lowest ranked films on attitudes and knowledge about autism is then assessed. This ranking process provides insight into the qualities that make the film memorable, and whether the accurate portrayals are recalled; through this approach a platform is created to discuss the potential use of film in professional development training for preservice teachers.

In addition to the significant and novel aspects of the film-related investigation of the study, there are also valuable insights resulting from the second study involving preservice teachers as the participant cohort.

Research into teachers' understanding of autism and the impact on students is limited, albeit increasing. However, to my knowledge, there has been no research into the influencing factors for preservice teachers' attitudes and knowledge regarding autism, or how the teachers' perceptions may translate from one medium to another, for example from film to the classroom. For example, "It is argued that Australian special educators and researchers are currently passive in relation to our negative media representations of disability with little to be found in local research literature that shows a specific interest in the issue." (Symonds, 2006, p157).

The second study expands the investigation beyond the special educators mentioned by Symonds, as the presence of students with autism is a likely reality for most or even *all* teachers. Therefore, this thesis focuses on preservice teachers because there is an opportunity to harness and nurture realistic beliefs, and explore unrealistic and negative beliefs surrounding autism prior to entering the teaching profession. The beliefs are important because they will likely influence teachers' behaviours towards students with diverse needs (Helps et al., 1999; Symeonidou & Phtiaka, 2009).

Secondly, the contribution of negative emotions towards having students with autism in their class has not been explored in the empirical literature. However, as Murray (2012) notes, media introduced autism to the world through the film *Rainman*, and the influence of media on attitudes is well-established throughout the literature. As such, the results of this thesis suggest that exposure to specific film portrayals of autism can change the attitude of preservice teachers.

For the purposes of this thesis, I have focused on the real life consequences resulting from the viewing of a false reality. As it has been established that important consequences for people with disability arise from film exposure, based on the findings from this thesis, in Chapter 5 I propose guidelines for producing representations of human difference that produce 'least harm'. These guidelines explore the films' abilities to maintain the characters' integrity and suggest methods of framing the disability in a way that does not lead to 'othering'. Furthermore as will be discussed in Chapter 3, 4A, 5, and 8 it is recommended that characters are developed as individuals rather than existing to drive the film plot (Baker, 2008; Murray, 2006; Pangrazio, 2003), and to avoid exaggerations to the common characteristics that unite the Autistic Community.

## **Chapter 2: Background and Literature Review**

### **2.1 Autism Spectrum Conditions**

The Autistic Community share commonalities in some domains; for example difficulty with social communication. Despite the shared commonalities among those with autism and those with AS there are distinguishing differences. For example, the age of language onset and intelligence varies in that those with Asperger Syndrome have average or above average intelligence and average language onset whereas those with autism may not (McLaughlin-Cheng, 1998). As mentioned in the previous chapter, autism and AS are no longer distinct categories under the new DSM-5; instead the new diagnostic label, Autism Spectrum Disorder (ASD), is used.

#### **2.1.1 Autism Past and Present**

Autism, and the meaning attributed to the term, has evolved over the past 70 years making it one of the most well-known diagnostic labels of current times (Fischbach, 2011). Originally used within the diagnostic description of schizophrenia (DSM-I), autism comes from the Greek word “autos” meaning ‘self’ and was used to describe an attribute associated with schizophrenia. In 1943, Leo Kanner observed a group of children that shared some similar qualities. The small group of children exhibited a number of distinct behaviours that differed from all other childhood conditions and syndromes known at that time (Ellis, 1990; Wing 1993). Kanner titled what he described as ‘peculiar behaviour’ patterns as ‘early infantile autism’ (Ellis, 1990; Wing, 1993). Specifically, the children Kanner observed were not interested in people, had poor communication and repetitive behaviours; this was a symptomology Kanner referred to as ‘autism’ (Wing, 1993). Over the next 40 years autism remained a relatively rare condition and was referred to as ‘classic’, ‘typical’, or ‘Kanner’s’ autism prior to the inception of Wing’s term ‘spectrum’ in the 80s. In 1987, the DSM term ‘infantile autism’ gave way to the diagnostic term ‘autistic disorder’ which was used until 2013. In 2013, the expanding definition was reflected

through the submission of a new diagnostic label Autism Spectrum Disorder (ASD) found in the DSM-5. As Fischbach (2011) stated in an interview, “Leo Kanner in 1943 gathered a group of children and said there is something common about these children ... but the definition has just kept expanding since then.”

One year after Kanner identified the behaviours which are now associated with autism, Hans Asperger identified similar characteristics in a group of adolescents who lacked empathy, were socially odd, were literal in language, rigid in routine, had special interests and poor non-verbal communication (Baron-Cohen & Klin, 2006; Ellis, 1990; Frith, 1991). This group of people was identified as having Asperger Syndrome (AS), which was introduced into the DSM-IV in 1994 and maintained in the DSM-IV-TR in 2000. Since AS was a separate diagnosis in the DSM IV (American Psychiatric Association, 1994) specific assessment tools (e.g. Childhood Autism Rating Scale (High-Functioning version) were developed (Schopler, Van Bourgondien, Wellman, & Love, 2010). Originally, AS was found in the DSM-IV, and DSM-IV-TR, under the umbrella term Pervasive Developmental Disorder (PDD) alongside autism, Rett’s Syndrome, PDD-NOS (Not Otherwise Specified), and Childhood Disintegrative Disorder. In spite of the relatively recent introduction of the ‘Asperger Disorder’ diagnosis in the DSM-IV, autism and AS have been amalgamated into one diagnostic umbrella term ‘Autism Spectrum Disorder’ in the 2013 DSM-5.

### 2.1.2 The Symptomology and Characteristics that Define ASD

Autism is complex and there are infinite potential displays of characteristics. The complexity and individual nature of autism affectedness is reflected in the comment made by researcher Robert Schultz, “If you’ve seen one child with autism, you’ve seen one child with autism. Autism’s like a snowflake” (Waterhouse, 2012). Furthermore, Walsh, Elsabbagh, Bolton, and Singh (2011) have stated that, “The general public ... rarely appreciate this level of complexity and the broad spectrum of functioning that characterises the condition (autism)” (p. 606).

In a bid to reflect the broadening definition, the structure of the DSM criteria changed from separate diagnoses in edition IV to a singular diagnosis in edition 5. The aim of the DSM is to outline characteristics that when grouped together are used to identify an individual as having a specific disorder, for example autism, AS, or ASD. Characteristics found in the DSM-IV were relative to these three main areas of challenge (the triad of impairments). The DSM-5 structures the characteristics in a different way and aims to reflect challenges associated with ASD in the areas of: social initiation and response (interaction); non-verbal communication; social relationships; atypical speech, movements and play (communication); preoccupation with objects or high interest topics; and resistance to change (flexibility of thought/rigid and repetitive behaviours).

Varieties of assessment tools are available to aid professionals in determining a diagnosis. To determine the presence of a number of characteristics, standardised assessments, such as the CARS2 or the ADOS (Autism Diagnostic Observation Schedule), along with a number of questionnaires and checklists, can be used. These results are then compared to the criteria in the DSM and if the required number of characteristics is evident and they are consistent across environments, a diagnosis may be given.

### 2.1.3 Social Adherence to the Medical Model

There is a strong adherence to the medical model paradigm for disabilities in the current culture. Many aspects of support and provision - for instance funding, educational provision, access to specialist programs and professionals - are dependent on a diagnosis. This dependence on diagnosis to gain support finds some individuals forced to seek a label. The medical model conception of disability has been accused of applying language that focuses on limits and inabilities (Draaisma, 2009), and encapsulating the individual through the support of the idea of the 'disabled autistic' for which a cure should be sought (Kama, 2004). This is a notion that many within the Autistic Community avidly reject stating that, "autism is a significant, dominant, and irrevocable part of what makes me..." (Baggs, n.d.). In addition, it is through the process of diagnosing that individuals who display a certain number of specific characteristics are deemed

to be disordered. However, some scholars argue that it is not so much the act of labelling that determines what autism is, but instead the social processes of identifying, interpreting, and representing that determine 'what it means to be autistic' for the individuals and for society (McGuire, 2010; Nadesan, 2005).

These two very different perspectives produce different language. For example, while the social construction model proposes that there should be no medical means of categorising or classifying human difference that does not have an organic base (Timimi, 2012), the medical model clearly identifies individuals by definite properties into definite categories. Further to the categorisation itself, those that adopt the social construction model contend that disability only exists relative to discourses of normality (Brownlow, 2010; Bumiller, 2008; Conn & Bhugra, 2012). In fact, Brownlow discusses the perception that 'autism' should change to fit the neurotypical world, a point that she counters with the contention that autism could be perceived as difference rather than deficit.

## **2.2 Prevalence and Incidence**

The extraordinary increase in prevalence of autistic conditions around the globe in the last 20 years has been referred to as an 'epidemic' (Chamak, 2008; Iobst et al., 2009; Murray, 2006). Frequently used by popular media, although refuted in discussions in scholarly literature, the term 'epidemic' offers a graphic, albeit potentially fear inducing, description of the increasing presence of autism in society. For example, there has been a dramatic rise from two in 10,000 children in 1943, and for nearly 40 years following the original observation of autistic symptomology, to recent reports of more than 1 in 100 (Chamak, 2008); this represents a 4,900% increase. To clarify, when discussing the pervasiveness of autism in the population, typically the prevalence is reported rather than the incidence for a number of reasons. First, incidence refers to new cases and it is thought that individuals are born with autism; as Mesibov has said, "It is a cradle to grave disorder" (Schopler & Mesibov, 1983). Since there is no known organic base for autism a majority of the diagnoses for the spectrum do not happen until a child is two years of age or older (and often later than that for AS) when the

differences in the relation to the social world become obvious. Hence, cases are not considered 'new cases' as the children remain as they always were and a label became available to describe them.

Reports from the United States indicate the prevalence of ASD to be 1 in 68 children eight years of age in 2010 (Baio, 2014); the Centers for Disease Control and Prevention (CDC) noted an increase from 1 in 150 in 2002 to 1 in 88 in 2008 for the same age group and now report the Baio (2014) prevalence rate of 1 in 68. Countries around the world are reporting increases in the prevalence and incidence of autism spectrum conditions. In the United Kingdom, in 2009, reported prevalence of autism spectrum conditions in 2009 was 157 in 10,000 (Baron-Cohen et al., 2009), a dramatic increase from the 57 per 10,000 reported in 2002 (Scott, Baron-Cohen, Bolton, & Brayne, 2002). In Australia the prevalence of autism more than doubled from 2003 to 2009 where 64,600 Australians 'had autism' in 2009 and even more in 2012 (Figure 2.1)(Australian Bureau of Statistics, 2009). It should be noted in the graph below that there are not fewer people with autism after the age of 20-24 as is implied by the dramatic slope of the line, rather there are fewer data as people leave school and are not registered with particular agencies.

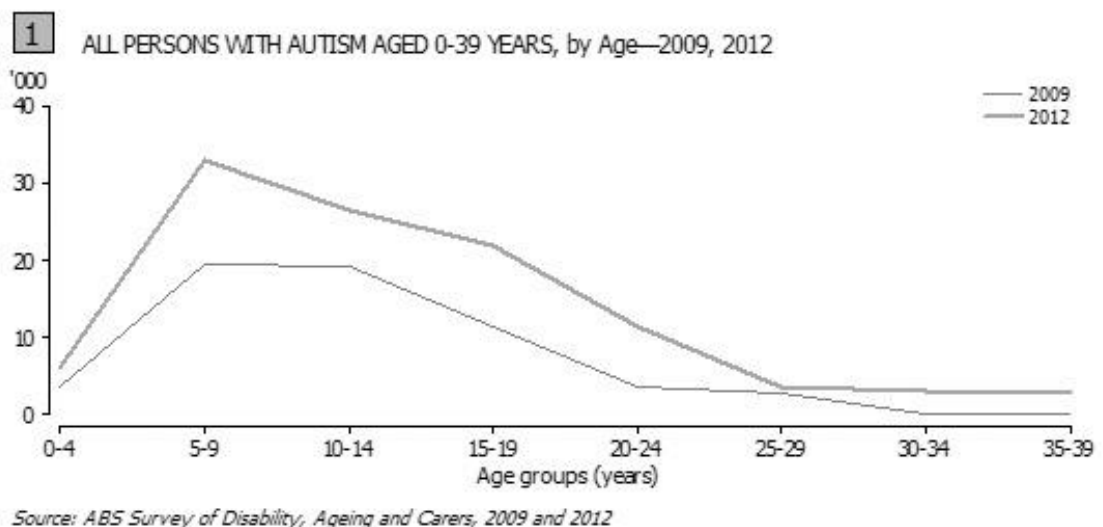


Figure 2.1: Prevalence of Autism in Australia

While there is clearly an increase in the prevalence of people with autism diagnoses around the world, there is great debate about the actual cause of the rise. Changing and broadening definitions, lack of specificity regarding the inclusion of AS in the analysis, methods of diagnosing, and cultural perceptions of behaviour and diagnosis are a few of the possible causes (Williams, Higgins, & Brayne, 2006). Regardless, there is a high prevalence of autism spectrum conditions globally, and specifically in Australia, which seems to increase each year.

### 2.2.1 Increased Prevalence of Students on the Spectrum in Schools

The increased prevalence of autism spectrum conditions around the world has resulted in allocation of funds towards 1) monitoring incidence and prevalence; 2) development of national guidelines for assessment and diagnosis; and 3) development of early intervention strategies (MacDermott, Williams, Ridley, Glasson, & Wray, 2006). These initiatives support understanding the influencing factors on the rising prevalence of spectrum conditions (e.g. diagnostic measure; cultural bias), and support early diagnosis and intervention. However, the focus of initiatives mentioned above does not address the challenges faced by the teachers of, and children on, the autism spectrum who are currently attending schools across the country.

In 2008, Williams et al. (2008), reported an autism prevalence rate of 12.1 to 35.7 per 10,000 for children age 6-12 years across Australia for the years 2003-2004. The prevalence rates of autism and AS reported by MacDermott et al., (2006) for the same year and the same age group was 47.2 per 10,000 and 15.3 per 10,000 respectively. MacDermott and colleagues also reported rates for the age 13-16 years for 2003-2005, with 24.2 per 10,000 youth with autism and 12.7 per 10,000 with AS. In a later report by the Autism Advisory Board (2006), it was estimated that one in 160 students age 6-12 attending Australian schools were classified as having autism. The Australian Bureau of Statistics noted that the prevalence rate varies dramatically by state. According to the 2003 data the prevalence of students age 6-12 with autism in schools in the Australian state of New South Wales (NSW) was 9.6 per 10,000 while it was reported to be 40.8 in schools in

Western Australia (WA). Almost three-quarters of people with autism in the Survey of Disability, Ageing and Care were age 5-18 years - the age at which they would be expected to be attending school where data is collected by services. The estimates of autism by Australian states in the 5-18 year age group are: 13,300 in NSW, 14,300 in Victoria, 9,700 in Queensland, 4,400 in Western Australia and another 5,400 across the remaining states and territories, (Australian Bureau of Statistics, Geography, 2009).

The New South Wales Board of Education stated that in 2011 it provided support for 10,000 students with autism<sup>4</sup> of the estimated 760,012 students in public schools (Roth, 2013). Additionally, there were an estimated 47,100 students between the ages of five to eighteen with spectrum conditions in schools across Australia in 2009 (Australian Bureau of Statistics, 2009).

The discrepancies in the reported prevalence are in part due to the variations in who was accounted for (e.g., autism, the spectrum including AS, the spectrum including PDD-NOS, or some other combination). These prevalence rates, and the already noted increasing prevalence around the globe, imply that teachers working in public schools in Australia will almost certainly encounter a student with a spectrum condition, whether in their classroom or the general school environment.

### 2.2.2 Educational Options for Students with Disability, Autism Specifically

In Australia, there are a number of educational options, which vary by state, for students with autism spectrum conditions. Generally, the options include: attending a mainstream class (with or without a Teacher's Aide); placement in autism specified classrooms; placement in classrooms for students with moderate intellectual impairment; placement in classrooms for students with mild intellectual impairments; multi-categorical classroom placements; or placements in a School for Specific Purposes (SSP).

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<sup>4</sup> This number may be higher as it is unclear whether students with AS were included

Within the school environment the student will have access to at least one teacher. The student-to-teacher ratio is dependent on the type of classroom provision; the allocation of a teacher's aide for part or entire days is dependent on funding and availability.

The Australian Institute for Teaching and School Leadership lays out responsibilities for teachers in the classroom, whether a mainstream or SSP teacher. Of the many responsibilities that a teacher has, some specifically mention students with disability or special learning needs (Table 2.1).

**Table 2.1: Teachers' responsibilities for students with special learning needs**

<b>1.5 Differentiate teaching to meet the specific learning needs of students across the full range of abilities</b>	Demonstrate knowledge and understanding of strategies for differentiating teaching to meet the specific learning needs of students across the full range of abilities.	Develop teaching activities that incorporate differentiated strategies to meet the specific learning needs of students across the full range of abilities.	Evaluate learning and teaching programs, using student assessment data, that are differentiated for the specific learning needs of students across the full range of abilities.	Lead colleagues to evaluate the effectiveness of learning and teaching programs differentiated for the specific learning needs of students across the full range of abilities.
<b>1.6 Strategies to support full participation of students with disability</b>	Demonstrate broad knowledge and understanding of legislative requirements and teaching strategies that support participation and learning of students with disability.	Design and implement teaching activities that support the participation and learning of students with disability and address relevant policy and legislative requirements.	Work with colleagues to access specialist knowledge, and relevant policy and legislation, to develop teaching programs that support the participation and learning of students with disability.	Initiate and lead the review of school policies to support the engagement and full participation of students with disability and ensure compliance with legislative and/or system policies.

(Source: AITSL, 2011, p9)

Note that the teacher is to 'demonstrate broad knowledge and understanding of teaching strategies that support participation and learning of students with disability'; that they are to 'design and implement teaching activities that support students with disability'; 'incorporate differentiated strategies'; and demonstrate knowledge and understanding of strategies (across the full range of abilities)'. In addition to the above responsibilities of the teacher, it is "the legal obligation of schools to accommodate students with disability" (Review of Funding Scheme, p235).

One of the many challenges in the policies is the terminology used. The challenges arise from lack of objectivity and the vague nature of the terminology used in policy. For example, what is the meaning of a 'full range of abilities' and how do teachers demonstrate (no less acquire) a 'broad knowledge' of

strategies for students with disability? The term disability is not defined anywhere in the document which poses another challenge. This issue is highlighted in the Review of Funding for Schooling document which states, “(there was) a general acknowledgement of the need to establish a national definition for students with disability” (Commonwealth of Australia, 2010, p6).

For teachers to fulfil their responsibility and utilise their broad knowledge they need to understand the core characteristics of the community. Generally, children on the spectrum, even considering the range of abilities and manifestation, seem to respond to organized and structured environments, and particular management approaches of education and behaviour (Ellis, 1990; Mesibov, 1993). As is pointed out in the responsibilities, teachers also need to engage in effective and positive behaviour management strategies, and maintain the safety of all of the children. While this second point may seem obvious, it may be difficult to achieve under certain circumstances or with a limited repertoire of strategies.

### 2.2.3 The Attitudes and Knowledge of Teachers Regarding Autism

“The greatest resource in Australian schools is our teachers. They account for the vast majority of expenditure in school education and have the greatest impact on student learning, far outweighing the impact of any other education program or policy” (Jensen, 2010,p5)

Teachers are arguably the pinnacle of the classroom environment. They direct the learning of students, both academic and social learning, and act as a model to the children they teach. There is a convincing body of literature that supports the notion that beliefs and attitudes dictate behaviour (Albarracfn et al., 2000; Postmus, Warrener, & McMahon, 2011). This prospect calls into question the attitudes and beliefs of teachers regarding inclusion, disability, and autism conditions specifically.

### 2.2.3.1 Attitudes

Many contributing factors accumulate to form opinions and attitudes towards certain topics or experiences. For example, it has been stated that: “seeing, listening, viewing, and experiencing shape our assessments and judgements,” (Hobbs & Jensen, 2009, p2). Personal contact with individuals with disability has been shown to improve acceptance and tolerance of disability, and make individuals more aware of discrimination against people with disability (Farnall & Smith, 1999). Contact through other avenues, on the other hand, has been found to lead to more emotions that are negative. For example, Kasa-Hendrickson (2005) conducted a study in which she interviewed teachers that were open and positive about having a student with autism and mental retardation in their class. These teachers had not placed a ceiling on the child’s potential but instead aimed to support and ‘see what they were capable of’. Many of the teachers in this study reported hearing negative perceptions of the student with disability; for instance, one teacher was told by a psychologist that they should not expect much because the student was the most disabled they had seen. Likewise, another teacher was told that they were unrealistic and misguided in their starry-eyed optimism about a student’s potential and ability. There is an inherent pressure for these teachers to conform to limiting perspectives, in part, because the teachers’ superiors relay these perceptions. The prejudice demonstrated by the professionals in the above examples was also found in a survey of principals from mainstream education environments in the United States (Horrocks, White, & Roberts, 2008). School principals also have an impact, with the attitude held by principals towards students with autism directly related to their belief whether those students could be included in a mainstream environment (Horrocks et al., 2008). These judgements of potential success may result from prior experience, or from seeing, hearing or listening as Hobbs and Jensen (2009) suggest.

The mistaken idea that students will not achieve because of their spectrum condition may occur, in part, because “professionals’ understandings strip the

experiences of autism of its complexity by characterising it as a ‘devastating disorder’” (Cowley, 2003, p43). Likewise, Starr and Foy (2012) conducted a study exploring parent perspectives of education for their child with autism and reported that parents had been told that they should have ‘warned’ the teacher about the child. Additionally, the parents who participated in the study stated that their childrens’ fears over being pinched or bitten spread from the children to the teachers and on to other parents.

Through framing autism spectrum conditions as devastating, or something to fear, the stage is set for the negative emotions reported by teachers. Helps, Newsom-Davis, and Callias (1999) interviewed 72 teachers in the United Kingdom to explore their views on autism and dealing with a student with autism in their mainstream class. As mentioned in Chapter 1, the teachers expressed resentment, and had a tendency to underestimate their students’ abilities. The resentment at having a student with autism in their classroom has been attributed to beliefs that children with spectrum conditions belong in special learning environments, that the children require multiple strategies and frequent/constant input and support, and that the demands of the child interfered with achieving curricular goals (Helps et al., 1999; Robertson et al., 2003; Soto-Chodiman et al., 2012; Starr & Foy, 2012). Additionally, some teachers reported fear and anger about having to manage behaviours displayed by some students (Robertson et al., 2003; Soto-Chodiman et al., 2012; Starr & Foy, 2012). At times, these behaviours can be violent; in addition, there are challenges between the child on the spectrum and their neurotypical peers that require teacher support. For example, rigid perspectives can frustrate students, and self-injurious behaviours or communication challenges can foster fear and apprehension about continuing interactions.

The literature indicates that some teachers struggle to determine how to support communication and social interaction challenges presented by a student on the spectrum, and do not feel that the support systems in place are adequate (Glashan et al., 2004; Kasa- Hendrickson, 2005). The overwhelming nature of

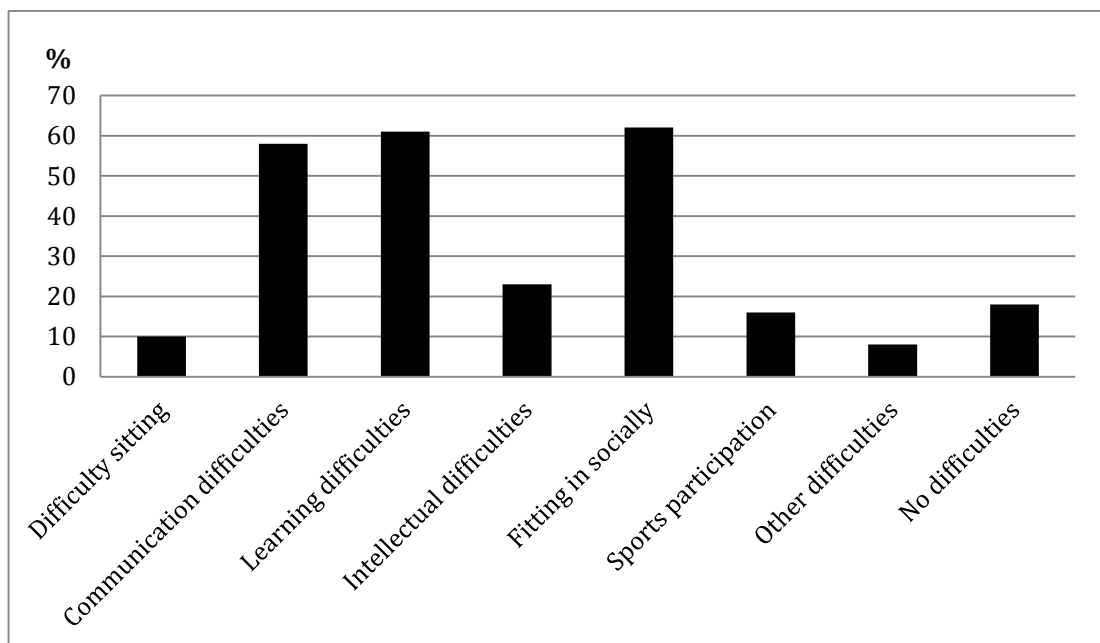
the stressors have been shown to result in approximately 24% of newly graduated teachers leaving the field within their first two years, and approximately 46% after five years (higher for teachers of special education) (Hunt & Carroll, 2003). According to Whitaker (2001) this rate of exiting the profession is because the teachers lose confidence when the reality of classroom composition, and parental demands and administrative challenges override their desire to teach students and impact positive change.

In addition to attitudes held by teachers, it is important to consider the knowledge they possess in regards to spectrum conditions. Certainly, at least to some extent, knowledge will inform attitudes. Therefore, teacher preparedness should be investigated considering the expectation that teachers have a broad knowledge base of how to support students, and that the mass exodus from the teaching profession by special education teachers is related to stresses of under-preparedness.

#### 2.2.3.2 Knowledge

Preparedness for teaching is a result of possessing ‘a broad knowledge’ of the curriculum, teaching and learning strategies, facilitating, differentiating, and supporting the diversity of student needs. Obviously this is not a complete list of the factors that prepare a teacher for effective leadership of a classroom. However, the above mentioned skills are essential to providing the social and academic teachings of a classroom. The challenges that teachers face have led to the development of action plans at the state and national levels. One of the focal points of these action plans is to “increase professional learning opportunities for teachers and counsellors to provide understanding and skill development in Autism Spectrum Disorders” (NSW DEC Disability Action Plan 2011-2015). The mandate to increase teacher understanding of the needs and challenges students on the spectrum face is a need that is reflected in the literature that reports that teachers are over-taxed and under-supported in understanding how to teach and support these students.

Lack of knowledge of strategies to support students with spectrum conditions is frequently reported as a source of frustration and ‘emotional exhaustion’ by teachers (Soto-Chodiman et al., 2012; Starr & Foy, 2012). The Australian Bureau of Statistics (2009) reports that “for children with autism who were attending school, 82% reported ‘having difficulty’ at school, the majority of whom had difficulty with communication, learning and fitting in socially” (Figure 2.2).



**Figure 2.2: Proportion of children aged five years and over with autism, by schooling restriction status and type of difficulty experienced at school (ABS Survey of Disability, Ageing and Carers, 2009)**

To reflect these difficulties, teachers in the study by Roberston et al (2003) stated that the communication and social interaction difficulties experienced by students with spectrum conditions often resulted in peer conflict, isolation, and behavioural difficulties, thereby furthering the demands for attention on the teacher. The teacher then has to navigate the needs of the student and simultaneously maintain both the social and curricular goals of the classroom with whatever knowledge and skill they possess.

## **2.3 The Influence of the Increasing Presence of Autism in Media**

### **2.3.1 What is Media?**

Media is a broad term covering the vast majority of the visual and auditory stimuli that the average person encounters on a minute-by-minute basis in the technology age. This medium has a powerful impact on the public, influencing the opinion and self-assessed knowledge they hold on specific topics (Saito & Ishiyama, 2005; Hargreaves et al. 2006; Eayers et al, 1995). The Australian public consumes, on average, three hours of television per day with peak viewing time at 8p.m. for people over the age of 15 years (Australian Bureau of Statistics, 2006); 38.5% of 18-24 year olds view one to five films at the cinema per year (Australian Bureau of Statistics, 2006). The consumption of television programs has increased to four hours per day or 13 hours per week and 39 hours per week of sedentary activity (screen based: TV, computer, ipad, etc) according to the 2011-2012 census (Australian Bureau of Statistics, 2011). The upward trend in media consumption indicates that the reach of media messages is broad and may not reflect actual media consumption since only specific types of media are surveyed.

The media discourse surrounding disability generally reflects cultural dogma (Draaisma, 2009; Ritterfeld & Jin, 2006). Changes in media representations act as a barometer of socially held beliefs and help to understand how a culture perceives issues (Ritterfeld & Jin, 2006). Media, it is argued, can serve as the main source of information, and misinformation, on mental illness (Fragale & Heath, 2004; Owen, 2007), and will greatly influence how the lay public understand the 'ill-defined enigma of ASD' (Murray, 2008). For instance, consider the explanation for the cause of autism from the 1950s and 1960s, the so-called 'refrigerator mother' theory (Bruno Bettelheim). This theory evolved from limited observations of a group of children and parents used in Kanner's work. These parents were primarily highly educated and busy, which focussed blame for the 'isolated child' on the cold mother that did not connect with her child. Bruno Bettelheim was the child-development specialist that popularised the term 'refrigerator mother'. To counteract the cold relationship between

mother and child one of the proposed solutions was holding therapy. This 'therapy' involved physically restraining a child for extended periods of time while telling them all that they have done wrong but that they are loved in spite of their errors (Bumiller, 2008; Conn & Bhugra, 2012). Films like *Change of Habit* (1969) reflect the societal acceptance of this theory and treatment throughout the 1960s. Thankfully, over time researchers and parents of children with autism challenged this theory resulting in an evolution of theories about cause and treatment strategies. The media continues to mirror the evolution of medical and social thinking. For example, as new models like behavioural interventions (such as applied behavioural analysis) began to replace old theories, like the refrigerator mother, films like *Silent Fall* and *Miracle Run* (featuring components of Applied Behaviour Analysis) demonstrated the 'new thinking' and 'treatment' for people on the spectrum.

### 2.3.2 Entertainment Film

One particular fragment of the media that has a potential 'staying' power is that of the entertainment film (Greenburgh, 1988). Take for example, my catching my three-year-old son humming the Jaws soundtrack as he played with sharks in the bathtub. Obviously at the innocent age of three he had not seen Jaws (released 34 years prior to his birth), and yet through social discourse he had attributed the daunting and tense music to the 'man killer of the ocean' reflected in his play. Likewise, the phrase "you can't handle the truth" from A Few Good Men (1992) has been used in conversation and in comedy skits over time. The use of movie quotes in social discourse, as in the above example, relays emotions, connects with others, or is employed to entertain oneself (Danescu- Niculescu-Mizil, Cheng, Kleinberg, & Lee, 2012; Fischhoff, Cardenas, Hernandez, Wyatt, & Young, 2000; Harris, Werth, Bures, & Bartel, 2008). What is more, films regarded as having high entertainment value, primarily those with large box office sales (Ginsburgh & Weyers, 1999), are usually dominated by memorable and emotive scenes (Holm & Mäntylä, 2007; Humphrey, Underwood, & Lambert, 2012; Uhrig, 2005).

The fact that certain films, quotes from movies, or character idiosyncrasies remain vibrant in culture decades after their 'heyday' gives credence to their power to impact society (Fischhoff et al., 2000). This power is supported through the 'drench hypothesis', as put forth by Greenburgh (1988), which states that particularly memorable or strong portrayals of minority characters may have more influence on the viewer than less memorable but more frequent exposures. Given that 'seeing, listening, and viewing' shape our judgments (Hobbs & Jensen, 2009), exposure to just a single portrayal could be the catalyst for a viewer's attitude towards a minority group.

### 2.3.3 Media Influence on People

Films have the ability to cut across all social, economic, political and educational boundaries (Lord, cited in Black, 1994) thereby affording film an immeasurable power to influence society. Furthermore, as Shah (2011) writes, "movies can educate too. They tell us things we never could have known. They tell us things we might not know, and they give us a way to explore the past, the present and the future.....it doesn't matter whether you like the movie or not, but it starts a conversation" (words of Tom Sherak<sup>5</sup> from the interview). The credibility of the production and the conversation it starts, as determined by the viewers, affords the film's content a 'normative' power (Owen, 2007; Scull & Peltier, 2007; Valentine, 2001). Stereotypes can be created or perpetuated through filmic representations and provide exposure to ideas and experiences that a viewer may, or may not, have real world involvement with. Therefore, it is imperative that there are tenable filmic portrayals of individuals and groups representing typical, and atypical, variations of human nature.

The power of a film to move an audience to tears, enrage, or empower them affords film certain credibility with audiences (Shah, 2011). Whether reflecting or fostering societal perceptions (Donald, 2001; Draaisma, 2009; Haller et al., 2006; Ritterfeld & Jin, 2006), fiction films, even those based on a 'true' story, use

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<sup>5</sup> Tom Sherak is the president of the Academy of Motion Picture Arts and Sciences, a consultant to Marvel Studios and has worked in the film industry since 1970.

creative license to enhance the films' entertainment draw. This may seem like a moot point, since classification as fiction indicates the film's story line and characters are, to a greater or lesser extent, fictional (a category that can be used even when a film is loosely based on an actual person or event).

While some do connect to 'true stories', films classified as a fiction do not require representation of actual events, but they do require representation of realistic events, primarily to ensure audience interest. The 'morsels' of truth (or reality) are, in effect, the fragments of actuality that provide realism to the dramatised representation. In other words, films use selected 'truths' that are plausible, or realistic, and it is precisely this plausibility that allows viewers to engage with the text and immerse themselves in the story (Moyer-Gusé & Nabi, 2010; Dal Cin et al., 2004; Moyer-Gusé, 2008). For instance, as Moyer-Gusé (2008) contends, viewers place themselves in the story, perhaps empathising with the character, aspiring to be the character, or having disdain for the character because the experience is familiar to them. The space between the 'realism' or 'truths', and the exaggeration or distortion of the truths, presents an issue when people with disabilities are central to a film. These creative representations have the power to educate and to impact on the stigma surrounding individuals affected by the disability being depicted in a film (Owen, 2007; Scull & Peltier, 2007; Titchkosky, 2005). Therefore, even fictional film representations of humans derive from 'morsels of truth' that possess a unique power to educate and stimulate the formation of attitudes, with the exception of the fantasy genres that are not constrained by relatability achieved through reality.

The indistinguishable chasm between truths and dramatisations in fiction films results in a lack of authenticity in representations that may or may not be obvious to the viewers. Thus, reducing the number of inauthentic filmic representations would seem to be particularly vital for films that portray characters with disability because of the educative and attitude-forming power of films. For example, films can contribute to or counter the fostering,

encouragement, or perpetuation of stereotypes and ‘othering’<sup>6</sup>, particularly when the ‘morsels of truth’ are portrayed as being representations of reality.

As film is a social artefact, it can be used to explore the social conscience of the time, or for educative purposes. Entertainment-Education Theory (EET) describes the concealed influence of engagement with entertaining media. Although producers of film, perhaps not withstanding those producing documentaries, may contend that they are story writing with no intention of educating the public, there is the distinct possibility that viewers are getting more than they paid for through the educative ‘hidden curriculum’<sup>7</sup>.

Entertainment film is particularly influential for viewers because it provides an opportunity to sit and connect with multisensory input for an extended period (Zillmann, 2000). Film affords a mini reprieve from the fast paced culture of continuous demands that we live in today (Uhrig, 2005). Film watching allows an individual to observe without requiring any explicit effort or thought. This ability to ‘turn off’ deactivates our resistance to the content that is presented through the stealthy medium of ‘entertainment’ (Dal Cin, Zanna, & Fong, 2004; Moyer-Guse & Nabi, 2010).

Connection with characters - whether wanting to be like them, feeling empathy or sympathy for them, or imagining the possibility of the impossible - are all aspects of the film viewing experience that make movies so powerful (Dal Cin, Zanna, & Fong, 2004; Giles, 2002; Moyer-Gusé, 2008). The persuasive nature of films rests in the evocative images and catchy phrases, which make this very accessible form of media wholly powerful. For example, the film *Jerry McGuire* brought about a number of catch phrases, ‘show me the money’, ‘you had me at hello’, and ‘you complete me’. These phrases, whether you have seen the film or not, are relatable, that is they become incorporated in lay language and ‘catch on’ (Shah, 2011).

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<sup>6</sup> Othering is a term that refers to the idea that our identity is created and maintained through distinction we make between ourselves and those we view as different from us (Watermeyer, 2006)

<sup>7</sup> Hidden curriculum is a term to describe all of the unspoken subtleties of social interaction (Smith Myles, Trautman, & Schelvan, 2004).

Viewers want to be absorbed in a film and are not likely to be critically or reflectively reading the text (Dal Cin et al., 2004; Moyer-Gusé & Nabi, 2010; Moyer-Gusé, 2008; Titchkosky, 2005). This means that the messages and modelling to which the viewers are exposed can, in the absence of introspection, influence their knowledge and attitudes about the content and characters in a film (Rogers & Singhal, 2002). In this way portrayals have the capacity, arguably, to engage viewers without their 'conscious processing' of the ideas that are presented.

Social Cognitive Theory (SCT) and Personal Resistance Theory (PRT) have generally dominated the literature on the impact of media on viewers. The premise of SCT is that in addition to direct, experiential learning, people learn vicariously by observing models (Bandura, 2001). Models, in the context of SCT, can be found on television and transmit "knowledge, values, cognitive skills, and new styles of behaviour to viewers" (Bandura, 2009, p78). This para-social relationship between the viewer and the characters is established through the personal relatability of the narrative. Whether the viewer perceives the story and characters to be realistic and believable, and whether they develop empathy with the characters, has an impact on the adoption of similar beliefs (Jin & Ritterfeld, 2012; Potter, 2009; Ritterfeld & Jin, 2006). This phenomenon is demonstrated in a study by Jamieson et al., (2006) which found that youth who viewed films featuring 'mental health disturbances' were less likely to seek treatment. The films selected for viewing in that study feature a similar unwillingness to seek help.

PRT contends that overt messages, such as those found in public service advertisements, are resisted. Viewers resist the message because they want to maintain autonomy in their views and values, and may rebel against a message that they would ordinarily support (Moyer-Gusé, 2008). However, EET proposes that resistance can be overcome through the entertainment quality of popular film. For example, as described in Chapter 1, behavioural intent to vote was changed after viewers watched the film JFK (Butler, Koopman, & Zimbardo, 1995). Similarly, the incidence of smoking initiation increased after watching films featuring relatable characters that were smoking on screen (Dal Cin, Stoolmiller,

& Sargent, 2013). Thus, maintaining that emotional connection with characters increases the potential for viewers to adopt beliefs, attitudes, and behaviours displayed through the filmic medium.

The persuasive effect and reduced personal resistance resulting from emotional connection increases the entertainment value of the film. The above examples demonstrate the drench hypothesis proposed by Greenburgh (1988), in which a connection between the viewer and a single character in an entertaining film had a significant impact on the viewer. Certain films may project positive models for the viewer while others may present poor models. Master narratives, or the dominant portrayals, guide societal judgements (Scully, 2009). This is because, “narratives mediate between biological programming and cultural imprinting, processing the past and refiguring the future, as in dreams and prophecy” (Kinder, 2003, p97). Through this mediation viewers of master narrative may adopt terminology used in the dialogue of the film and in media connected to the film, as well as inter and intra-personal attitudes displayed through the film. In the instance of films featuring characters with disability, the viewer’s adoption of attitudes displayed by characters may be problematic (Matthias, Angermeyer & Schulze, 2001; Duvdevany, Rimmerman, & Portowicz, 1995; Symonds, 2006).

#### 2.3.4 Media Representations of Disability

Disabilities in film are under-represented according to Saito and Ishiyama (2005). The disability representations most dramatically under-represented are those of intellectual or ‘mental disorders’ (Gardner & Radcliff, 1978 cited in Saito & Ishiyama, 2005). Schizophrenia is the cognitive disorder at the centre of a majority of the literature regarding representations of disability in film. Many scholars have found that the public mistakenly perceive people with schizophrenia as being aggressive and displaying erratic behaviour and speech (Owen, 2007). Owen used video presentation of film clips to determine whether film could dispel commonly held myths. She found that video stimuli had a greater effect on women than men, and there was an overall improvement in knowledge which may challenge negative stereotypes. This suggests certain

films can have positive influences on attitudes mediated through increase knowledge. Owen's findings counter claims that films featuring characters with schizophrenia promote stereotypes and foster negative attitudes (Angermeyer, Dietrich, Pott, & Matschinger, 2005; Ritterfeld & Jin, 2006). Other factors may also influence the power of the filmic representation on viewers. There is some evidence that personal contact with people with disability may reduce negative media effects. For example, Farnall and Smith (1999) found that personal contact combined with media exposure was significantly related to higher levels of perception of discrimination, emotional response and comfort with people with specific disabilities. All of these authors contend that portrayals that are more accurate would produce greater positive influence on the public.

An opposing perception of the under-representation of disability in film is the notion that disability is not under-represented but instead misrepresented. Draaisma (2009), Kama (2004), and Murray (2008) have argued that characters with disability, and autism in particular, are not under-represented but represented in limited ways through general archetypes: "the supercrip/hero"; "the burden"; "the villain/threat"; "the unintended/accidental hero"; "the victim"; and "unable to adjust" (Nelson, 1996). The supercrip and the villain are favourite archetypes of film narrative. The supercrip affords the opportunity to be human with 'otherworldly power' (Professor X in the *X-Men* film) while the villain utilises physical disability to indicate their 'evil' nature (like the Penguin or the Joker in *Batman* (1989, Dir. Tim Burton)(Morgan, 2008). These spectacularised versions of the disabled, like the supercrip or maimed villain, increase entertainment value without producing resistance or enforcing the need to relate (because these characters provide an avenue for acceptable 'othering'). If this is the case, the presence of characters with disability in film is distorted but might be potent enough to gain and maintain the attention of a viewer, thereby allowing what they witnessed in the film to be adopted into their repertoire of beliefs (Dal Cin et al., 2004).

### 2.3.5 Evidence of Autism Spectrum Conditions in the Film

Featuring a character portraying autism seems to guarantee success of virtually any media (Wing & Potter, 2009). This 'guaranteed success' may be attributable to the 'contemporary fascination' with what are generally known as Autism Spectrum Disorders (ASD) or autism conditions (Murray, 2008). Contemporary attention resulting from near celebrity status has made the label 'autism' a household term. As Mallett and Runswick-Cole (2012) and McGuire (2011) attest, social artefacts, (including scholarly fascination and film), have made 'autism' somewhat of a 'thing' which can be viewed and understood through the medium of film. Film is a key modality that communicates generic 'celebrity status disability'. In particular, depictions of a character with a disability illustrate how people with that disability experience life and 'serve as a lens through which an audience can view and define that disability' (Baker, 2008, 229).

Autism portrayals have been found in entertainment media as early as 1969 (Conn & Bhugra, 2012), and representations have continually increased in the last 15 years (Conn & Bhugra, 2012). The representations have evolved to reflect the scientific community's broadening scope of associated characteristics (Sarrett, 2011). This is reflected in the illustrations, which according to some scholars, range from one dimensional portrayals representing only the most unique characteristics such as lack of eye contact, to misrepresentation of a multitude of characteristics consistent with a variety of often co-occurring disorders such as savantism, intellectual disability, challenging behaviours, and seizures (Matson & Horovitz, 2010).

Though the illustrations may be inaccurate, an increase in filmic portrayals of autism conditions is evident (Conn & Bhugra, 2012). This increase may be attributed to the boundless presentation possibilities. That is to say, the disorder provides the film-maker with few limitations in representation since there is a limited science-based understanding of ASD, so much so that Timimi (2012) argues there should be no diagnosis at all for the disorder. The mystery surrounding the elusive cause of ASD arguably furthers its celebrity status,

while the varied manifestations found among the population probably contribute to filmmakers' creative freedom.

Although autism maintains a certain mystique, the medical-scientific community does offer what I contend to be a 'framework' for understanding spectrum conditions. This framework is the 'triad of impairments' (Wing, 1991) described in Chapter 1, which includes impaired social interaction; impaired social communication; and impaired social imagination (Ellis, 1990; Mesibov, 1993; Wing, 1991). These characteristics can manifest in a number of vastly differing visible behaviours, which open the spectrum to an unlimited and relatively unquestioned number of cinematic presentations. The behavioural presentation of this 'triad' is attractive to filmmakers, providing as it does, both the visual salience of the formerly favoured physical disability portrayals as well as visible indicators allowing the neurotypical viewer a glimpse into the mystery of the inner processes of autism. Film raises the visibility of autism through new cinematographic methods of making internal processes 'visible'. For example, advances in technology and special effects have increased filmic representations of the less visible disorders, in films such as *A Beautiful Mind* (2001) or *Mad Love* (1995) which use spinning scenery and close ups on eyes to indicate 'chaotic thought' and 'loss of control'. Notably, in spite of the cinematographers' efforts to make internal processes visible, representation of variance in the experience of autism displayed through film remains limited (Osteen, 2006; Baker, 2008; Draaisma, 2009). These limitations restrict the potential positive influence of the viewer's relationship with the narrative by means of maintaining a semblance of a 'true' representation of the disorder.

Although there is limited literature on the representations of autism spectrum conditions in film, there is ample evidence that film portrayals influence viewers (Bandura, 2001; Hargreaves & Tiggemann, 2002; Moyer-Guse, 2010; Ritterfeld & Jin, 2006; Rubin, 2009) and a suggestion that portrayals of autism conditions are limited and stereotyped (Baker, 2008; Draaisma, 2009; Murray, 2008). Furthermore, the small body of literature surrounding the attitudes and knowledge held by teachers regarding the spectrum indicates that teachers may

have negative attitudes and limited knowledge of the spectrum and associated characteristics. Knowledge and attitudes influence beliefs and the beliefs of a teacher can have a direct positive or negative impact on individuals affected by ASD (Scull & Peltier, 2007). As members of the public, teachers are susceptible to the influence of media, such as film. As such, their beliefs about students on the autism spectrum could be affected by film viewing. This prospect forms the basis of this thesis.

## **SECTION 2 – STUDIES ABOUT FILM**

**“I’m not bad, I’m just drawn that way”**

*(Who Framed Roger Rabbit, Director Robert Zemeckis, 1988)*

## ***Section Overview***

This section discusses the multistage study of films, Study One- *The Discovery, Analysis, and Ranking of Films that Feature Characters with Autism Spectrum Conditions*. The number and nature of films that claim to feature a character portraying autism spectrum characteristics are explored in this section. In Chapter 3: An Inventory of Existing Representations of Spectrum Conditions a search of all full-length feature films portraying characters on the spectrum was conducted. The next stage was to analyse the films that met the eligibility criteria using the CARS2 assessment tool for autism characteristics (Chapter 4A: Accuracy of Filmic Character Representations of Autism Conditions). Following the empirical analysis of accuracy related to diagnostic characteristics the filmic dialogue was analysed in an effort to understand the potential educational contribution specific films can make to viewers' understanding of autism spectrum conditions (Chapter 4B: Analysis of Film Dialogue Referencing the Autism Spectrum). Finally, in Chapter 5: Ranking Films with Characters Described to be Autistic, the films were ranked on a weighted ranking system devised to identify the top-rated available film featuring a character with a spectrum condition.

### **Chapter 3: An Inventory of Existing Representations of Spectrum Conditions**

#### **3.1 Focussed Literature Review: Film Inventory**

Saito and Ishiyama (2005) reported that disability and disorders were under-represented in the entertainment media. Further, cognitive and emotional disorders (where autism spectrum conditions could be classed) are least evident in the entertainment media by quantity and are the most narrow in terms of the scope of characteristics attributed to the disability (for example media products that commonly associate schizophrenia with violent behaviour) (Ritterfeld. & Jin, 2006). However, representations of autism conditions are increasing, and the social presence of 'autism' is evident in its increasing media profile (Draaisma, 2009; Osteen, 2008; Saito & Ishiyama, 2005) and through global events like World Autism Day or the 'Light It Up Blue' campaign.

To understand the contemporary attention and popular social belief surrounding autism, this chapter argues filmic representations of autism foster a celebrity status, with narrow or non-existent diversity. It is argued that this presentation of spectrum characteristics restricts characters' uniqueness through the presentation of limited and similar abilities, or disabilities, providing the viewer with the misperception that individuals on the spectrum range solely from severe to severe with savant skill.

There is a robust debate regarding the social construction of 'autism' and the use of the medical label 'ASD'. In this chapter, the intention is not to dispute or defend the contemporary use of the diagnostic label; rather the purpose is to analyse the social construction of the celebrity persona, 'Autism', through filmic representation. The propensity of this cultural artefact to adhere to the medical model paradigm is reflected in the use of the term ASD and will be discussed throughout this section of the thesis. It should also be noted that in both social and film dialogue the terms autism, Asperger Syndrome and ASD tend to be

used interchangeably; the challenges this creates are discussed throughout the thesis.

In line with the shifting and conflicting meanings that contribute to the “collective awareness” of autism (McGuire 2012), I discuss the explicitly identified presence of characters who display a fictional experience of the autism label. In so doing I fully acknowledge that basic awareness of the label ASD acts as shorthand for identification and contributes to the ableism<sup>8</sup> and commoditisation of ‘autism’ when used to maintain a “sectarian perspective” (Mallett & Runswick-Cole, 2012). This is not my intention, rather the term ASD as used in this chapter is not assumed to insinuate an understanding of the varied experiences of persons in the autism community. Instead, the use of ASD provides a commonly known term for discussing the collective awareness and expectations of the celebrity notion of autism formulated through the lens of image exposures and fictional experiences. Therefore, the films used in the analysis for this study have specifically identified the character as ‘autistic’, ‘having autism’, or ‘having Asperger Syndrome’. It should be recognised that the films that have explicitly identified characters depicted as having a unique categorical quality that is atypical, for example stating that the character is a ‘severely autistic child’, demonstrate a general allegiance to the medical model paradigm. Consequently, this chapter discusses the experience of autism as it is presented in filmic terms.

A search of entertainment media, often referred to as film or movies, was conducted to identify films that included a character with autistic characteristics in order to understand how the experience of autism is represented through this cultural artefact. A comparison of the characters’ characteristics and the DSM-IV diagnostic characteristics using the CARS2 instrument was conducted following the discovery of the autistic representations in the identified films. This analysis was undertaken to understand the scope and severity of the

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<sup>8</sup> Ableism is a system of beliefs and practices that produces a particular kind of self and body that is projected as perfect. Anything outside of the culturally entrenched perfect kind is cast aside as a diminished state of being human (Campbell, 2001, p44).

autistic representations as compared to the actual autistic population. This comparative analysis was deemed to be important as some researchers have argued that the portrayals of autism in film are stereotypical and uni-dimensional (Baker, 2008; Draaisma, 2009; Murray, 2008; Sarrett, 2011).

### 3.1.1 Exposure to Filmic Character Portrayals of Autism Spectrum Conditions

#### 3.1.1.1 Filmic categorisation: trends over time

In the evolution of film, the prominence of a specific disorder in the entertainment industry seems to mirror its prevalence in the scientific community (Sarrett, 2011). The phenomenon of social migration towards new ideas and knowledge, or 'flocking' as Singh et al (2007) describe it, can be seen through the increase in social interest and media images of ASD which parallel its increasing recognition in the scientific community, contributing to the celebrity of autism. These synchronised events can be highlighted through exploration of film representations across time.

The parallels between science (diagnostic rates) and the social migration to new ideas (flocking) expose the 'common face' of autism, which either reflects or informs current social thinking about ASD and contributes to the social discourse surrounding ASD (Draaisma, 2009; Ritterfeld & Jin, 2006). Exploring the current 'face' of autism as presented in film by tracking the migration towards filmic portrayals of the autism spectrum, and highlighting the parallels between science and society, enables a discussion of the prominence of ASD in the social conscience. For example, Jones and Harwood (2009) report on print media stories about ASD that were framed as positive or negative, noting that the stories peaked in 2004. This peak coincides with both the increased release of filmic representations of ASD as reported by Conn and Bhugra (2012), and the increase in scientific research surrounding the MMR (Measles, Mumps, Rubella) vaccine and medical findings that allude to potential cures for ASD (Jones & Harwood, 2009).

### 3.1.1.2 Filmic categorisation: representation of diagnostic characteristics

Every movie poster, trailer or DVD cover has text, a brief summary, or a synopsis, of the plot of the film. Although many films mention ASD in the term in the synopsis; for example, *The Black Balloon* describe a main character as an 'autistic brother'. Films representing human differences that assert specific diagnoses in their synopses usually feature diagnosis-related qualities through the character portrayal, accurately or inaccurately. Thus the stated 'diagnosis' is important if stigma experienced by people carrying that label is heightened by exposure to inaccurate film portrayals, as reported by Gabbard and Gabbard (1999).

In some cases, the characteristics of a filmic portrayal may fall within the diagnosis described in the synopsis, while in others they may not. Such inaccuracies, demonstrated through the over-representation of specific characteristics, contribute to the stigmatisation of those portrayed, as well as the development of stereotypes (Murray, 2006; Symonds, 2006). Of particular interest are the implications of the presentation of savant skills within the context of an autism affected character portrayal. This is concerning given the limited number of filmic ASD portrayals relative to the actual population, and the tendency to emphasise specific features or elements of the disorder. Simplified and limited representations of ASD risk reducing the understanding of the complexity of the disorder by the viewing public (Farr, 1995).

### 3.1.1.3 Filmic categorisation: the influence of genre

Research indicates that 'genre' is an important – if not the most important – factor in decision-making for audiences about which film to see (Litman, 1983 cited in Redfern, 2012: p147). Genre is important for other reasons. Firstly, it sets the tone of the film. If a film is in the horror or thriller genre it is likely to have a negative emotional valence due to the fear-inducing qualities. If a film is in the drama genre it will likely follow the formulaic plot markers that produce one of two reactions from viewers. The first potential reaction is an empathetic response for either the character with disability or those managing the commonly portrayed 'burden' archetype (Murray, 2006; Draaisma, 2009). The

alternative reaction is a feeling of triumph over obstacles response, where the obstacle is often the disability itself (Shapiro, 1994). The associations in the drama genre can evoke feelings of pity or grandiose visions of overcoming the 'obstacle' of disability (Draaisma, 2009). Secondly, the genre of a film is important as it may conform to a particular stereotype featuring limited archetypes and physical indicators. For example, as mentioned in Chapter 2, the archetype of a character portraying human difference in the action genre is often either a villain (e.g., the Penguin in *Batman*) or a supercrip (e.g., Professor X in *X-Men*) (Baker, 2008).

This chapter reports on all identified films portraying ASD produced between 1930 (taken as the commencement of the Hollywood feature length film) through December 31, 2010 (start of this thesis). This period is adequate to facilitate a discussion of the evolution of the 'common face' of autism as presented by 'Hollywood' for the lay viewer's consumption. The purpose was to discover the potential exposure to filmic character portrayals of autism spectrum conditions by identifying all potential film representations of the spectrum and then verifying the search findings via a survey of professionals working in the field. The film portrayals were then classified by (i) trends over time (ii) representations of diagnostic characteristics, and (iii) genre. Forty- nine films were identified and the majority of the films that featured portrayals of autism were in the drama genre. The contribution and influence of film to the presence of the disorder in the social sphere, and potential education value derived from exposure to these portrayals, is also discussed.

### **3.2 Method: Film Inventory**

The search for films containing characters portraying ASD was conducted in two parts. The first part involved a search of academic databases for journal articles, books and conference proceedings that referenced films about disability and/or autism, Asperger Syndrome (AS), High Functioning Autism (HFA), or ASD. ProQuest, Informa World, Scopus and Factiva databases were searched using the following search terms:

**Search terms/phrases:** autism character and film or movie; Asperger character or film or movie; autism character blockbuster; ASD character blockbuster; Asperger character blockbuster; Asperger represent\* or portray\* or role; autism character represent\* or portray\* or role; disab\* character or film or movie or cinema or represent\* or portray\*; disability character or film or movie

The second part of the search was conducted using gray literature. The search terms/phrases were entered into the Google; Google Scholar; Bing; Yahoo search engines, as well as the search tools on websites for autism and Asperger organisations (for example, Geneva Centre for Autism; Autism Ontario; National Autistic Society, UK; National Autistic Society, USA; ASPECT; Autism Canada):

**Search terms/phrases:** autism character in film; autism in movies; Asperger Syndrome character in film; Asperger Syndrome in movies; Asperger character tinsletown or cinema; autism character tinseltown or cinema; autism character blockbuster; ASD character blockbuster; Asperger character blockbuster

The results from each engine, or site, were checked for mention of entertainment media relating to ASD until saturation was reached. Saturation was achieved when no new film names or characters were found (Bryman, 2008). If entertainment media was referenced in blogs, newspaper articles or interviews it was recorded for verification at a later point.

The resulting list was subjected to an independent search to verify the presence of an ASD character using the Internet Movie Database (IMDB; [www.imdb.com](http://www.imdb.com)), consistent with the procedures used by Hartman (2006) and Conn and Bhugra (2012). The resultant list was then subjected to the two inclusion criteria: the film was released prior to December 31, 2010; and the film identified a character with an ASD in the synopsis on the Internet Movie Database (IMDB, [www.imdb.com](http://www.imdb.com)), DVD synopsis or film trailer. The films identified in the IMDB synopses were verified to contain a character with an ASD by checking the DVD

boxes or trailers. Where there were discrepancies between the IMDB synopsis and the DVD description or trailer, the printed descriptor on the DVD box or oral descriptor in the trailer was taken.

### 3.2.1 Verification Survey

Scull and Peltier (2007) contend that professionals working in a particular field are the best judges of the quality of a film representation. In this instance, quality refers to the relationship between the diagnostic label the film contends to represent and the criteria for use of that label as defined in the DSM-IV-TR. As such, verification of the list was sought from professionals currently working at ASD associations in Australia, Canada, United Kingdom, and United States. Human Resource or Training Managers at two national organisations in each country were contacted to distribute a survey to a minimum of five professionals in the organisation, who, in turn, were asked to respond anonymously to the survey.

The survey (Appendix A) included 37 items covering demographic information (including country of residence, years of experience, and professional roles) and the autism terminology used in their geographic area and professional environment. Participants were asked about their use of entertainment media in training, their opinion on the best and worst representations of ASD in films, open-ended questions about ASD in the media, and a list of entertainment films to confirm or negate the portrayal of a character with ASD for each film.

Any discrepancies between the findings of the professional survey and the final film list were investigated by locating the DVD copy of the film for verification of the inclusion criteria. A master list was produced of the films that met the inclusion criteria. Films on the list were then categorised by year of production, diagnosis portrayed, genre and box office sales. Foreign films were also classified in a variety of ways on IMDB, for example as 'foreign films' or as 'art house' films. For this thesis, all films were categorised by the traditional genres such as 'action', 'drama', 'documentary', etc.

Descriptive statistics were used to identify the changes in total production of films over time, as well as the number of films featuring characters portraying autism, AS and savantism. The genre of the film was recorded based on the IMDB category and analysed using descriptive statistics. The box office sales were determined via the websites Boxoffice mojo ([www.boxofficemojo.com](http://www.boxofficemojo.com)) and Showbiz Data ([www.showbizdata.com](http://www.showbizdata.com)), both of which contain international figures and general synopses of films.

### **3.3 Results: Film Inventory**

#### **3.3.1 Selected Films**

The film list from the original search of academic and grey literature prior to verification included 108 films; this list comprised all films referenced in journal articles, newspaper articles, magazines, blogs and organisation websites.

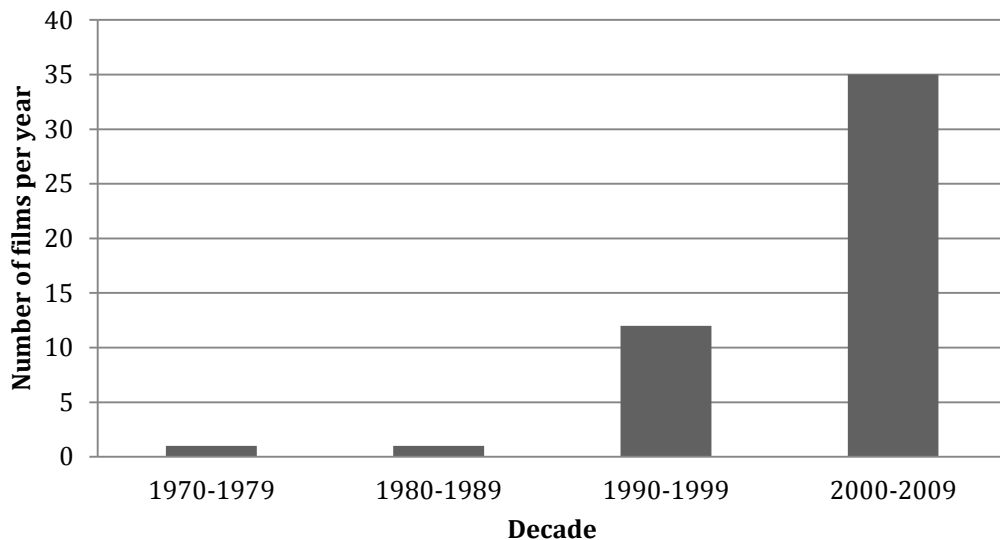
Application of the inclusion criteria reduced the number of eligible films to 49 (see Table 3.1). For each of the eligible films the year of production, whether autism or AS is depicted, the film genre and its distribution channel (i.e., film theatre, television, DVD, film festival) are noted in the table. The films that met the initial criteria are listed in ascending order by the year they were released. The earliest film that met criteria was *Son-Rise: A Miracle of Love*, 1979.

**Table 3.1: Films that met criteria of featuring a character on the autistic spectrum (n=49)**

FILM TITLE	YEAR	DIAGNOSIS	GENRE	BOX OFFICE	FILM TITLE	YEAR	DIAGNOSIS	GENRE	BOX OFFICE
<i>Son-Rise: A Miracle of Love</i>	1979	A	Doc	TV	<i>Autism: The Musical</i>	2007	A	Doc	DVD
<i>Rain Man</i>	1988	A savant	Drama	\$354,000,000	<i>Her Name is Sabine</i>	2007	A	Doc	DVD
<i>Family Pictures</i>	1993	A	Drama	TV	<i>Imagination</i>	2007	AS	Drama	Festival
<i>Silence of Adultery</i>	1994	A	Drama	TV	<i>Prism</i>	2007	A	Thriller	DVD
<i>Silent Fall</i>	1994	A	Thriller	\$3,180,674	<i>SnowCoke</i>	2007	A	Drama	\$1,381,665
<i>Touch of Truth</i>	1994	A	Drama	TV	<i>The Black Balloon</i>	2007	A	Drama	\$2,136,663
<i>Relative Fear (The Child)</i>	1995	A	Horror	DVD	<i>The Sandwich Kid</i>	2007	A	Doc	DVD
<i>Under the Piano</i>	1995	A savant	Drama	TV	<i>Ben X</i>	2008	AS	Drama	\$2,744,414
<i>George</i>	1996	A savant	Doc	TV	<i>Dark Floors</i>	2008	A	Horror	Festival
<i>Cube</i>	1998	A	Horror	Festival	<i>God's Ears</i>	2008	A	Drama	DVD
<i>Mercury Rising</i>	1998	A	Action	\$91,670,000	<i>If You Could Say It In Words</i>	2008	AS	Drama	Festival
<i>Nightworld: Lost Souls</i>	1998	A	Horror	TV	<i>Mary and Max</i>	2008	AS	Anime	\$58,570
<i>Spoonface Steinberg</i>	1998	A	Drama	TV	<i>Treasure Diversity</i>	2008	A	Doc	DVD
<i>Molly</i>	1999	A	Drama	\$17,650	<i>Adam</i>	2009	AS	Drama	DVD
<i>Bless the Child</i>	2000	A	Horror	\$40,443,010	<i>Chocolate</i>	2009	A	Action	\$3,179
<i>Killer Diller</i>	2004	A savant	Drama	\$20,795	<i>Nobody Nowhere</i>	2009	A	Doc	DVD
<i>Midwinter Night's Dream</i>	2004	A	Drama	Festival	<i>The Daisy Chain</i>	2009	A	Horror	Festival
<i>Miracle Run (The Unexpected Journey)</i>	2004	A	Drama	TV	<i>The Horse Boy</i>	2009	A	Doc	DVD
<i>Fielder's Choice</i>	2005	A	Drama	TV	<i>Burning Bright</i>	2010	A	Horror	DVD
<i>Guarding Eddy</i>	2005	A	Drama	Festival	<i>Dad's in Heaven with Nixon</i>	2010	A	Doc	DVD
<i>Magnificent 7</i>	2005	A	Drama	TV	<i>Maria and I</i>	2010	A	Doc	Festival
<i>Marathon</i>	2005	A	Drama	Festival	<i>My Name is Khan</i>	2010	AS	Drama	\$42,345,360
<i>After Thomas</i>	2006	A	Drama	TV	<i>Ocean Heaven</i>	2010	A	Drama	\$67,994
<i>Mozart and the Whale</i>	2006	AS savant	Drama	\$84,447	<i>Temple Grandin</i>	2010	A	Drama	DVD
<i>Normal People Scare Me</i>	2006	A	Doc	DVD					

### 3.3.2 Trends Over Time

As can be seen in Figure 3.1 below, there has been a substantial increase in the number of films featuring a character with ASD over the time period 1970 to 2010; thus only one film was produced during the decade 1970-1979 compared to 35 films produced during the decade 2000-2009.

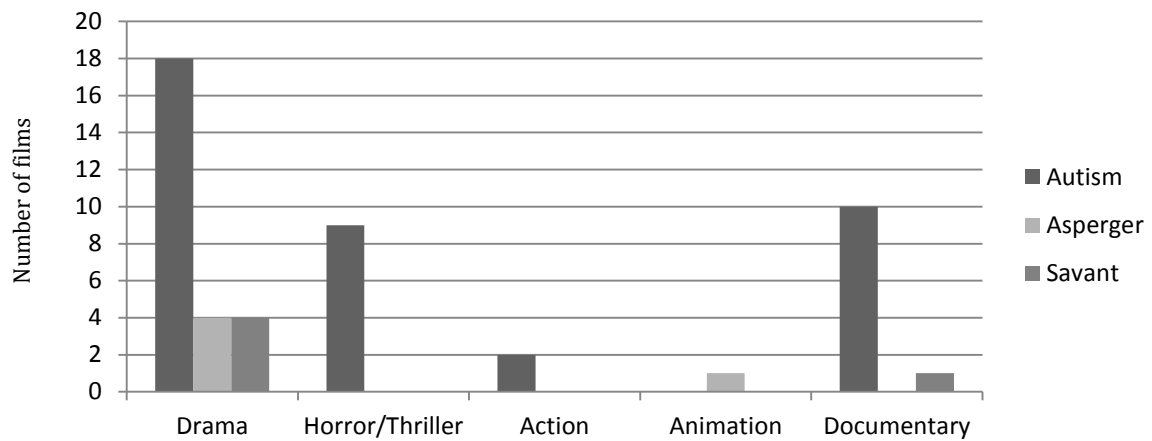


**Figure 3.1: Increase of films featuring a character on the spectrum**

*Note: six films were released between January 1, 2010 and December 31, 2010 that met inclusion criteria.*

### 3.3.3 Films by Genre

Over half (53%) of the 49 films were in the drama genre (26), which consists of many subclasses. Although a majority of the 26 films in this genre are found in the general drama category, six films are categorised in two drama subclasses, two films in the biographies subclass and four films in the romance subclass. The distribution of films by genre categories is depicted in Figure 3.2.



**Figure 3.2: The genre of films featuring characters on the spectrum**

### 3.3.4 Verification Survey

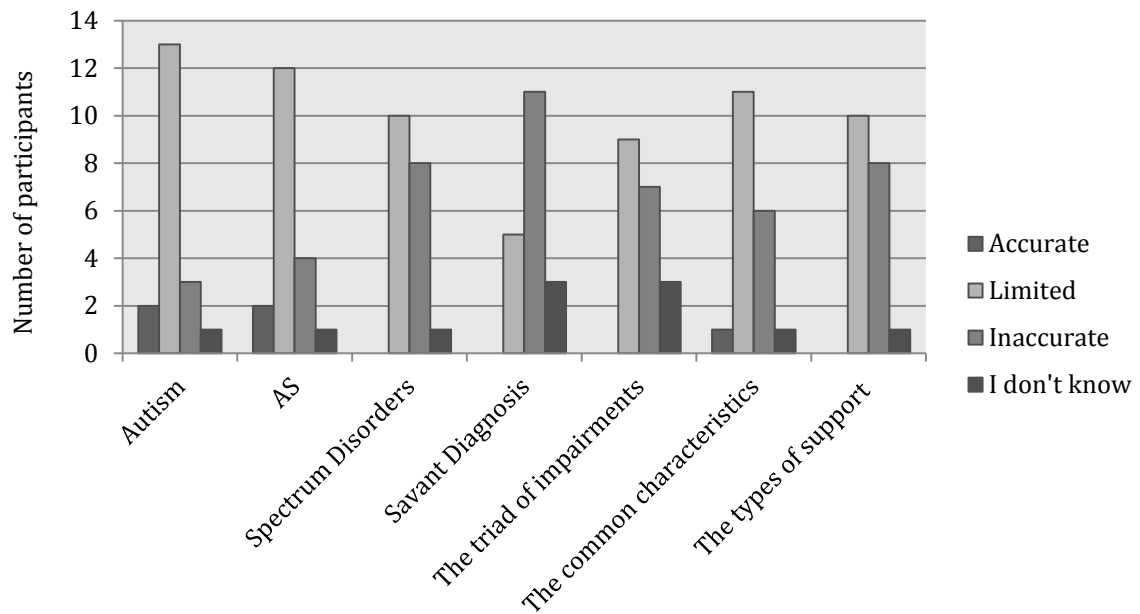
#### 3.3.4.1 Terminology used and professional opinions on teacher preparedness

A total of 22 professionals affiliated with autism-focused organisations responded to the online survey (10 Australians; 9 Canadians, 1 British and 2 Americans). Fifty-four percent of the respondents had 10+ years of experience in the field of ASD, and 57% reported they had used entertainment films in training or workshops for educational purposes.

All 22 professionals used the term ASD in their workplace, 20 used Autism and Asperger Syndrome, 18 used high-functioning and low functioning and 11 used mild, moderate and severe. In response to their understanding of the term ASD: 11 participants said the spectrum of autism, including Asperger Syndrome; two said the spectrum of autism, excluding Asperger Syndrome; eight said all diagnoses under the Pervasive Developmental Disorder (PDD) umbrella; and one said other (autism, AS, and Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS)).

Nineteen participants responded to the question, “How accurate do you think the newly qualified teachers’ understanding of the following is?” To respond to the question the participants were provided with a list of items (e.g., Autism; the triad of impairments; the common characteristics of the spectrum) and four possible

responses (accurate, limited, inaccurate, and I don't know). The professionals indicated that they believe teachers have limited understanding of autism (68%), AS (63.2%), and common characteristics (57.9%). At the same time, 57.9% of the professionals surveyed indicated they believe teachers have an inaccurate understanding of savant diagnosis (Figure 3.3).



**Figure 3.3: Professional assessment of newly qualified teacher understanding by topic**

In response to the question, 'How prepared do you think the newly qualified teacher is to work with students with ASD?', none of the professionals felt that newly qualified teachers were 'very prepared'. A large majority (89.4%) of respondents felt that teachers were either underprepared or unprepared to work with students with ASD (Figure 3.4). One professional specifically commented that, "I think the information they receive at the university is very dated and limited."

## STUDY ONE-AN INVENTORY OF FILMS

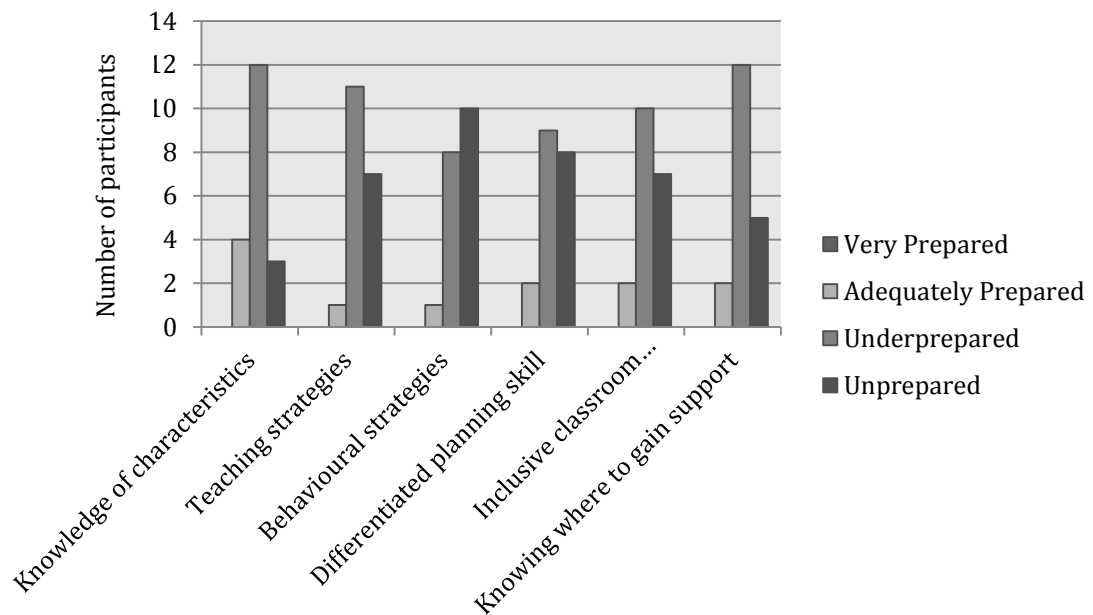


Figure 3.4: Professional opinion on preparedness of newly qualified teachers by topic

In response to the question, ‘What is the most likely source of the average teacher’s ‘idea’ of ASD?’”, most professionals felt that training and workshops were the primary source followed by news media and personal contact. Approximately half of the participants (53%) (n=10) thought entertainment media was a likely source (Figure 3.5).

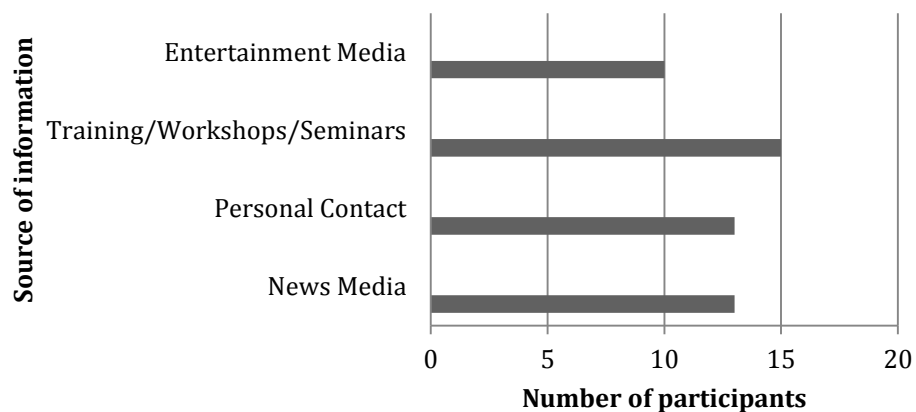


Figure 3.5: Professional opinion about the likely source of information about ASD for teachers

## 3.3.4.2 Professional opinions of films featuring characters on the autism spectrum

Nineteen of the 22 respondents provided answers to the film specific questions. A majority of the 49 films had not been viewed by the respondents. However, the participants indicated that they were aware of films which they had not seen but contended contained character portrayals of autism or AS. The top five films identified from a list of films that portrayed autism or AS were: *Temple Grandin* (n=18); *Rainman* (n=17); *I am Sam* (n=17); *The Black Balloon* (n=12); and *Snowcake* (n=9). The most viewed films the respondents identified in descending order were: *Rainman* (n=17); *I am Sam* (n=13); *The Black Balloon* (n=9); *Snowcake* (n=6); *Adam* (n=6); *Mozart and the Whale* (n=6); *Mercury Rising* (n=5); and *Mary and Max* (n=5).

The most frequently named film for portraying the best or most accurate representation of Asperger Syndrome was *Adam* (n=3), followed by *Temple Grandin* (n=2), and *Ben X* and *Napoleon Dynamite* (n=1 for each film). *Temple Grandin* was mentioned as the best film for both autism and Asperger Syndrome (39% of those that had seen it), while *Rainman* and *Mercury Rising* were mentioned as the worst films for both autism and Asperger Syndrome. Seventeen respondents answered the question 'What is the best or most accurate representation of autism?'. *Temple Grandin* was the highest rated with seven respondents naming it; two respondents named documentaries (*Wretches and Jabberers*; *Autism the Musical*) as creating the best or most accurate representations of autism. In terms of the representations of autism and Asperger Syndrome in media other than film, two respondents named the television show *Parenthood* and one named *Big Bang Theory* as creating good representations of Asperger Syndrome. No television shows were mentioned as providing good representations of autism.

Ten respondents<sup>9</sup> answered the question ‘What is the poorest or most inaccurate representation of autism?’ in film. Some respondents named more than one film. Seven respondents (47% of those that had seen it) listed *Rainman* as the poorest representation of autism; this negative rating was most often attributed to the prevalence of the savant diagnosis. For example, one respondent stated, “it makes it seem like ASD is a super power and that is not a good representation of the spectrum”. *Change of Habit* and *Mercury Rising* were also mentioned as depicting poor representations of autism. Moreover, one respondent named *The Black Balloon* as the worst representation, stating, “doesn’t use visuals” as the reason.

### 3.4 Discussion: Film Inventory

The recent propensity of both the public and the scientific community to ‘flock’ towards autism related texts is an indicator of the increasing presence of autism in the social consciousness. Film has the power to produce (in the instance of a master narrative like *Rainman*) or at least contribute to the ‘common face’ of autism for the lay public. While many of the films listed in Table 3.1 are obscure, there is an increase in the production of identified representations of ASD in both made-for-television films and cinema-released films. The marketing surrounding the release and promotion of these films alone has the potential to raise the profile of ASD. The increase in the portrayals of characters in entertainment media with autism characteristics parallels the increasing science-based interest in autism, and thereby contributes to higher potential exposure of the public to multi-media representations of the celebrity issue called ‘autism’.

The increased exposure to ASD resulting from the rise in production of films increases the potential of films to ‘educate’ the viewer towards the adoption of a positive and respectful understanding of autism affectedness. This likely occurs

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<sup>9</sup> There are limitations in considering the opinions of such a small number of professionals. Acknowledging the small sample size and the lack of information regarding clarity of professional recall for films, the ranking scale to be discussed in Chapter 5 was calculated with and without professional comments.

by raising awareness of the characteristics that connect the community through the representation and illustration of the autism-affected population. Conversely, and perhaps more likely, it can increase the production of a stereotyped, inaccurate figure that personifies the characteristics of ASD without acknowledging the individual; unfortunately, this likely contributes to an inadequate 'common face' of autism for the lay public to 'understand'. For example, autism has become a common household term that carries a mistaken sense of 'knowing autism'. Take for instance media reports that associate aggressive behaviour and Asperger Syndrome, for example, "Assault Charges Dropped Because Rock Singer has Asperger's" the *Daily Telegraph* (November 26, 2004) or the headlines, "Connecticut school shooting thrusts autism into national spotlight" (*The Examiner*, December 12, 2012) and "Brother claims Connecticut shooter was Autistic," (*The Examiner*, December 14, 2012). Although there was a swift and strong response from experts and members of the autism community negating such claims, the association between autism and violence had already infiltrated the public domain. The celebrity autism persona has been tarnished through negative associations. These negative associations, although unfounded, can also be witnessed in the horror genre (between demonic power and autism), in the drama genre (where the individual with autism is a burden), and via responses to the survey in which *Rainman* was identified by respondents as being the poorest representation of autism due to inaccuracies and associations with savant abilities. The depiction of autism in *Rainman* likely adds to the unrealistic expectations of persons with autism that are expressed by teachers (Soto-Chodiman et al., 2012).

The discussion of any potential 'education' to be derived from film begins with the quality of the representations, and the extent to which the filmic images reflect social discourse and media depiction. Hollywood continues to vastly under-represent the diversity within the actual Autistic Community, and thereby restricts the presentation of varied spectrum-related characteristics and the diversity of their abilities. The 'education' a lay viewer receives from 'witnessing' (to use Murray's (2008) term) the characteristics of autism remains constrained by the essential formulaic plot characteristics of the genre.

### 3.4.1 Trends Over Time

Conn and Bhugra (2012, p56) identified 23 “films in which a diagnosis of autism is specifically stated” (in the script or in promotional material), limited to only cinema-released films. Comparatively, this thesis includes a number of films that were made-for-TV (e.g., *The Unexpected Journey*; *Under the Piano*; *After Thomas*). The inclusion of made-for-television films (see Table 3.1) was based on their accessibility. It is worth noting that a made-for-television film, *Temple Grandin*, was identified in the survey as being a good portrayal of autism.

These films, however, do not have the capacity to draw box office sales equal to those of widely released and marketed films, and are therefore less likely to become embedded in social discourse. Furthermore, some films (e.g., *Nell*, that was included in the Conn & Bhugra (2012) study) were excluded from this thesis, as they do not contain identified representations of spectrum conditions. Additionally, this thesis excluded some films (e.g., *Change of Habit*, and *The Boy Who Could Fly*), that were not identified by the producers in the trailer or on the DVD box as having an ASD portrayal in them; this occurred even though a character was clearly identified as having an ASD in the dialogue of the film. In these films, the characteristics portrayed would likely not warrant an autistic diagnosis (Conn & Bhugra, 2012). Disturbingly, although perhaps in line with cultural and societal perspectives at the time, *Change of Habit* displays holding therapy, where over one relatively short session the main character ‘loves’ the autism out of a little girl, curing her on the spot. As autism is a lifelong disorder (Mesibov, 1993) the representation of ‘cure’ diminishes the boundless impact of this diagnosis for the lay viewer.

### 3.4.2 Representation of Diagnostic Characteristics

There is a lack of consensus amongst professionals in the use of terminology to describe degrees of affectedness from autism to Asperger Syndrome, and what is meant by ASD (Attwood, 2006). The professionals that responded to the survey indicated that they unanimously used the term ASD, however, what they meant when they said ASD differed. The variations in meaning ranged from

autism including AS (n=11) to autism excluding AS (n=2). The 49 films use a variety of descriptors from 'autism' and 'autistic' to 'Asperger Syndrome' to convey the featuring of characters from a discrete category of people. This is problematic (Barkley, 2004; McGuire, 2012), particularly because the social movement towards neurodiversity may not be considered when presented through the entertainment medium since resistance is low and the film portrayals clearly identify 'otherness'. This would mean that in labelling the character as 'autistic' the viewer is not forced to confront their 'ideas' of difference when they watch the film; in effect, they have been given permission to negate any similarity between themselves and the atypical character. Mirroring the blurred use of terminology by professionals and film synopses is the interchangeable identification of a film character through dialogue using terms such as autistic, Asperger Syndrome, and high functioning autism. This hazy application of terms complicates the consistency of the portrayal for the lay viewer, which is reflected in social discourse (Draaisma, 2009). In *Mozart and the Whale* various terms are used interchangeably to describe the male protagonist as autistic (*sic*), having autism (*sic*), having Asperger's (*sic*) or having Asperger Syndrome (*sic*); additionally he is identified as having a savant mathematical ability. Although this film is based on the life of Jerry Newport (a man with Asperger Syndrome and a savant mathematical ability), the characteristics overlay a number of different terms, distorting the discrete diagnoses represented.

Contrary to the limited representation of the ASD-affected population in general, and furthering the confused understanding of what diagnosis is represented, there is an over-representation of unidentified savantism. The unidentified savantism far supersedes the 10% of films portraying this characteristic that were identified in the survey; for example, the films *Chocolate* and *Silent Fall* feature characters that would likely warrant a savant diagnosis but are not identified as such in the synopsis. This over-representation of 'super ability' supports the fallacy that these exceptional skills are a common component of the ASD diagnosis, furthering the incorrect 'collective awareness' of members of the autism community. Additionally, the major box office hits *Rainman* and *Mercury*

*Rising* use savant skills entrenched in an ASD character portrayal to drive a plot forward. The glorified presence of the savant skills risks propagating a negative ideology, i.e., to be of value an affected individual requires compensatory qualities (Draaisma, 2009; Murray, 2008). This increases the stigma experienced by people with “mental disorders” as a consequence of the public being exposed to inaccurate portrayals (Gabbard & Gabbard, 1999).

Furthering the inaccurate information about savantism or other associated characteristics is the tendency for film characters to be described in a short conversation, often between neurotypical characters and a medical figure (e.g., *Rainman* or *Molly*; these conversations often include a list of characteristics to ‘explain’ the condition, some of which may not be components of the diagnosis. Likewise, high profile films like *Mercury Rising* portray a boy with autism who can crack a government super code in seconds, but the savant diagnosis is only mentioned as an explanation for the character’s incredible ability.

‘But it’s not unusual for an autistic person to be a savant..... he might not actually be able to decipher the code, it may just appear to him.’ (Leo Pedransko, Government Security Mathematician, *Mercury Rising* (1998))

The statement is inaccurate as only 10% of the autistic population is savant (Exkorn, 2005).

### 3.4.3 Influence of Film Genre

The majority of films identified with ASD portrayals were found in the drama genre (n=26). The dominance of the drama genre may be attributable to the formulaic plot (Redfern, 2012) found in many of the films in which autism is used to drive the story and evoke feelings of empathy or sympathy (Murray, 2006). Most of the films represented in this genre have not been distributed in cinemas, and have been available for limited viewing and special events only. Limited release restricts these films in their contributions to the ‘understanding’ or ‘misunderstanding’ of autism because there are fewer promotional materials and fewer media articles about them, and therefore less discourse and referencing power (Valentine, 2001). Regardless, the sheer number of films in

this genre warrants attention as most drama genre films follow similar plot lines and contain characters that are limited in their representation of associated characteristics, which allows a blanket understanding of autism through film.

Within the formulaic blanket of dramatic representation there are two subclasses of the drama genre, romance and biographies. Romance films deserve specific mention because the interpersonal, specifically romantic, relationships highlighted in these films (e.g. *Adam*) are not commonly associated with the general knowledge of autism. The four films dealing with intimate relationships and spectrum disorders all feature characters portraying AS. In this case, the representation can be interpreted to be positive as it indicates that Hollywood is beginning to explore, and illustrate, this facet of the lives of those affected by ASD, those once deemed emotionless (Kerbeshian & Burd, 1986).

Like romance films, the biography subclass (e.g., *Temple Grandin* and *Mozart and the Whale*) is of interest because it too provides variance from typical plots. The literature indicates that films based on a true story are more credible and have a greater impact on public perception (Moyer - Gusé, 2008), making biographies potentially more powerful than 'fictional' films found in other genres. Films such as *Guarding Eddy*, *Ben X*, or *Mary and Max* state that they are based on true stories, potentially resulting in being judged as more realistic than other films in the eyes of the viewer, a contention that warrants further investigation.

Similar to biographies, and perhaps having more potential for influencing the public, are the films found in the documentary genre [11 films]. These films have not yet made a notable impact in the box office, nor have many of them been released into the cinema; however, this may change as the social 'flocking' towards ASD-related scripts increases. Interestingly, documentaries are a genre that has potential for large returns for producers (Redfern, 2012), as well as the ability to influence social discourse and policy. More investment in this realm might be worthwhile in raising awareness about ASD.

The other genre that is particularly useful in raising awareness about ASD is the animation genre. Animation is a genre known to be highly consumable for people with spectrum disorders (Baker, 2008). The potential for this genre to represent ASD accurately while maintaining entertainment value is significant as there are no limitations imposed by the skill of the actor or in the visual demonstration of thoughts and emotions. Furthermore, as entertainment media has already been established as contributing to 'knowledge', there is great potential for films in this genre to aid newly diagnosed adolescents in understanding the diagnosis and providing opportunities for self-reflection and peer education. Unfortunately, this genre is only represented by one film, *Mary and Max*, which features a character portraying Asperger Syndrome in the form of a Claymation (molded plasticine animation).

Next to the drama genre, the highest distribution of films featuring a character on the spectrum is in the horror/thriller genre. Disturbingly, the representation of autism in these films likely contributes to a negative influence on the social 'knowledge' about the autism condition. Many of the films portraying autism within this domain contain associations between demonic power and autistic diagnosis (e.g., *Burning Bright* and *The Daisy Chain*). *Bless the Child* begins the story with a description of characteristics that indicate the child may have autism; however, by the end of the film the viewer understands that the child actually has omnipotent power that could be used for good or for evil. Although the film disregards the original contention of autism, the association of autism with the supernatural, particularly evil, power is a potential catalyst for damaging attitudes and perceptions towards individuals affected by autism.

Further adding to the presence of ASD in a genre with negative associations are two thrillers, *Silent Fall* and *Cube*. *Silent Fall* features a child with autism who witnesses a gruesome murder, while *Cube* is a science fiction thriller, which depicts a man with autism who is a burden to the neurotypical characters who are trying to escape a cube that has trapped them. In both instances, the autism-affected character has a savant skill, which implies that investment by

neurotypical characters is worthwhile as the ASD character is a commodity, acting as the key to survival or finding the truth.

The genre of a film has relevance to both the box office sales and the influence on recall of the film (Redfern, 2012). If the scenes with ASD portrayals found in horror, thriller and action films (n=9) are more memorable due to their emotive nature, they could also be associated with negative feelings or attitudes towards people on the spectrum. The demonic association of autism characteristics in films and references to 'being in their own world' that are often heard in news media or documentary descriptions could assimilate into images of autism that actually reduce the public's openness or positive attitudes towards affected persons. With the high entertainment value and large box office sales of films in these genres, there exists a realistic probability that using a disorder to drive the plot could perpetuate negative stereotypes.

### **3.5 Conclusion: Film Inventory**

In comparison to the reported incidence of ASD in the population, the filmic representations of ASD-affected persons are few relative to the total number of films produced each year. Furthermore, the scope of character portrayals remains limited compared to the vast array of possible characteristics associated with persons in the Autism Community. The proliferation of one-dimensional media images contributes to a limited understanding of human differences and a shallow perception of autism. The production and reproduction of the celebrity 'common face' of autism persists in large part because it "virtually guarantees the economic success of the production" (Wing & Potter, 2009). However, this results in an ASD-affected person being defined by clinical markers rather than acknowledging their individuality. To attain the 'guaranteed success', which maintains sales and public intrigue, the media industry continues to create representations of ASD in predictable genres with limited displays of characteristics that serve to drive film plots.

Matching the industry's motivations with authentic portrayals could increase the production of ASD representations that have the potential to dispel the public's misconceptions about ASD and thereby avoid reducing the complexity of autism affectedness to a few emotive snapshots (Haller, 2000). Since media both influences and reflects societal beliefs, it is necessary to understand how productions contribute to 'education' about autism for the lay viewer. With this in mind, I will next explore both the visual and aural associations to the term autism as they are presented in the 15 films that identified a character as 'autistic'.

## **Chapter 4 Overview - Characters: the Traits they Portray and the Things They Say about Autism Spectrum Conditions**

This chapter is comprised of two parts. Chapter 4A describes the analysis of character traits and 4B explores the character dialogue relative to the autism spectrum. This chapter examines how cultural artefacts like film communicate new information about autism. The information presented through film then ‘scaffolds’ (Vygotsky, 1986) the adoption of homogeneous (one-dimensional) and confining diagnostic characteristics for the inexperienced viewer. Subsequently, using a constructivist lens the quality and quantity of autism-related characteristics portrayed by film characters are explored, and the relevance of character dialogue to the construction of new knowledge for inexperienced viewers is examined.

## **Chapter 4A: Accuracy of Filmic Character Representations of Autism Conditions**

### **4.A.1 Focussed Literature Review: Accuracy**

Stereotyping has consequences for individuals in both personal and practical terms and occurs across a plethora of processes (Duvdevany, Rimmerman, & Portowicz, 1995). For example, there is debate regarding the stereotyped representation of the 'normal distribution' of disability in film, particularly the representation of ASD (Farnall & Smith, 1999; Hartman, 2006; Murray, 2008; Osteen, 2008; Draaisma, 2006; Baker, 2008). Although there is a small body of literature that discusses how disability and disorder, including ASD, are portrayed in film, the discussion is usually focused on the plot utility of the disorder and the social stigma associated with the representation (Murray, 2008; Baker, 2008). This debate rests in subjective observation of stereotyped archetypes, and criticisms of the function of autism as a formulaic plot driver (Baker, 2008; Draaisma, 2009; Osteen, 2008; Murray, 2006). In an effort to contribute empirical evidence to the debate, I investigate the authenticity of ASD film portrayals using a scientifically based assessment tool (the Childhood Autism Rating Scale, Second Edition, (CARS2)). This tool is utilised by practitioners to determine the presence and severity of spectrum characteristics and is used in this stage of Study One to conduct an analysis of filmic representations of ASD.

The use of a clinical tool in a social realm, such as film, may seem counterintuitive as these arenas rarely overlap when working with persons affected by autism. For example, there are limitations arising from the lack of control over influential variables in the practitioner's social realm. However, although autism may be diagnosed clinically the people on the spectrum exist in the social sphere and therefore there may be educational merit derived from applying a 'clinical' tool to a 'social' representation. The potential benefit is found in the departure from the controlled, scientific, and manipulable observation of autism in clinical settings wherein film arguably mirrors the highly variable and uncontrolled

‘social presence’ of autism more likely encountered by the inexperienced individual.

Where the degree of the presentation of ASD characteristics is ordinarily determined through the gathering of information from professionals, parents, teachers, and the individual using a variety of tools (e.g., the ADOS, the CAPS, the CARS2), the brief and limited observation afforded by the interaction between the viewer (rater) and the character may be more reflective of ‘real life’. However, it is recognized that a clinician would likely use a battery of tests to inform diagnosis rather than a singular instrument. Nevertheless, the utilisation of an observational tool, like the CARS2, applied to a filmic portrayal of ASD does not allow for manipulation of stimuli or the control of variables that tend to reflect actual processes. Furthermore, to explore the functionality of an assessment tool, the authenticity of the filmic representation and the influence of previous knowledge, it is necessary to represent both the arena the diagnosis is achieved in (clinical) and the realm in which it exists (social). In this part (A) of this chapter I report the findings that reflect both an education specialist’s and a clinical psychologist’s ratings of filmic portrayals of ASD using the CARS2 instrument. This process provides insight, from both the social and the clinical perceptions, into the ‘individual’ display of ASD characteristics within the filmic context.

#### **4.A.2 Method: Accuracy**

Most of the ASD assessment tools are specifically designed to detect and quantify the presence, frequency and severity of specific behaviours to inform a diagnosis according to the characteristics outlined in the DSM-IV; this is usually achieved via a clinical interview. However, for this stage of the study, an assessment tool that relied on observable characteristics was required; thus, the CARS2 instrument was selected. The CARS2 is an observation-based tool where manipulation of stimuli is not essential, thereby allowing for the observation of autism-related characteristics in film.

The CARS2 is composed of 15 behavioural areas or categories, 14 of which relate to diagnostic characteristics found in the DSM-IV (American Psychiatric Association, 1994) and one for 'overall impression'. There are two versions of the CARS2, with one appropriate for use amongst the general autism population (Standard version) and one appropriate for use amongst the high functioning autism population (High Functioning version) (Schopler, Van Bourgondien, Wellman, & Love, 2010). In addition to the two versions there is a form for parents and caregivers to complete which would provide information across contexts however it would be impractical and ineffectual to adopt the perspective of a character's caregiver and therefore this was not used for this study. For each of the 15 behavioural categories there is a potential score from one to four, where one represents age-appropriate or no evidence of difficulty, and four represents severely abnormal (Schopler, Van Bourgondien, Wellman, & Love, 2010). For each behavioural area a mean score is provided that represents the average score expected for the population with a diagnosis of ASD (Schopler et al, 2010).

Most currently available assessment tools (e.g., ADOS) require specific training courses for their implementation or some level of interaction with the individual, family, and professionals involved. Since the goal of this analysis was not to inform diagnosis but to provide objective evidence about the filmic representation of ASD, an intensive clinical tool such as ADOS was deemed neither necessary nor feasible to use.

The CARS2 was selected for this analysis because it can be used by "well versed professionals independently of interviews" (Schopler et al, 2010: page 5), and it adjusts for the age of the assessed individual. The CARS2 is recommended for assessing persons from childhood through adulthood (Department of Human Services, Victoria State Government). In addition, it has been determined to have a 95% inter-rater reliability (Schopler et al, 2010).

In accordance with the instructions for using CARS2, when the DVD descriptor indicated the film portrayed autism, the Standard version of CARS2 was used; for films that portrayed high functioning autism or Asperger Syndrome, the High Functioning version of CARS2 was used. The categorical CARS2 scores, the diagnosis the film contends it represents, and the normal distribution of these characteristics in the ASD affected population were then compared to determine whether the film authentically represented ASD.

The inclusion criteria for the films selected for rating using the CARS2 were: the film had been released in cinema; the synopsis on the DVD explicitly stated autism, Asperger Syndrome or ASD; and the film had been released prior to December 31, 2010. This resulted in the identification of 15 films (see Table 4.A.1).

The CARS2 instrument was applied to the filmic character portrayals in the 15 selected films. Two raters independently assessed the filmic character portrayals: an education specialist with a background in theory and strategies for supporting students with ASD, and a clinical psychologist with a practice focus on ASD assessment. Both assessors had experience using the CARS2 assessment tool. The raters viewed each film independently and in random order one time. In the instance that more than one character was on the spectrum the main character was rated (for example, *Mozart and the Whale*-Donald was rated<sup>10</sup>) Assessment scores were entered into SPSS (SPSS v.17.0 2008) and analysed for inter-rater reliability using the Kappa statistic. The 15 categories on each of the versions of the CARS2 were analysed for outliers.

#### **4.A.3 Results: Accuracy**

The overall mean ratings of the educational specialist (ES) and the clinical psychologist (CP) were virtually identical by both category (ES M=3.01, CP M=2.87) and Total raw score (ES M=42.27; CP M=42.41;  $t=-.153, p>.10$ ). Similar

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<sup>10</sup> Only one character was rated per film to maintain consistency and limit the possibility of comparative bias (judging one character as more or less able based on the portrayal of the secondary character).

results have been reported for the mean of the ratings by ‘professionals in different disciplines’ in the CARS2 manual (Schopler et al., 2010: page 79). Inter-rater reliability was examined for ratings made by the two independent professionals for the 15 film characters. Consistent with Schopler et al. (2010) an unweighted coefficient *kappa* was used to determine agreement between raters. Inter-rater agreement of 87.4% was obtained for Total Scores on the CARS2-ST ( $r=.874$ ,  $p=.000$ ). The inter-rater agreement increased to 93.5% ( $r=.935$ ,  $p=.002$ ) when foreign language films were excluded from analysis. This agreement is consistent with that reported by Schopler et al (2010: page79).

The weighted kappa estimates were calculated for the pair of raters. This statistic evaluates categorical, absolute agreement between raters across the categories for each item but also ratings values of that are very similar (.5 on either side) (Schopler et al., 2010). The results indicate a median level of agreement of .686 (Table 4.A.1). This indicates a moderate agreement for median level of category scores on the CARS2 Standard version, with 100% agreement for severity grouping (minimal-to-no symptoms of ASD; mild-to-moderate symptoms of ASD; and severe symptoms of ASD). The Kappa for the category scores of CARS2 HF version for the educational specialist and the clinical psychologist was substantial showing a median level of .651, indicating agreement beyond what would be expected by chance (Viera & Garrett, 2005), again with 100% agreement for severity grouping. In both cases the Kappa was slightly lower than those reported by Schopler et al (2010) which was .71 for the CARS and .73 for the CARS2-HF.

Table 4.A.1: Median ratings for each rater by CARS2 category

Category	Rater 1	Rater 2
Relating	3.5	3.14
Imitation	2.42	2.21
Emotion	3.35	3.21
Body	2.64	2.92
Object	3.14	2.92
Adapt	2.78	2.64
Visual	2.5	3.21
Listen	2.9	2.85
Taste	2.5	2.42
Fear	3	3.2
Verbal	3.57	3.21
Non-verbal	3.5	2.85
Activity	2.21	2
Intellect	3.64	2.92
Overall	3.4	3.21

The films selected, the DVD box descriptor, and the severity ratings according to the CARS2 assessment can be found in Table 4.A.2. The results indicate that 13 of the 15 films scored in the 'Severe Symptoms of ASD' group on the CARS2. In terms of the DVD descriptors, 10 used the word 'autistic', two used the word 'autism', two used the term Asperger Syndrome and one used Asperger Syndrome and autism.

**Table 4.A.2: Comparison of contended portrayal and CARS 2 severity score**

Film Title	DVD Box Descriptor	Severity Groupings According to CARS2 Scores
Ben X	Mildly autistic	Severe
The Black Balloon	Autistic brother Charlie	Severe
Bless the Child	Thought to be autistic	Minimal-to-no
Chocolate	Young autistic girl	Severe
Guarding Eddy	Autistic sports jabbering kid	Mild-to-moderate
Killer Diller	An autistic savant	Severe
Mary and Max	Asperger's Syndrome	Severe
Mercury Rising	Nine-year-old autistic boy	Severe
Molly	Autistic, retarded sister	Severe
Mozart and the Whale	A math savant Asperger's Syndrome, a form of autism	Severe
My Name is Khan	Has Asperger's Syndrome	Severe
Ocean Heaven	Childhood autism	Severe
Rainman	Autistic savant	Severe
Silent Fall	An autistic child	Severe
Snowcake	Suffers from autism	Severe

The CARS2 reports 'interpretive categories associated with CARS2-ST or CARS2-HF', describing the T-score range in terms of "levels of autism-related symptoms compared to those with an autism diagnosis" (Schopler et al, 2010, p 45). The T-score range as identified by Schopler and colleagues (2010, p 45) for "average level of autism-related symptoms compared to those with an autism diagnosis" is 45-54. In other words, an individual who has a T-score of 48 would be classified as exhibiting autism-related symptoms similar to those expected in the population with an autism diagnosis (e.g., the mid-range of the distribution curve). Figure 4.A.1 shows the T-score range for each film character in relation to the normal distribution curve for the population with an autism diagnosis indicated in the CARS2 manual.

## STUDY ONE- ACCURACY OF CHARACTERS USING CARS2

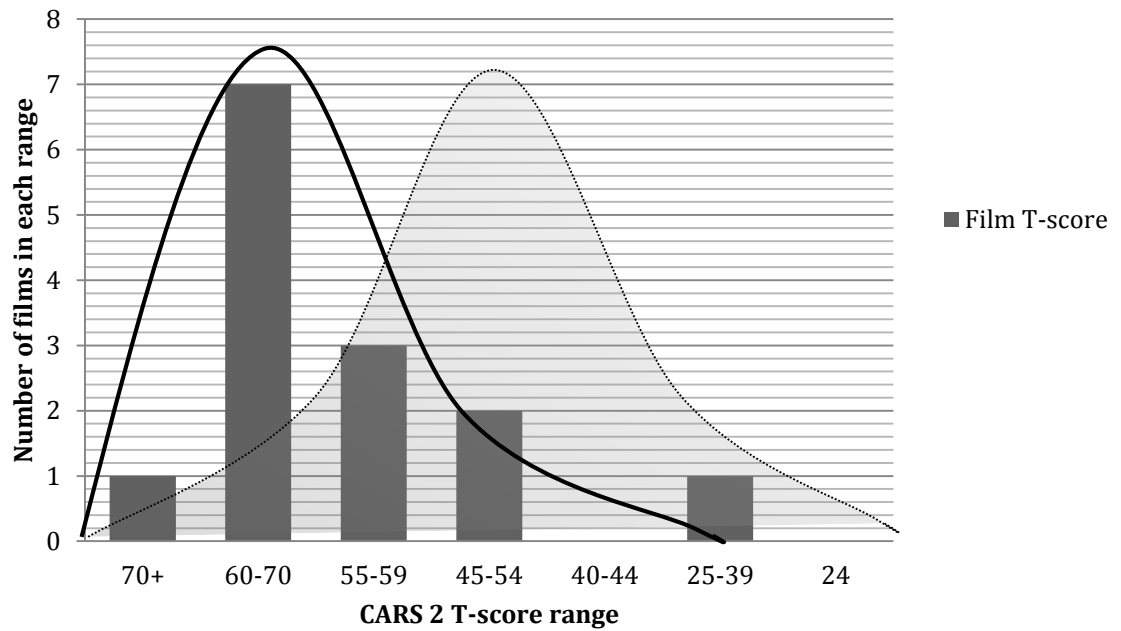


Figure 4.A.1: The normal distribution curve for behaviour categories in the actual population with autism versus the distribution of behaviour categories for the filmic population

The distribution for filmic representations of autism-related symptoms is skewed to the left, with most films being in the 60-70 range; this suggests that these films are representing 'very high levels' or 'extreme levels' of autism-related symptoms.

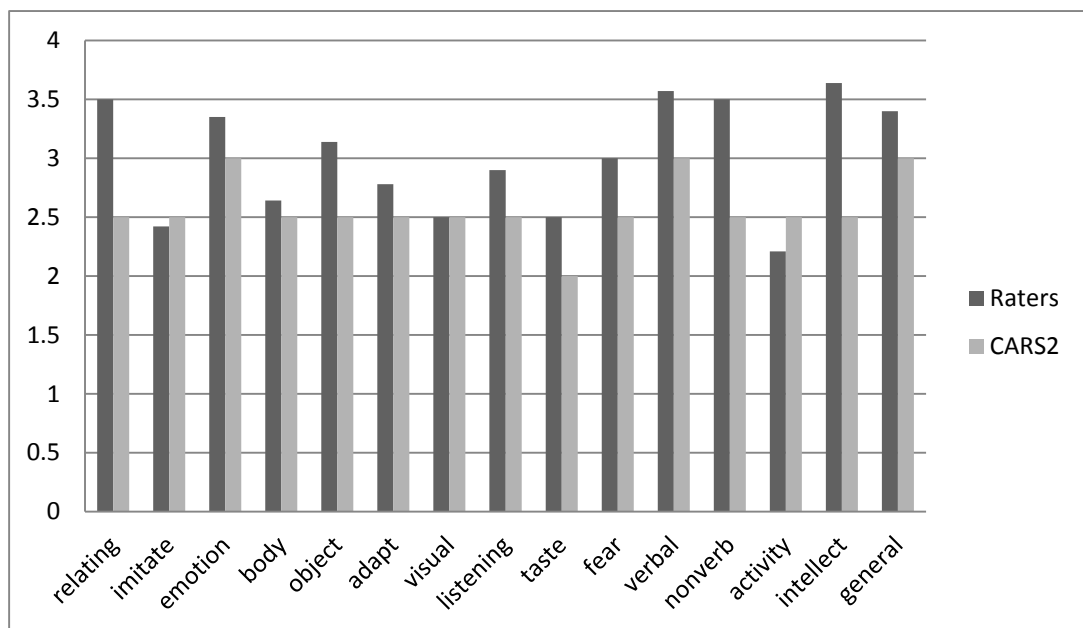


Figure 4.A.2: The difference in median score between raters and expected median by CARS2 category

An analysis of the median scores by category indicates that the film representations of autism-related symptoms were higher for each CARS2 category than the reported median (Figure 4.A.2), with the exception of the 'imitation', 'visual', and 'activity' categories. The 'imitation' challenges and atypical 'activity levels' that would be expected for the population within the 'severe group' were portrayed below the median score as indicated by the CARS2, whereas the 'visual' category was similar to the median score for the population with an autism diagnosis.

#### **4.A.4 Discussion: Accuracy**

##### **4.A.4.1 Film representations**

The application of a clinical tool to a social and non-manipulable presentation of autism has both merits and challenges. The character portrayals were found to be more severe in their display of autism symptomology than would be expected in the average autism affected population as assessed using the CARS2 (Schopler et al, 2010; Gillberg, 1991). This obscured representation of the autism spectrum as shown in the distribution curve for filmic portrayals is skewed to the left, indicating that the portrayals are extreme versions of autism affectedness. Furthermore, there was a higher than average presentation of symptoms in nearly every CARS2 category than would be anticipated for the average population affected by ASD, as reported by Schopler and colleagues (2010).

These findings reveal the dominance of 'extreme representations' in film, thereby providing evidence that the film industry does portray outliers or at least aspects of exceptionalities beyond those that would be expected in the normal distribution. For instance, portrayals of outliers included those with unfathomable abilities (omnipotent or superhuman powers) in films such as *Bless the Child* and *Chocolate*, or those shown to have no intent or capacity in films like *Molly* (before surgery 'cured' her of autism) or *Mercury Rising*. There are obvious misrepresentations of the autism and Asperger Syndrome diagnoses

in film. For example, certain characteristics such as ‘poor quality’ eye contact (one of the symptoms of ASD) are shown as total avoidance (e.g., *Mercury Rising* or *Silent Fall*), or savant skills are portrayed as integral to the ASD diagnosis (e.g., *Rainman*, *Mozart and the Whale*, and *Killer Diller*).

Further complicating the picture of autism painted by the film industry is the fact that some of the character portrayals, in spite of their dramatic representation of profound symptomology, would not warrant a clinical diagnosis (Conn & Bhurgra, 2012). This phenomenon is supported by Schopler and colleagues (2010), “it is possible for an individual to obtain a CARS2-ST total raw score of 30 or higher...and not qualify for a DSM-IV diagnosis of PDD (Pervasive Developmental Disorder)” (p 44). An individual that scores 30 or higher but does not warrant a PDD diagnosis may have other conditions that cause similar behaviours or may score severely in certain categories but not at all in others. Irrespective of this possibility, the film industry has identified the character as having a diagnosis of ASD in the DVD synopsis, which suggests for the lay viewer that the representation of autism in the film is irrefutably present and should be accepted.

#### 4.A.4.2 Educational implications

Given the extreme portrayals of autism in films, the educational value of filmic representations of ASD is questionable. There is, however, a distinct possibility that utilising a tool that informs diagnosis by critically analysing the presence of ASD symptoms and their impact on the filmic character, could be beneficial. This possibility was explored through the application of the CARS2 observation assessment tool by two professionals from different disciplines, a clinical psychologist and an education specialist. Both assessors found that the filmic representations of ASD among the population of film characters were more severe than would be expected for the average population with a diagnosis of ASD. Significantly, however, the representation of profound disability was less evident when looking at the raters’ scores for 15<sup>th</sup> CARS2 category, ‘overall impression’, which considered the character portrayal holistically rather than by specific characteristics. In the ‘overall impression’ category there was very high

agreement between the education specialist and the clinical psychologist, represented in an impressive  $r = .951$ ,  $p = .000$  for the Overall Impression scores, which are a better picture of the overall individual than the categorical measures of one kind of behaviour. The results can be interpreted to show that with relative accuracy well-versed practitioners can assess the impact of autism on an individual's daily living activities, even when those individuals are fictional. In other words, experienced practitioners can agree on the severity of the autism portrayed in film because they have an understanding from their breadth of experience with real world ASD affectedness of the benefits of the portrayed strengths and the hindrances of the portrayed challenges. Thus, while maintaining a cautious consideration of the extreme presence of ASD characteristics portrayed in the films, the findings suggest the possibility of using filmic representations of ASD for educative purposes.

A growing body of literature is exploring the use of film for educative purposes. Entertainment-Education Theory (EET) "provides the opportunity to study mass media as agents of both entertainment and persuasion" (Singhal & Rogers, 2002: page 119). EET is also used to understand the influence of entertainment media on the knowledge and attitudes of viewers (Moyer-Gusé, 2008) via the assessment of EET-based interventions. Although this section of the thesis did not focus on EET, it is noteworthy that researchers are continuing to use it to explore the educational value of film. Research regarding the use of filmic representations to improve professional practice has also increased; for example, Wiertelak (2002) incorporated full-length feature films into neuroscience classrooms to promote content mastery and critical thinking skills. In a similar way, through the use of an empirical assessment tool, this study has shown that filmic characters can be used to promote identification of characteristics related to ASD.

A further benefit to practitioners in using film representations of ASD is the static nature of the medium. Being able to refer back to the exact behaviours or interactions depicted in film offers opportunities for discussion in educational situations. Repeatedly referring to and replaying behaviours, communications,

and interactions can promote accuracy in the identification of antecedent events (events that come just before the behaviour) and general learning amongst the viewers. While the exaggerated and often inaccurate representation of ASD characteristics and behaviours in the 15 films examined using the CARS2 would likely make it easier for new practitioners to collect data on behavioural categories, it would probably not facilitate the development of a coherent understanding of the diversity in presentation of characteristics displayed by the Autistic Community.

#### 4.A.4.3 Limitations: Accuracy

The benefits of applying assessment tools to filmic portrayals of a disorder outweigh the challenges, however these challenges should still be acknowledged. The challenges are illustrated through the slightly lower inter-rater agreement found in this analysis than that reported for the CARS2 when used in a clinical setting. A number of factors reduced the likelihood of high inter-rater reliability. Firstly, the sample size was small and, as noted previously, some of the films were in languages other than English which required the use of a number of skills when performing the assessment; this served to distract from the task of observing behaviours. For example, reading subtitles and trying to understand cultural nuances make it challenging to determine whether a particular behaviour is deviating from the expectations by age. When analysis was conducted without the foreign language films, levels of agreement were higher than that reported in the CARS2 Manual. Secondly, some of the films, for example *Molly* and *Bless the Child*, began by showing a character with autism and then moved away from the diagnosis and diagnostic symptomology. This made it difficult to rate the characters because of the dramatic shift in idiosyncrasies, which further exacerbates the unrealistic representation of ASD. Finally, when applying an assessment tool to films in independent settings (e.g., each rater viewing and scoring in their private residence) there are extenuating factors that may influence rating outcomes. These extenuating factors include, but are not limited to: other people in the area; pauses in viewing such as bathroom breaks; affection for, or aversion to, actors; and perceived

entertainment value of the film, among others. Irrespective of these limitations, the merit in accurate scoring using film portrayals for practitioners that wish to use the CARS2 in their practice to inform planning and practice is evident.

#### **4.A.5 Conclusion: Accuracy**

This stage of Study One has shown that filmic portrayals of ASD are not normative relative to the Autistic Community. With few exceptions the film industry, irrespective of the motivation for portraying ASD, relies on stereotyped outliers and extreme representations of autism affectedness as key features in films. These outliers, however, are not described as such; rather they are presented as 'common' or 'typical' archetypes of autism or ASD. This phenomenon is demonstrated in the global use of the term autism on DVD descriptors, thereby suggesting that the film industry would have viewers believe that persons with ASD are profoundly disabled and at the same time are likely, for example, to possess supernatural abilities. Since viewers learn about unfamiliar topics from entertainment media, the influence of the misinformation regarding the skewed severity of the spectrum requires further investigation. Using narrow descriptions of autism the film industry has pigeonholed representations of extremes and consequently omitted any appropriate or realistic representation of the diversity of the autism spectrum.

The trends explored in Chapter 3 indicate an increase in the number of autism related portrayals in film, while this stage of the study of film representations indicates that the representations are similar in nature and extreme compared to what would be expected in the actual Autistic Community. These findings provide a foundation for understanding how stereotypes of a diverse population are portrayed in filmic representations as actual social realities. Further investigation into the influence on viewers' knowledge and attitudes from exposure to non-representative and even extreme filmic representations of ASD is warranted and will be discussed in Section 3. However, before I delve into the exploration of the influence of film exposure on attitudes and knowledge of preservice teachers I need to better understand the nature of the filmic

presentation of characters portraying autism. Since popular film provides both visual and auditory information, and I have already uncovered the extreme nature of the visual presentation in this first part of this chapter, I will turn my focus to the aural presentation of autism in the next part of the chapter. In analysing the dialogue I can gain a deeper understanding of how autism is referred to, described, and interacted with in the 15 films that contend they portray characters on the autism spectrum.

## Chapter 4B: Film Dialogue Referencing the Autism Spectrum

### 4.B.1 Focussed Literature Review: Film Dialogue

While the representations of autistic characteristics portrayed in film tend to be exaggerated, they do cover a range of possible characteristics related to the diagnostic criteria. Part A of this chapter explored the visual presentation of characters in relation to autism conditions. This part of chapter 4 explores the framing of the autism spectrum in the 15 films as it is defined and documented for historical and future reference in entertainment film. This is accomplished through analysis of the cultural artefact of filmic dialogue.

Media is a key medium for communicating messages that influence people (Quick, 2009; Hargreaves & Tiggemann, 2002; Moyer-Gusé, Mahood, & Brookes, 2011; Moyer-Guse & Nabi, 2010; Uhrig, 2005). Media is easily accessible and can either reflect or promote societal understanding of topics (Eayers, Ellis, Jones, & Miller, 1995; Lyons, 2000) through the use of language and images. A large body of literature argues that language is of utmost importance in the passing of information because it enables information to be communicated quickly and across many avenues (Dickson, 1993).

Like media itself, media dialogue is considered to be either a reflection, or creator, of societal perspectives and values on a given topic (Giles, 2002; Potter, 2009). As such, it can be used to highlight the cultivated understanding of inexperienced people on a given topic. The constructs arising from exposure to what Murray (2008) refers to as autistic 'events' impress upon inexperienced viewers specific expectations of actual encounters with members of the Autistic Community. The resulting understanding may contribute to a more concrete construction of measurable 'normalcy' (*us*) and the opposite of that, the measurable category of people known as those having autism (*them*) (Titchkosky, 2001; Ross, 2005). The cultivated concept can have harmful effects on the actual individuals that are represented and discussed in the media

(Ritterfeld & Jin, 2006), especially if the viewer interprets the dialogue to be negative, limiting, or othering.

The media framing of the autism spectrum characteristics is representative of societal perspectives, either reflected or produced and, as such, the dialogue of filmic characters can be considered representative of general societal beliefs and understandings regarding autism spectrum conditions. The aim of the analysis of film dialogue is not to debate the use of medical diagnosis since the films used in the analysis have categorically identified the character as 'autistic', 'having autism', or 'having Asperger Syndrome'. Therefore, it should be recognised that the films that have explicitly identified characters as having a unique categorical quality that is 'outside of the norm', for example, stating 'severely autistic child', demonstrates an allegiance to the medical model paradigm. This section offers some insight into how cultural artefacts like film are communicating new information about autism.

When communicating with language, spoken or otherwise, the selection of one word over another is important because meaning is embedded in the terms used (Lyons, 2000). That is, the specific terms that media chooses to use to convey a particular message carry with them particular connotations. For instance, a comment such as, 'she is very slender' versus 'she is very skinny' presents the perspective of the speaker on body weight, that being either positive (slender) or negative (skinny). Furthermore, the proximity of one word to another can influence how the inexperienced viewer recalls information. Take for example the below conversation from *One Flew Over the Cuckoo's Nest* (1975):

Dr Sanji: I don't think he's overly psychotic, but, I still think he's quite sick.

Psychiatrist: You think he's dangerous?

Dr Sanji: Absolutely so.

In this quote the words 'psychotic', 'sick' and 'dangerous' are used in very close proximity to one another. Whether these descriptors have an actual association

or not, there is a strong potential that the terms will become associated when the viewer amalgamates their beliefs about mental illness, psychosis and dangerous behaviour into a newly constructed understanding of mental illness.

In addition to the terms selected to discuss a topic, the delivery of the dialogue by the character and the word associations resulting from close proximity to one another, influences the viewer in making constant judgements and assumptions about the characters. These judgements and assumptions create new knowledge and learning as the viewer connects new information to previously acquired information (Vygotsky, 1986). The viewer will not only consider what the character says but also how they say it, what is being said about them, and what they are saying about themselves. This is important because “each time a character opens his (sic) mouth, filmgoers learn more about him - is his accent “upper class or hillbilly? Is he or she polite? Brusque? Thoughtful? Quick/lazy? Does the voice carry calm resonant authority (Alec Guinness as Obi Wan Kenobi) or a brittle nervousness (Anthony Daniels as C-3PO)?” (Kozloff, 2000, p43). All of these considerations and judgements are used in the assimilation of new information with existing information to form the construction of knowledge about the character.

#### 4.B.1.1 Construction of concepts through dialogue

“Constructivist approaches to learning focus on the transformation of information into knowledge through the construction of meaning” (Moody, 2009, p6). To create new knowledge, the information must be relevant and connected to existing knowledge (Jordan, Carlile, & Stack, 2008). The receiver of messages will either amalgamate the new information into their repertoire of ideas, or reject the new information as it does not match their beliefs or provides information that competes with their existing understanding (Lebow, 1993; Valentine, 2001).

Social constructivism requires a knowledgeable facilitator that provides information and scaffolding from which the learner constructs new knowledge. For the purposes of this discussion the films featuring characters portraying

autism act as the facilitators of new information about the experience of living with, or being connected to, people with autism. Although fictional, the characters and the way in which they discuss 'autism', or communicate with characters portraying the characteristics of the autism condition, can influence the inexperienced viewer through valenced language and specific word selection. Further complicating the uptake of the seemingly subliminal construction of 'autistic qualifiers' in film is the increased likelihood that the viewer will accept ideas scaffolded from the dialogue of entertainment film (as opposed to non-fiction media) (Fischhoff, 2000). The viewer's susceptibility to messages is increased through the entertaining narrative which makes the viewer less likely to apply media literacy skills to the narrative (Moody, 2009). The absorption in the narrative lowers the viewer's resistance to subtle shifts in attitude, interaction, or behaviour portrayed on the screen (Moyer-Gusé, Jain, & Chung, 2012), as described in literature related to Entertainment-Education Theory (EET) (Moyer-Gusé et al., 2012; Moyer-Guse & Nabi, 2010).

The constructivist process is achieved through the scaffolding role of films in cultivating and reconstituting the inexperienced viewers' 'meaning' of autism. The narrative contributes to the construction of new knowledge in a variety of ways including the terminology used in the dialogue, the source of the dialogue and the credibility of that source. Recall the example from 'One Flew Over the Cuckoo's Nest', wherein the conversation regarding a specific patient takes place between a doctor and a psychiatrist. These two practitioners cue the viewer towards a perception of accurate and true information. Doctors and psychiatrists are usually respected for their medical opinions, and in this example the doctor could be seen to address the physical problems and the psychiatrist the cognitive state. Together these practitioners achieve mutual agreement about the patient's diagnosis and the threat the patient poses to others. Valentine (2001) contends that for some viewers this authoritative connection firmly solidifies previously wavering beliefs about the link between mental illness and dangerous behaviour. Through the analysis of sources of information and the specific dialogue those sources use in defining, describing and defending characters in filmic 'events', it is possible to highlight the

potential influence on viewers' constructed understanding of autism, and their para- social experience of autism through film.

#### 4.B.1.2 Considering the source of information in film

There is a relationship between the "credibility of a message's source and its persuasive impact" (Fragale & Heath, 2004). "Credible sources, by definition, are those that have a reputation of accurate and truthful reporting" (Fragale & Heath, 2004, p226). Therefore, the story, or message, will require a particular 'credible source'. For example, the US Centers for Disease Control and Prevention (CDC) may be deemed a credible source for medical and illness information, while the stranger at the bus stop may be considered a credible source in their relay of current news if they communicate the story in a believable way. Furthermore, people will assume the credibility of sources for stories or messages that they believe in (Fragale & Heath, 2004). The individual may then spread the message, attributing the source to one the storyteller perceives to be credible or has heard repeated on numerous occasions (Fragale & Heath, 2004; Hawkins et al, 2001). This phenomenon aids in understanding how film characters talking about autism are considered to be credible sources of information for the inexperienced viewer, and thereby contribute to the construction of a 'rumour' about the experience of living with autism that is repeated amongst peers and through other media (Baker, 2008; Draaisma, 2009; Murray, 2006, 2008).

The films analysed were selected from the list of films reported in Chapter 4A (Table 4.A.2) as clearly identifying (in writing on the DVD synopsis) that the film featured at least one character portraying an autism condition. There were four emergent categories of people that acted as 'knowledgeable' facilitators of information regarding autism, and can be considered 'credible sources' in the film dialogue analysed (Figure 4.B.1).

Firstly, there is the doctor, psychiatrist, or clinician, known as the 'Practitioner' source. This source of information in film has been widely discussed by scholars (Beveridge, 1998; Hyler, 1988; Orchowski, Spickard, & McNamara, 2006; Schneider, 1987) and is often recalled as a credible source of information

(Fragale & Heath, 2004). The second source is the family member or friend, which is referred to as the 'Inner Circle'. This source can be considered as a credible source of the experience of living with an individual with an autism condition. The third source is the 'Self-Report'. Traditionally this was uncommon in films in relation to autism, but has been increasing in recent years, and is considered a credible source of the experience of having an autism condition. Finally, the viewer hears from the 'Others'. According to Hawkins et al (2001) these are the characters playing passers-by, neighbours, strangers or community members who may not be considered credible sources unless the messages they convey are in line with the viewers' beliefs.

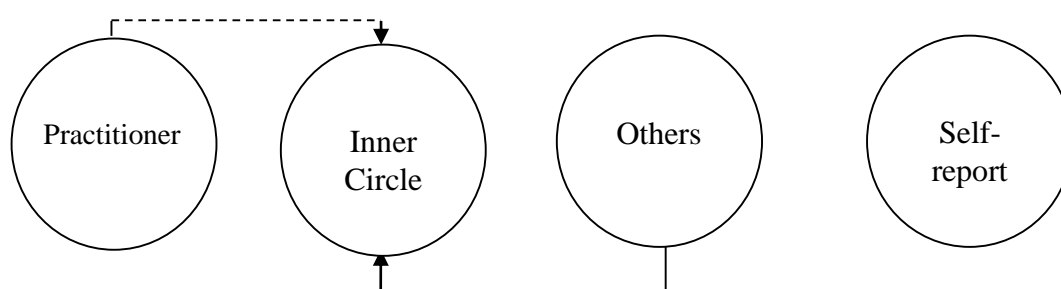


Figure 4.B.1: Emergent sources of information

**Note:** dotted lines indicate potential for the character to move from one source category to another through plot development.

### *'The Practitioner'*

To grasp the role of the doctor or psychiatrist it is necessary to understand the cultural significance of the 'practitioner' figure. Films often identify this source with a symbolic white lab coat, the cultural artefact for knowledgeable medical practitioners; this cues the viewer to accept the information relayed from this source as a trusted specialist (Draaisma, 2009; Kalra, 2011; Scully, 2009). Often describing characteristics from the 'Movie Diagnostic Manual' (MDM), which Schneider (1987) wittily refers to as the Hollywood version of the Diagnostic and Statistical Manual (DSM). These characters deliver seemingly accurate facts in an authoritative manner leading the viewer to assume the 'experts' know what they are talking about.

*The Inner Circle*

The inner circle is composed of family members and friends. This narrative voice is commonly used to explain the effects of knowing a person with the labelled disability. The inner circle has a freedom in their expression as they relay their personal perspectives, which are often highly emotive and yield empathetic responses from viewers. Entertainment-Education Theory suggests that the more engrossing and relatable the dialogue from this source is, the more likely the viewer is to position themselves alongside the portrayed perspective (Humphrey et al., 2012; Moyer-Gusé, 2008).

*Self-report*

Self-report is used to discuss autism and Asperger Syndrome in films from the perspective of the person with autism. Seemingly, this method of report is the most individualized descriptor of the experience of having an autism condition, and the messages contained in this dialogue would likely be considered credible.

*Others*

This category is composed of those persons that play secondary or filler roles in the films, for example, passers-by, neighbours, and onlookers. The 'others' may not be credible or knowledgeable facilitators of information as they often perform linking roles between other characters. These characters generally necessitate the defense of the character with disability or act as an avenue into the explanation of 'what is autism'. In the former, the transparent attempt to contradict ableist language may actually prevent the EET model from being effective as it may cause the viewer to consciously acknowledge the prejudice attitude demonstrated through character use of derogatory terms. In the latter instance the 'set up and pass' often seems forced and out of context with the storyline potentially resulting in the viewer employing media literacy skills and resisting the information (Slater, 2002; Sood, 2002).

#### 4.B.2 Methods Used for Analysing Sources of Information in film

The films selected for analysis of source of information were self-proclaimed presenters of characters with autism or Asperger Syndrome. Three of the 15 films identified in Chapter 4A were not used because 'autism' was never mentioned in the dialogue (*Guarding Eddy*, *Chocolate*, and *Killer Diller*). Transcripts of the dialogue pertaining to autism or Asperger Syndrome in the selected films were created and coded for: phrases and words relating to autism; derogatory words; the source of the information (Practitioner, Inner Circle, Self-report, Others); and the relationship the source has with the character portraying autism characteristics (where familiar indicates an established and consistent relationship, and unfamiliar indicates an estranged or passing relationship such as a first or a brief meeting). The dialogue from each film was transcribed and entered into NVivo10 software. Textual analysis was carried out using NVivo10 to explore the frequency of terms used, the frequency of groups of words and their proximity to terms relating to autism, and the descriptions of the autism condition (coded by valence, source, and language used). Text queries were used to identify the frequency of terms and word groups (for example, 'stupid' sic, 'retard' sic 'spas' sic, 'idiot' sic, and 'dumb' sic, formed one theme or word group). The dialogue was coded by source (e.g. Practitioner) and a compound query was run to combine the source with the word groups.

A limitation to this procedure is the omission of information carried through non-verbal means such as subtle shifts in body language, delivery tone, information about intention and mood indicated through movement or eye contact. To reduce the impact of these omissions, when it was deemed necessary to understanding the overall communication, these exchanges were recorded in brackets, for example, (eyes roll) or (puts up middle finger) and included in the dialogue analysis.

To expand on the social construction idea of the facilitator of knowledge scaffolding new ideas for the inexperienced learner, the results of the analysis are presented for each of four sources (facilitators) of information about the experience of living with autism. The credibility of the narrative sources, and the function of the film characters as facilitators of information for the viewer are also discussed.

### 4.B.3 Results: Film Dialogue

Analysis of the filmic dialogue using word frequency query in NVivo showed the words 'autism', 'autistic' and 'Asperger' appeared 63 times across the films, while derogatory terms or phrases such as 'retarded', 'stupid', or 'limited' appeared 161 times. These terms and phrases were most commonly used by passers-by as insults or by schoolchildren to mock the sibling of the character with autism. For example: "what's wrong with her"- "she's autistic"; "Well, he's retarded". – "Autistic. Actually, high-functioning."; "he's not a spastic. He's autistic"; or "it isn't synonymous with diminished capacity, autistic people are shut off. But it's not unusual for an autistic person to be a savant"<sup>11</sup>.

The manner by which sources describe their feelings towards the character with autism was then categorised producing four emergent themes. These four themes are presented using a matrix diagram (Figure 4.B.2).

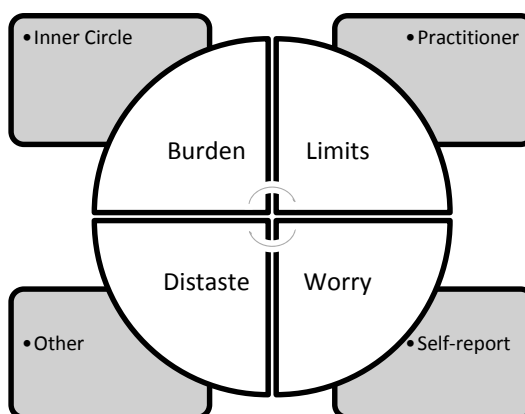


Figure 4.B.2: Emotive theme regarding ASD as expressed by each source category

<sup>11</sup> A statement from the film *Mercury Rising* that perpetuates the stereotype but is inaccurate.

This figure illustrates both the common themes within the relationships between the neurotypical main character and the character portraying autism characteristics (in the circle), and the general reporters of the emotions (grey squares). Although there are instances in which characters representing one category express more than one emotive theme, the majority of the comments relate to the theme represented in Figure 4.B.2. For example: there were 60 comments made by Practitioners; 122 by members of the Inner Circle directly relating to autism or the character on the spectrum; 95 Self-report comments relating to worry; and 79 comments made by Others displaying distaste. Also included are some examples from the dialogue that illustrate this phenomenon (see Table 4.B.1).

### *Practitioners*

The characters playing practitioner roles have historically spoken about disability in terms of limits. There is a clear representation of the medical model in the filmic medium with discussion of 'normality', and comparison to the 'typical' population disregarding the social construction perspective (McGuire, 2010). The practitioner characters indicate feelings of skill-poverty, inability and challenge and rarely highlight what the individual is capable of (Table 4.B.1).

## STUDY ONE- FILM DIALOGUE

**Table 4.B.1: Feelings reported by Practitioners**

Film	Character Dialogue
Mercury Rising	Nurse: No, it's just the opposite, everything gets through. He has trouble with feelings and emotions so he gets very frightened and confused.
Ben X	Psychologist 2: Emotionally dysfunctional.
	Psychologist 3: A light form of psychosis.
	Psychologist interview: They're volcanoes. They're walking volcanoes. We don't know when they'll erupt. Time bombs living undercover in our world. And the reaction often happens much later than the cause.
Bless the Child	Psychiatrist: It's a difficult diagnosis to accept, I know that. But there are a wide range of degrees of autism. Cody may well be one of the lucky ones. Reading, writing, language skills, she may even be able to express basic emotions.
Rainman	Clinical Director: Raymond has a problem communicating and learning. He can't even express himself or probably even... understand his own emotions in a traditional way.

### *Inner Circle*

The inner circle is generally composed of two groups, friends and family. While many of the quotes from friends indicate a sense of curiosity and perhaps affection for the 'innocent' character with autism, the family reports can often be heard to portray a sense of burden, obligation, or disability expressed in terms of limits. Consider the quotes in Table 4.B.2.

## STUDY ONE- FILM DIALOGUE

**Table 4.B.2: Feelings reported by the Inner Circle**

Film	Character Dialogue
The Black Balloon:	Thomas (Charlie's brother): He's not my responsibility.
	Thomas (Charlie's brother): I don't want anything to do with him.
	Thomas (Charlie's brother): I hated being your brother. Every night I used to close my eyes and wish that when I woke up you'd be normal. But you weren't.
	Charlie's Mom: Your brother will never be able to do the things you can Thomas. He'll never get a job or have a family. He'll never be able to look after himself. He will live with us for the rest of his life. So if there's anything that your father and I can do to help make your brother's life happier, a bit, a bit happier.
Molly:	Buck (Molly's brother): I have a sister, but she's... she's, you know, she's different.
	Buck (Molly's brother): She's completely helpless; I mean they have to do everything for her.
	Buck (Molly's brother): It's like a bad country western song: I lost my job, my girl and my sister's a savant.
Mercury Rising	Art (the detective that rescues Simon): Look at him, looks like a regular kid right. One little circuit gets crossed. Zap. Should have been smart, go to college, meet a girl, get married have some kids...be cool.
Ocean Heaven	Father of Dafu: We found out Dafu was autistic, she couldn't accept it. (speaking of the mother that committed suicide).

In some instances film characters reflect an evolving perception of disability, away from a perspective of limits, expressing intrigue or admiration for the character portraying autism. This is depicted in *Silent Fall* when the psychiatrist says, "I think autism is a kind of great, overpowering fear of the whole world...", and in *Ben X* when one of the psychologists says, "on the contrary, he's very

strong. You could almost say strong-minded. He has extraordinary perception.” In both of these examples the dialogue starts out sounding quite positive, giving hope to the notion that social perceptions of disability as limiting may be dissipating, but then the dialogue reverts to the cultural asylum of being locked away or references the limitations the individual has for living a ‘normal’ life (whatever that may be). Examples of this type of dialogue include: “there’s a boy in here, I just think he’s trapped behind a wall, and I think the fact that he’s trapped makes him terrified” (*Silent Fall*), and “in fact, he’s an extraordinary boy who every day fights to be ordinary. The question is should we dispel the illusion that he can live like a normal boy?” (*Ben X*).

### *Others*

‘Others’ typically speak about what they think of ‘autism’ in rather affronting ways, indicating resentment and a desire to maintain distance.

**Table 4.B.3: Feelings reported by Others**

Film	Character Dialogue
Ben X	Religion teacher: Ben’s just different from you, from the below - average members of the class. Fortunately for him, if you ask me. But you obviously find it very difficult to accept that someone is different.
	Other teacher: There are a couple every year. Always on their own in the playground. It breaks my heart to see them, but what can you do? You can’t nanny them.
	Religion teacher interview: Kids like him don’t stand a chance. They’re easy prey.
Mercury Rising	Leader of Agency: One boy, who cannot survive on his own, one of nature’s mistakes - weighed against the lives of thousands of our people.
	Police officer: Neighbours say he’s retarded.... kid like that costs a bundle. Maybe dad just got tired of knocking himself out for a kid that didn’t know any better. Put them all out of their misery.

The 'Others' generally maintain negative perspectives towards the person with 'autism' by referring to him/her as a nuisance, a problem, or in the worst instance a 'mistake'. The presentation of these notions may be a reflection of societal perceptions, or they could be embedded into the dialogue in an effort to make the viewer consider the ableist nature of these perspectives. Regardless, it is important to question the potential influence of such presentations and ask readers to consider the harm done to people through such exclusionary ideas. For example, consider the impact of the quotes from the above Table (4.B.3) on the viewer, on the nature of discourse and, most relevantly, on individuals from the Autistic Community.

### *Self-Report*

Finally, there is the self-report source. Although this source is represented more in recent times than it was in the 1990s, only those characters portraying 'high-functioning autism' or 'Asperger Syndrome' provide self-report in film. These reports often express the individual's challenges in understanding the "normal" world or frustration at being different. The lack of self-report by those with autism is representative of reality in that a majority of the 'self-reports' on the experience of being autistic from within the Autistic Community are from people with similar capabilities. The self-reports in film, however, tend to refer to separate worlds or concern over being different, thereby further promoting the established societal perception of 'being in a world of their own' and furthering the barometer perspective of the finite existence on a scale from low to high 'functioning'. The quotes in Table 4.B.4 provide examples of the polarisation and categorisation between the 'normal' and the 'abnormal' (identified as such through language that expresses a clear difference from the majority).

# STUDY ONE- FILM DIALOGUE

**Table 4.B.4: Feelings reported in Self-Report**

Film	Character Dialogue
Mozart and the Whale	Donald (main character with AS and savant math skill): I wasn't what they were looking for in a child. I wasn't normal.
Mary and Max	Narrated Max (main character with AS): And he couldn't understand why he was seen as the odd one while everyone else was considered normal.
	Max (main character with AS): Dr Bernard Hazelof says it is good to have goals but not stupid ones like mine.
Molly	Molly (main character with autism): In the world where I come from nothing's predictable. Sometimes everything's crowding in on you, so you have to hunch in on something small and certain and safe.
	Molly (main character with autism): It'll still be me Buck. I'm going to be just as much a person as I am now. I'll just be different (in a plea to be accepted in spite of her 'reverting back to a state of autism').
My Name is Khan	Khan (main character with AS): My hatred of the colour yellow and sharp sounds. The reason for me being so different from everyone is defined in just two words Asperger Syndrome.
	Khan (main character with AS): My name is Khan, I may look a little strange to you but that's because I have Asperger Syndrome. It's named after Dr Hans Asperger. That doesn't mean I am mad. No, no, no, I am very intelligent. Very smart, very smart. But there are certain things I don't understand.
Ben X	Ben (main character with AS): That's what they discovered. I've got autism. Or autism has got me....
	Ben (main character with AS): I wasn't normal I was special.

#### 4.B.3.1 Semantic differences: describing 'Autism'

"The protagonist in the film suffers from Asperger's Syndrome, a form of autism. While the film endeavours to depict the character as authentically and sensitively as possible, it is a work of fiction and hence certain creative liberties have been taken in the portrayal of the condition." (opening frame for *My Name is Khan*, Director Karan Johar, 2010).

The above disclaimer prefaces the film *My Name is Khan* in an unusual effort to justify deviations from the classification characteristics associated with Asperger Syndrome. There are a few important issues to note in these two short sentences. Firstly, the word 'suffers' carries with it a connotation of ailment or disease. Although it is a singular word it primes the viewer towards a medicalised, and arguably a negative, orientation to the character with 'Asperger Syndrome, a form of autism'. Secondly, there is no clarification as to which aspects of the 'portrayal of the condition' are authentic and which are 'creative liberties'. In this example the inexperienced viewer is being asked to consider the questionable credibility of the representation before being exposed to it. For the viewer, maintaining the memory of this disclaimer may be difficult if the representation falls in line with their beliefs about Asperger Syndrome, and if they determine the actor's portrayal to be more credible than the brief disclaimer.

In the films that were analysed in this stage of the study the characters describe 'autism' in similar ways, often using limiting language and ableist terms. Nearly all the comments, irrespective of the source, relate to one of three categories: the characteristics associated with autism; the emotion (or lack of emotion) and connection exhibited by the character portraying autism; or the likes and dislikes of the character as perceived by the source. Figure 4.B.3 illustrates the themes arising from the dialogue analysis for each source group and is depicted with the category themes that each source has in common. The bullet points beside the category indicate the variance in the focus of the dialogue by source group within each category. Examples of the themes arising from the dialogue analysis for each group of filmic 'participants' can also be seen in Figure 4.B.3.

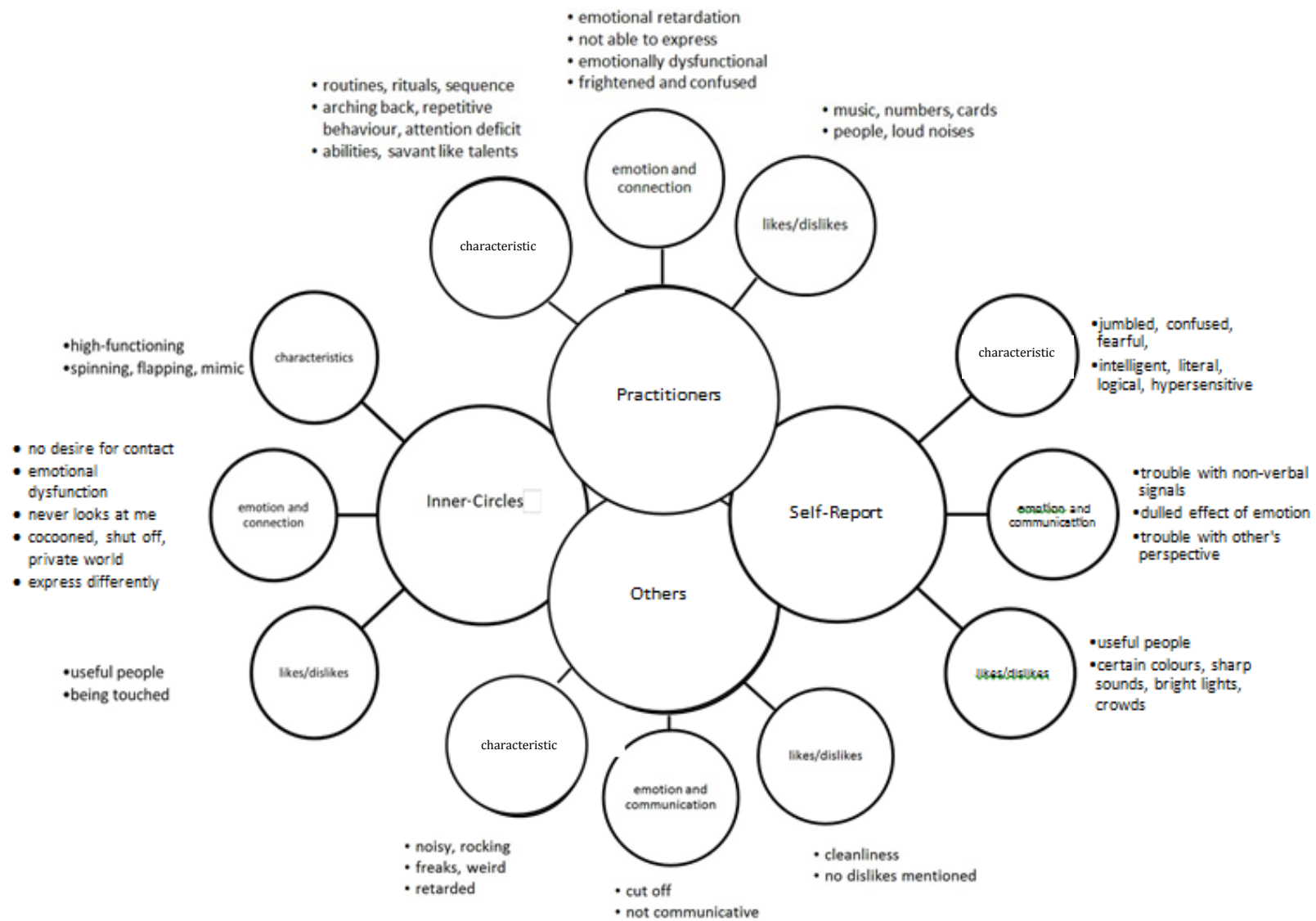


Figure 4.B.3: Semantic themes arising from dialogue analysis from each source of information

These themes are illustrated across the films from characters in each of the four source groups. Below is an example of a conversation demonstrating how these themes are communicated, and how they may contribute to the construction of viewers' beliefs about 'autism'. The conversation is from *Rainman* and takes place between a practitioner (Dr. Bruener) and the estranged brother (Charlie) about the character portraying characteristics of autism. Over the course of the film Charlie moves from the 'others' source category to the 'inner circle', and the way in which he speaks about autism and his fictional brother shifts in accordance to the themes represented in Figure 4.B.3.

Transcript of the conversation at the beginning of *Rainman* (1988).

“Charlie: What is he, crazy?

Dr: No.

Charlie: Is he retarded?

Dr: Not exactly.

Charlie: Not crazy or retarded, but he's here.

Dr: He's an autistic savant.

Charlie: I don't know what that means.

Dr.: People like him used to be called 'idiot savants.' They have certain deficiencies, certain abilities.

Charlie: Well, he's retarded.

Dr: Autistic. Actually, high-functioning.

Charlie: What does that mean?

Dr: It means that there's a disability that impairs the sensory input... and how it's processed.

Charlie: English here. You're talkin' over my head.

Dr: Raymond has a problem communicating and learning. He can't even express himself or probably even... understand his own emotions in a traditional way. There are dangers everywhere for Raymond. Routines, rituals... it's all he has to protect himself.

Charlie: Rituals. That's a good one.

Dr: Well, it's the way he acts... sleeps, eats, uses the bathroom, walks, talks, everything. Breaking a routine is terrifying."

Here the doctor is explaining what it 'means to be autistic'. Framing autism with phrases such as "people like him" and "he can't even" immediately indicates the 'other' of 'inability', speaking about autism in terms of limitations (Draaisma, 2009). Additionally, the close proximity of words like 'crazy' and 'retarded' to 'autistic' enables the possibility of linking the terms. This possibility is strengthened when the doctor says, "not exactly" when asked if "he's retarded", as if only a minute difference exists between 'autism' and 'retardation'. The credibility of this source and the entertaining film narrative may reduce resistance to this damaging message.

The limitations of adherence to the medical model and the Movie Diagnostic Manual are further evidenced when 'autism' is described by friends or family members of characters. For example, when Thomas (*The Black Balloon*) defends his brother from a young boy shouting abuse he says, "He's not a spastic. He's autistic," which is met with the comment "same diff". In defeat, Thomas simply says, "No, not really," and carries on with his chores.

The choice of words and the descriptors used in a number of films featuring characters with autism indicates a need to defend the individual with autism, at times pleading with the bully to excuse behaviour associated with the condition.

Terms used to describe autism are varied, and at times technical (whether correct or incorrect they are presented as facts to be accepted). For example, from the dialogue above taken from *Rainman*, the terms 'high-functioning' and 'impairs the sensory-input' from a seemingly credible source (a doctor) are used in conjunction with offensive words like 'retarded' and 'crazy'.

Further analysis using NVivo showed that 88% of the dialogue referring to autism or the character portraying autism referred to a group rather than an individual; for example, 'many autistics have unique and fascinating abilities' (*Silent Fall*) or 'they're walking volcanoes' (*Ben X*). The propensity to create a singular description is separatist and creates a clear distinction between 'us' and 'them'. This phenomenon is evident in self-report albeit from the first person perspective. For example, statements like 'in your world....' (*Molly*) and 'normal people...' (*Snowcake*), or 'people with Asperger's want contact with other people...' (*Mozart and the Whale*, 2004), imply that there is a vast separation between the 'group' of people with autism characteristics and the 'group' of typically developing people. This repetitive imagery of two distinct types of people delineates the 'spectrum' and omits the variance and individuality that the term should represent. The unifying, or reductionist, quality these words propose indicates that the term 'spectrum' is more of a barometer with finite categories (for example, high to low) (see Figure 4.B.4).

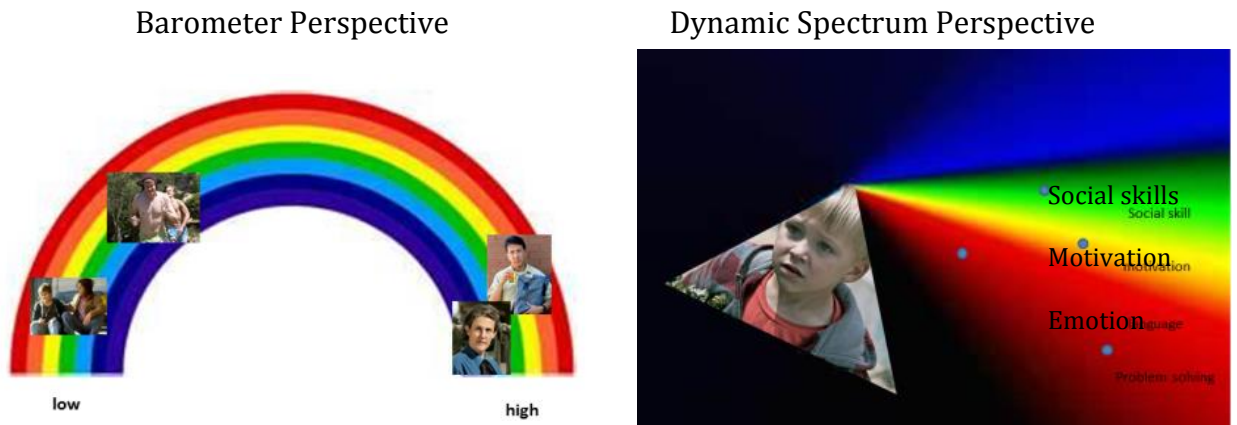


Figure 4.B.4: Barometer perspective versus dynamic spectrum perspective

Consider the categorical terms, 'people with Asperger's are this way' versus 'many autistics' are another way. The construction of understanding about the term 'spectrum', when film characters are considered credible and knowledgeable facilitators of information, is problematic as this language confines the individual with autism characteristics to a finite scale rather than, as a person centred approach requires, describing them holistically. A person centred approach acknowledges the many components of an individual, of which autism may be one and being male, for example, may be another. This approach supports the infinite individual displays of autism characteristics and personal traits originating from the person.

#### 4.B.3.2 The shifting representation of relationships between characters

The nature of the relationships between the character portraying autism characteristics and the neurotypical characters in these films demonstrates a cultural shift. Contrary to previous reports (Baker, 2008; Murray, 2006) which indicated that the films primarily portrayed total strangers meeting the person labelled as having autism and managing to build a relationship with them, approximately half of the films analysed featured relationships that were

established over time ('known'). This shift in interaction between characters may be attributed, in part, to the rising prevalence of autism (Williams et al., 2005), the popularity or the increasing 'celebrity' status of the term, or the self-reports and documentaries featuring individuals from the Autistic Community and their families. The shift, however, has not produced less stigmatising dialogue since the themes of the relationships remain negatively valenced. Irrespective of the cause of the increase in featuring 'known' relationships, it does indicate that there is greater interest in the experience of autism as opposed to the former fascination with atypical behaviour or savant talents (LeBesco, 2004; Osteen, 2008b).

#### **4.B.4 Discussion: Film Dialogue**

The aim of the analysis of dialogue was to offer some insight into how cultural artefacts like film are communicating new information about autism. The films featuring characters portraying autism conditions have been found to depict severe presentations of the condition and are often portrayed confounded by other disorders, disabilities or conditions (Conn & Bhugra, 2012). This homogeneous representation of the 'spectrum' in film increases the likelihood that inexperienced viewers will adopt beliefs, or have existing beliefs validated, which promote a circumscribed list of characteristics to define the experience of autism. Additionally, the information is attributed to credible sources, which may validate the persistence of the belief in a homogeneous presentation of autism.

The credible sources speaking about autism in a consistently negative and segregating manner scaffolds the adoption of a personified understanding of diagnostic characteristics called "Autism". This personification, represented in the celebrity persona 'Autism', brazenly reduces the intricate architecture of an entire community of people to a few dramatised 'truths'. This phenomenon of the character 'Autism' is illustrated here through the dialogue that holistically groups individuals into categories with finite boundaries, rather than acknowledging the vast possibility of difference in the person oriented spectrum.

Furthermore, the homogeneous nature of the terms used to describe the experience of living with a person with autism (as seen in the Inner Circle dialogue) or 'being autistic' (as seen through self-report dialogue) facilitates the production of new knowledge that is limited in scope and may serve to consolidate inexperienced viewers' beliefs about super skills, extreme challenges and worthiness. The impact of recognising 'Autism' (the barometer perspective) rather than the dynamic individual (person first approach) is far reaching. Consider, for example, the influence of the different perspectives on the viewers (politicians, funding agents, educators, community members) as well as on the portrayed (family members and individuals from the Autistic Community).

#### 4.B.4.1 Influence on the viewer

There are a great number of potential influences on viewers of these media representations of autism. For example, the inexperienced viewer with a film-constructed understanding of autism is offered 'solutions', where the individual with autism is either cured or provides a 'useful' function (Draaisma, 2009). The fictional representation of simultaneous diagnosis and treatment resulting in a positive resolution to a 'problem' represents a prosaic dulling of the complexity and challenges associated with autism affectedness, while at the same time implying there is error in the individual that should be rectified. The 'cure to the disability problem', as it is portrayed, is wrapped in a tight bow and presented to the viewer establishing a benchmark for 'successful work'. The implied simplicity of rectifying the 'issue' rather than respecting diversity, along with adherence to the medical model, can be seen in areas of politics, funding models, medical disciplines, and education systems.

The superficial portrayal of the actual complexity of autism often originates with the representation of a 'qualified' medical professional that can be easily located and offers a solutions-based suggestion, anything from institutionalisation to brain surgery. The solutions-based portrayal, although at its extreme, can be witnessed in the film Molly, where Molly undergoes brain surgery 'restoring the dormant area of the brain' and essentially is cured of autism. The portrayal of

instantaneous diagnosis, strategy and cure could result in the education of new medical practitioners towards false expectations of their own abilities (Diagnostic and Statistical Manual: Psychiatry's Deadliest Scam, Producer CCHR International, 2011). The repeated representation of 'doctor' and 'treatment' promotes a cure mentality, which is not only problematic for the viewers by offering a construction of autism that includes the idea that the individual can somehow be freed from the 'trapped world of autism', but also implies that such notions are sought and correct. This concept of being somehow untangled from autism and having it removed, or cured, is avidly rejected by most members of the Autistic Community (Grandin, 2002; Baggs, n.d.).

In addition to the imaginary diagnostic superpower that the clinicians are portrayed to possess, there is also a problem with the link between the practitioner's ability to 'solve the issue' and an overall societal benefit. In the above example from *Molly*, the practitioner not only provided a solution for the disability but, the 'cure' she offered also led to the building of the relationship between Molly and her previously estranged brother. Furthermore, Molly was less burdensome to her family and society at large as she no longer required institutionalisation. It should be noted that the relationship between Molly and her formerly estranged brother was again threatened when Molly began to regress back to her former state and her burden on the state was reintroduced. This was portrayed through the dialogue as Molly's failure, or fault, at 'returning to autism', rather than a medical error in the supposed 'treatment'.

In addition to the obvious issue with discrimination represented through these types of narratives, there is also an issue with the language used to talk about 'Autism' in these films. The language often implies finite categories (e.g., Asperger's, high-functioning, severely autistic; people like us; people like them), and that there is a key or 'correctness' in a relationship that will result in progression of skill and ability in the person with autism, which may move them from one category (them) to another (us). This notion has been found to lead to poor self-efficacy for people aiming to support actual individuals with autism,

such as teachers, as they do not feel equipped with the 'magic answers' (Gaad, 2007; Helps, Newsom-Davis, & Callias, 1999; Symeonidou & Phtiaka, 2009).

For an inexperienced viewer, like a new teacher who relies primarily on media representations for their knowledge of autism, personal beliefs can be validated by new pieces of media that follow the same prescriptive representation of 'Autism'. We could arguably speculate that, over time, the inexperienced educator may encounter an actual student with an autism condition that does not comply with the benchmark 'education' they received from the media. The actual individual could be considered the exception to the known 'Autism' which can influence how the teacher approaches, supports and perceives capability in a particular student (Guldborg, 2010; Huber, 2009).

Furthermore, the continued reinforcement of the 'barometer perspective' through segregating film dialogue has a number of potential consequences. If the inexperienced viewer, such as the new teacher, adheres to this perspective they may refrain from investigating the strengths and limitations of the individual leading them to make blanket judgments about the student (Guldborg, 2010; Harwood, 2010). Likewise, the teacher may assume that they know what a 'high functioning' person *is like* which would likely lead to the lay application of strategies and goals.

#### 4.B.4.2 The potential influence on individuals in the Autistic Community

Expanded from Harwood's (2010) argument of the mobile asylum, which describes the evolution of the asylum from the psychiatrist embodied asylum to one without the confines of a physical institution, I offer the possibility that filmic diagnoses of the celebrated character, 'Autism', have created somewhat of a cultural asylum. This cultural asylum is one that is forged from cultural artefacts, like film and the superior knowledge indicated by a white lab coat, to confine individuals or groups through stereotyped images and clear categorisation of people, in an effort to understand the 'other'. In essence, films offer the inexperienced viewer clear informational parameters for expectations

of people in these specific categories with whom they may or may not have personal experience, which can have serious consequences for actual individuals in that community (Farnall & Smith, 1999; Kama, 2004; Larsen & Haller, 2002). The findings in Chapter 3 (and those to be discussed in Chapter 6B) indicate that understanding of the terms ‘Asperger Syndrome’ or ‘high-functioning’ as they are used in film may actually act as false indicators of specific abilities and behaviours. This may result in leading the inexperienced viewer towards expectations of the actual individual with autism that they may not be able to meet (Huber, 2009).

Furthering the categorisation and construction of ableist ideas about the autism spectrum is the way characters that play community members, family members, and even people with autism talk about autism using derogatory terms and segregating language. These repeated themes serve to foster categorical beliefs about individuals and increase ideas of burden, incapacity and self-loathing. In this manner the films act as facilitators in the construction of new knowledge with the actors portraying peers, family members, and members of society. For instance, peer influence is a strong influence in our adoption of ideas and attribution of credible information (Fragale & Heath, 2004), making the emotional themes expressed by the sources of dialogue (Figure 4.B.2) all the more concerning. These sources, that represent our peers, talk about autism as a thing, as troublesome, and separate from the world of the ‘normal’. In the films analysed in this study, the character “Autism” is met with judgmental looks and sniggers from representatives of the community in the form of passers-by and onlookers. ‘Autism’ is the character that is a mystery, definitively different and separate from the viewer as shown in the way the self-reports talk about their worlds versus the ‘normal world’, or the baffled practitioners that talk about ‘them’ being one particular way or another. Consider the individual from the Autistic Community who views one of these films. The perception of self-worth, of value, that is being presented through the dialogue is likely very injurious to this individual. The peer influence gained from the para-social relationships with filmic characters does not end with the direct insult to the self-esteem of the

members of the Autistic Community. Some research indicates that these notions are adopted by members of the community at large, teachers specifically, as they then become weary of working with individuals with this label (Gregor & Campbell, 2001). It is argued here that the boundaries imposed by the cultural asylum, which have been created in part through the ableist dialogue in entertainment films, are far reaching as they have real world impact on individuals living the thing known as 'autism' (McGuire, 2010).

#### **4.B.5 Conclusion: Film Dialogue**

The accuracy of the characters was determined by applying the CARS2 assessment tool to character portrayals. The results of the assessment indicate that the majority of character representations of spectrum conditions are overly severe compared to what would be expected for the actual population. Typically, the 'overall impressions' score by the raters were less severe than the standardised severity score meaning that an untrained viewer with limited exposure to the diversity of the spectrum may believe that the presence of autism characteristics is extreme in every individual.

In addition to the dramatised severity shown through the CARS2 assessment, the analysis of character dialogue presented a clear commitment to the medical model's perspective of limits, and support for the idea that people in the Autistic Community belong to another world. The four sources of information that emerged from the analysis were the 'practitioner', the 'inner circle', the 'self-report', and 'others'. These sources generally endorsed negative emotions towards people on the spectrum. Specifically, the inner circle promoted a sense of burden, the practitioners promoted ideas of limitations, the others expressed general distaste regarding people on the spectrum, and the self-report expressed worry (often about not belonging to the 'normal' world).

The findings discussed in Chapter 4 indicate that the visual and aural presentations of, and associations with, 'autism' in the 15 films are; extreme, negative, and adhere to the medical model perspective of limitations and 'otherness'. Knowing that all of the character portrayals are lacking in some way, either by representing a burden archetype, being overly extreme in the characteristics portrayed, or utilising derogatory dialogue, some representations are more accurate (according to the CARS2 analysis), or less ableist (according to the analysis of dialogue) than others. In Chapter 5 I will explore a method of ordering the films from most to least authentic, accurate, or positive. The results of the ranking, which will be described in Chapter 5, will determine which films are used in the second study involving preservice teachers.

## **Chapter 5: Ranking Films with Characters Described to be Autistic**

This stage of Study One involving films utilises the films identified in Chapter 3, and the analyses of the characters portraying autistic characteristics in Chapter 4A. The information about each film and the ASD character is used to establish the films' standing on a weighted ranking scale. The ranking scale is designed to order the films from top to bottom based on accuracy, archetype, and professional comments. The films that are analysed and ranked in this chapter inform the studies involving preservice teachers (described in Section 3).

### **5.1 Focussed Literature Review: Ranking Films**

The qualities attributed to autism spectrum conditions through the visual and verbal film medium indicate an adherence to the medical model that supports a stereotyped view of people on the spectrum being super skilled in one area and a burden in all others. Furthermore, the deviations from the 'morsels of truth' that are set by the character's portrayal become even more exaggerated to accommodate Hollywood agendas. In this study the films that explicitly identify a character as portraying autism are ranked, using criteria devised to assess aspects of the film that present the best overall representation of spectrum conditions.

The issue of language needs to be carefully considered here. Researchers have investigated images and media in terms of positive and negative, accurate and inaccurate, good and bad, amongst other adjectives (Angermeyer & Schulze, 2001; Farnall & Smith, 1999; Owen, 2007). Investigations into the influence of portrayals, irrespective of the terms used, generally contend that negative portrayals are more influential on attitudes than positive ones (Farnall & Smith, 1999; Ritterfeld & Jin, 2006; Saito & Ishiyama, 2005). In this part of Chapter 4 the accuracy of the portrayal is considered along with the archetype of the character, the alignment of the intended portrayal with the actual portrayal, and aspects of the verification survey to professionals that work with people on the spectrum who were asked their opinion of the selected films (see Chapter 3). These four

items are used to create the weighted ranking system to identify the quality of the 'education' facilitated through the character portrayal. Since the educative power of the film is deemed to hold the most weight the top ranking films would be considered to have the most authentic portrayal of autism characteristics and the fewest deviations from the 'truths' established through the characters' portrayal.

Countering the desire for authentic representations of persons with autism are the goals of the industry that include providing enjoyment, or creating debate, and making a profit. The divergence between providing authentic representations and providing entertainment may be explained by Moyer-Gusé (2008) who contends that realistic portrayals may decrease enjoyment of the movie, perhaps because people go to the movies to escape from reality. This position implies that the 'morsels of truth' need to be embedded in fantastical details in order to create an enjoyable experience. If this position is accepted, the presence of characters with disability in film may be distorted to portray a social reality that does not exist. In effect, this practice makes the 'morsels of truth' mere splinters; however, they may still be potent enough to gain and maintain the attention of a viewer (Dal Cin et al., 2004). A key question then arises: if these distortions are necessary to maintain viewers' attention and be enjoyable, can the film be classified as a 'good' film when considering representations of disability?

The issue is two-fold. Firstly, viewers want to be absorbed in a film and are not likely to critically or reflectively read the text (Dal Cin et al., 2004; Moyer-Gusé & Nabi, 2010; Moyer-Gusé, 2008; Titchkosky, 2005). This means that the messages and modelling the viewer is exposed to can, in the absence of introspection, influence their knowledge and attitudes about the content and characters in a film (Rogers & Singhal, 2002). In this way 'morsels of truth' portrayals have the capacity, arguably, to engage viewers without their 'conscious processing' of the ideas presented in the film.

Secondly, the influence that a film has on viewers may directly impact real world individuals, groups, or societies (Butler & Gillis, 2011; Jamieson et al., 2006; Rogers & Singhal, 2002; Scull & Peltier, 2007; Farnall & Smith, 1999). For example, as previously described, Butler et al.'s (1995) study of the film *JFK* reveals the extent of influence of films on viewers' behaviour. These researchers reported that the film *JFK* aroused anger and acceptance of the broad conspiracy theory, and surprisingly decreased their intent to vote because of perceived helplessness in the political arena which was a theme of the film (Butler, Koopman, & Zimbardo, 1995). There are two considerations here: first this influence is derived from the collective experience of viewing film in a safe environment that allows viewers to experience roles and emotions they may not otherwise have the opportunity to experience (Uhrig, 2005); and second, as previously mentioned, peer influence is very powerful for viewers. Collectively, viewers are exposed to varying archetypes, character relationships, likeable characters, contemptible characters, humour, terror, despair, and hope (Uhrig, 2005). The viewer is able to share the experience, making film viewing a wholly powerful experience (Uhrig, 2005). For example, exposure to humour through the collective experience elicits good feelings. Good feelings and laughter would be interpreted as positive; however, consider LeBesco's (2004) observations of 'disability humour'<sup>12</sup> (as in *Stuck on You*, 2003) it may not be harmful to the real world experience. Alternatively, if that humour is 'disabling humour' (as in *Something about Mary*, 1998) it could have real world consequences for those living with disability.

Here the focus is on the second issue, the real life consequences resulting from the viewing of a false reality, given that the research literature has established that real consequences to people with disability arise from film exposure. This stage of the study involving films considers the creation of guidelines for producing representations of human difference that will result in the 'least harm'. This is explored through a film's ability to maintain the characters' integrity by

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<sup>12</sup> LeBesco (2004) defines this as humour that challenges ableist assumptions about people with disability rather than disabling humour where persons with disability are made to be the punch line of the joke.

framing the disability in a way that does not lead to 'othering' but rather allows the character to exist as they are instead of being present to drive the film plot (Baker, 2008; Murray, 2006; Pangrazio, 2003). This practice of 'driving the plot' is underscored by De Vany & Walls (1999) who state that:

"Film makers can position a movie to improve its chances of success, but after a movie opens the audience decides its fate: There are no formulas for success in Hollywood." (De Vany & Walls, 1999: p315)

The production of a box office hit, as De Vany and Walls (1999) have stated, is less to do with talent and ability and more to do with luck, a proverbial 'roll of the dice'. For example, a box office hit is not necessarily the result of the quality of a film, the stars featured in the film, the budget or the release strategy (De Vany & Walls, 1999).

The capricious nature of the industry, however, should not liberate filmmakers from producing authentic representations that maintain the integrity of the represented individual. Likewise, it does not relieve filmmakers from the responsibility for displaying the variation of disability. The industry's responsibility is founded on the growing body of literature that discusses the consequences of media viewing for individuals and cultures (Ritterfeld & Jin, 2006; Saito & Ishiyama, 2005; Sarrett, 2011; Uhrig, 2005). 'Box office hit status' gives a film longevity in the public realm and allows it to infiltrate social discourse (Haller et al., 2006; Scully, 2009), which magnifies its potential influence on viewers, whether positive or negative.

Furthermore, Ginsburgh and Weyers (1999) argue that box office sales are a better determinant of 'good' films than critic's reviews or accolades, such as Academy Awards. Box office sales indicate public interest and entertainment value, and are a good predictor of whether or not film content will last in the social realm. For instance, the film *Psycho* (1960) did very well at the box office and appeared in comedy skits and casual dialogue, but received mixed reviews from critics. However, there are a few instances where a film is a hit both at the box office and with accolades. For example, one of the highest profile films

featuring disability, *Rainman* (1988), as described in Chapter 3, featured a character diagnosed as an 'autistic savant' (DVD cover). Even today, 25 years after its release, references to this film are evident in everyday dialogue. Such enduring filmic images of autism, coupled with the modern interest in Autism Spectrum Disorder (ASD) (Wing & Potter, 2009) that is demonstrated through a rise in media coverage and filmic representations bestows upon us a defined cohort of filmic disability representations. It is this 'defined cohort', which I use to discuss the guidelines for 'good' films below.

This part of Chapter 5 uses a weighted scoring system to rank the 15 selected films with a character displaying autism. A 'good' film is defined as one that features a disability where the representation is reasonably authentic and therefore the film is judged to be one that will 'do no (or minimal) harm' to the public understanding of actual people with the represented disability.

## **5.2 Rationale for Ranking Films**

The identifiable cohort of films featuring characters with ASD was explored in Chapter 3; this process resulted in the identification of 15 films that described a character as having autism, Asperger Syndrome, or being autistic in the DVD synopsis. These 15 films are used to identify the characteristics of the 'good' films that authentically feature characters with ASD. Authenticity is defined by the integrity of the character's idiosyncrasies and consistency in display of autism symptomology established throughout the film by the character's portrayal of their affectedness. An 'authentic' character in a 'good' film would show a broad range of characteristics, be realistic in illustrating the character's daily life, and be positively framed in the potential of the individual and their 'typical' relationships. A 'good' film does not rely on sensationalised portrayals of skill or overcoming their disability, a problem discussed in the literature (Baker, 2008; Draaisma, 2009; Murray, 2006; Titchkosky, 2005); instead a 'good' film tells a simple story. A simple story is more realistic and more 'truthful' as it represents a majority of the population who, although extraordinary to their loved ones, live ordinary lives. This may be where the industry and authenticity

converge because directors contend that the making of a good film is in the writing of a good story (Murphy, 2011; Shah, 2011).

The simple stories that have some plausible content are the ones that viewers seem to recall (this is discussed in Chapter 9). Since films have credibility in the public realm, when characters are representing human difference the representations need to be respectful of the 'truths' they represent because a 'bad' film could have real life consequences (Duvdevany, Rimmerman, & Portowicz, 1995). These consequences are more concerning when films infiltrate the social conscience and become master narratives (Murray, 2008; Scully, 2009). As master narratives the filmic dialogue, attitudes, and stereotypes are perpetuated through social conversation. This means that films that spectacularise the 'truths', and deviate from genuine representations of human difference, may become the master narratives for the disability portrayed, however obscured the representation is. Consider again the box office mega hit *Rainman*, which paved the way for the formulaic presence of the autism condition in cinema and remains the master narrative for films featuring disability (Murray, 2008; Sarrett, 2011). In this case a particular truth about autism (the savant) was most certainly spectacularised.

In light of the unpredictable nature of attaining a box office hit and the credibility afforded to media, there is merit in attempting to create guidelines or a roadmap for the successful/good quality representation of disability such as ASD in all films that are produced. The potential of any film to acquire longevity in the theatres and public sphere necessitates an understanding of how to represent human difference with greater accuracy, or more 'truths'. Therefore, I consider the authentic framing of ASD using a weighted scale to identify films that are consistent in their portrayal and positive in their archetypes. This scale cannot be used to predict the probability of a box office hit, but it can assist writers and producers to ensure that the characters with disability are 'authentic' and grounded in the 'truths' of the individual's story.

### 5.3 Method: Ranking Films

The weighted ranking scale was created using the results of the film analyses to identify ‘good’ films featuring characters with ASD. All 15 films from the inventory that identified a character on the spectrum were ranked using a four-part scale. ‘Good’ films were identified on the basis of: (1) the range of characteristics represented with relation to the diagnostic criteria (possible total of 42); (2) the archetype the character fulfilled (possible total of 30); (3) the consistency between the film descriptor, the professional raters’ ‘overall impression’ scores and the severity scores from the CARS2 assessment tool (possible total of 16); and (4) comments from international professionals surveyed online (possible total of 12). The highest possible score for the most authentic and ‘good’ representation of a character with ASD is 100 (see Table 5.1).

The range of characteristics portrayed was determined using the CARS2 observational assessment tool. The CARS2 is composed of 15 behavioural areas or categories<sup>13</sup>, 14 of which relate to diagnostic characteristics found in the Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (DSM-IV) (American Psychiatric Association, 1994). For each of the 14 categories there is a potential score from one to four, where one equals age-appropriate or no evidence of difficulty, and four equals severely abnormal (Schopler, Van Bourgondien, Wellman, & Love, 2010). For each behavioural area a mean score is provided to identify the average expected for the population with a diagnosis of ASD (Schopler et al, 2010). For the purpose of the ranking scale, a single point was awarded to each of 14 behavioural areas that corresponded with the median score provided for each category. The sum of the points was multiplied by three for a potential score of 42. This process allocates the highest weighting to this item in the ranking system which totals 100 points. The rationale for making accuracy the highest weighted item is that sensationalized

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<sup>13</sup> The 15<sup>th</sup> category is the ‘overall impression category’ in which experienced raters give their overall impression of the severity of affectedness. This category is not included in the CARS2 weighted category because it is not based on directly observed behaviours but will be used to triangulate data later.

or false portrayals could reinforce any invalid understanding of the diverse spectrum and obscure useful learning. Where a total of 10 or more points were achieved, the representation was deemed to portray a broad range of characteristics, while scores of 9 or less were deemed to represent a limited range of characteristics. This score had the highest weight in the overall scale because it identifies the accuracy with which the actor portrays characteristics associated with the disability, and also whether the scope of affectedness is appropriately represented.

In addition to the characteristics portrayed, the characters with disability often serve as drivers of the film plot (Baker, 2008). Primary to the plot utility is the archetype the character fulfils. The archetypes frame how a viewer interacts with a character, and can potentially permeate the boundary between fictional interactions and real life ones. There are a number of familiar archetypal tropes; for example, the 'innocent and helpless', the 'supercrip', or the 'insufferable or mad genius' (Baker, 2008). The archetype that the character fulfilled was ordered according to the likely empathetic value. Since people gravitate to the Hero archetype it is attributed the highest points; and, as people often perceive themselves to be caregivers and relate to the burden archetype, this also scores highly (Faber & Mayer, 2009). Likewise, Faber & Mayer (2009) observed that people respond with anger and dislike to characters when the character is presented within a thriller theme making villain archetypes less likeable and therefore lower scoring. Finally, the villain is the least likeable and therefore unlikely to evoke empathetic responses, thus scoring low points in the ranking (Hoeckner, Wyatt, Decety, & Nusbaaur, 2011). The points awarded by archetype were hero (scoring 30 points), unintended hero or unable to adjust (scoring 25 points), negative archetypes were burden (scoring 15 points), victim (scoring 10 points), and villain (scoring no points). The positive archetypes hold higher weighting because viewers will engage more and are more willing to interact with real people when portrayed positively (Hartman, 2006; Moyer-Gusé, 2008; Nelson, 1996). Although 'unintended hero', sometimes referred to as 'wise simpleton' (Berger, 2012), and 'unable to adjust' may not sound very positive, they are accepted as such because the characters in these archetypes tend to

display innocence and effort which are viewed as positive by viewers (Baker, 2008; Draaisma, 2009). On the other hand victims, villains and burdens that demonstrate weakness, sinister qualities and lack of effort, and are often interpreted as having negative associations, have low weightings. Burden archetypes may elicit empathetic responses from viewers and therefore score more points than the other 'negative archetypes', while victim archetypes can elicit feelings of discomfort and sympathy from viewers, therefore gaining 10 points, and villains are wholly negative which is why this archetype is awarded no points.

The severity of characteristics as identified using the CARS2 severity group (minimal-to-no symptoms of ASD; mild-to-moderate symptoms of ASD; and severe symptoms of ASD) were checked against the 'overall impression' category on the CARS2 tool, as well as against the descriptor on the DVD box or synopsis. This allowed a triangulation of the data to check for consistency between what the film-makers contend they are portraying, how the professionals using the CARS2 classify the character portrayal (overall impression), and the range and severity of characteristics as rated by the CARS2. This, in effect, reflects a judgment regarding whether what the viewer sees is in fact what they have been primed for and receive. It is important to acknowledge that if the purported portrayal is a misrepresentation of the actual portrayal the viewer may assimilate new (mis)understandings into their beliefs about the nature of autism. As such, a full match was awarded 16 points, and a partial match eight points.

Scull and Peltier (2007) contend that professionals working in the field are better determinants of quality films than box office sales or critics' reviews. The use of professional opinions thus provided a perspective from seasoned educators that often use film to advise, teach, or demonstrate concepts related to spectrum conditions. The contact information for a number of nationally recognised autism agencies and organisations that I was personally aware of from living and working in Australia, Canada, United States and United Kingdom, was obtained using Google search. The agency resource manager, information service manager, or research manager was emailed a formal letter requesting that they

disseminate a survey link to colleagues and members of the organisation. The purpose of the online survey was to determine their opinion of filmic portrayals in specific movies. Professionals' comments were solicited for three issues related to the films they had viewed: which diagnosis was portrayed; how accurate the portrayal was to the diagnosis; and whether the portrayal was positive or negative. The comments that were used to further inform understanding of the accuracy and archetype of the characters. A potential score of 12 was possible for this category, where being labelled the 'best' film yielded 12 points (+12) and being labelled the 'worst' film yielded minus 12 points (-12). Neutral comments (e.g. I saw the film and liked it) yielded six points, positive comments yielded 10 points (+10), and negative comments yielded minus 10 points (-10).

Finally, the box office sales were observed to determine the entertainment value of the film, and its potential longevity in the social conscious (De Vany & Walls, 1999; Ginsburgh & Weyers, 1999; Ritterfeld & Jin, 2006). The overall box office sales can be attributed to a number of factors, including but not limited to, social interest in the topic, media surrounding the film or its stars, and the timing of release relative to current events. Given the arbitrary nature of becoming a box office hit, as De Vany and Walls (1999) succinctly point out, the total box office sales holds little weight in the ranking of films but are useful in understanding why some films gained professional comments and others did not. In addition, total box office sales are an indicator of the potential power of the representation in the social realm, irrespective of whether a film is good or bad. The total box office sales were identified using the Internet Movie Database (IMDB; [www.imdb.com](http://www.imdb.com)); this procedure is consistent with Hartman's (2006) study of salesperson representations in entertainment film. Total film sales were also checked using Boxoffice mojo ([www.boxofficemojo.com](http://www.boxofficemojo.com)) and Showbiz Data ([www.showbizdata.com](http://www.showbizdata.com)) websites, both of which contain international figures and general synopses of films.

## 5.4 Results: Ranking Films

The films were ranked for character depictions for two separate groups: autism and High-Functioning/Asperger Syndrome. The ranking criteria are outlined in Table 5.1, and the scores films received against the criteria are noted in Table 5.2.

**Table: 5.1: Ranking criteria**

Categories	Rational	Measure	Method	Possible weighted total
CARS 2	Accuracy of the portrayal. 1 point for each of 14 behavioural category that was scored showing a presence of ASD  <i>Minus 1 if box 14 records a savant skill as they represent less than 10% of the population</i>	Broad range of characteristics- narrow range	Total points multiply by 3	42
Archetype	Positive or negative archetype	Hero Unintentional Hero Unable to Adjust Burden Victim	30 25 25 15 10 0	30
Description Consistency	Comparison: Severity score on CARS 2, overall impression category (15) and descriptor on box/synopsis description  Recorded: CARS/overall impression/synopsis	Total consistency Partial consistency No consistency	16 8 0	16
Professional comments	Expert opinion-experts opinion of the quality of representation	Best Positive comments Neutral Negative Worst	12 10 6 -10 -12 0	12

## STUDY ONE- FILM RANKING

**Table 5.2: Film score against ranking criteria**

	CARS2	WS	Archetype	WS <sup>14</sup>	Description Consistency <sup>15</sup>	WS	Professional comments	WS	TOTAL SCORE
The Black Balloon	8	24	burden	15	severe/severe/autistic	16	neutral, best film	12	67
Ocean Heaven	11	33	burden	15	severe/moderate-severe/autism	16		0	64
Chocolate	6	18	unintent hero	25	severe/mild/autistic	8	neutral	6	57
Guarding Eddy	5	15	unintent hero	25	mild/none/autistic	8		0	48
Rainman	9	27	unintent hero	25	severe/moderate/autistic savant	8	negative, worst film	-12	48
Molly	6	18	burden	15	severe/moderate/autistic	8		0	41
Silent Fall	7	21	victim	10	severe/moderate/autistic	8		0	39
Mercury Rising	5	0	victim	10	severe/moderate/autistic	8	negative, worst film	-12	21
Bless the Child	2	6	villain	0	minimal/none/autistic	0		0	6
High-Functioning and Asperger Syndrome (HF Version of CARS2)									
Mary and Max	10	30	unable to adjust	25	severe/severe/AS	16	positive, accurate	10	81
Snowcake	10	30	unable to adjust	25	severe/moderate/autistic	8	positive, accurate, best	12	75
Mozart and the Whale	6	18	hero	30	severe/moderate/AS	8	positive, accurate, best	12	68
My Name is Khan	7	21	unintent hero	25	severe/mild/AS	8		0	54
Killer Diller	5	15	unintent hero	25	severe/mild/AS	8		0	48
Ben X	8	24	Victim	10	severe/moderate/mildly autistic	0	negative	-10	24

<sup>14</sup> WS is an abbreviation for Weighted Score

<sup>15</sup> These descriptors correspond to CARS2 score, the raters 'Overall Impression' score, and the DVD descriptor respectively

The films featuring characters with High Functioning Autism (HFA) or Asperger Syndrome were more accurate in their portrayal of a range of characteristics, as determined by the CARS2 category summation, than the films featuring autism. The highest scoring film in the autism category was *The Black Balloon*, a film about a young man with autism, and the highest scoring film in the High Functioning Autism category was *Mary and Max* (a claymation film).

Seven of the films featured negative archetypes (victim, burden, or villain), while eight films featured positive archetypes (hero, unintentional hero, or unable to adjust). The films featuring characters with HF and AS had more positive archetypes than films featuring autism.

Only three films matched the CARS2 score, the CARS2 overall impression category, and the synopsis descriptor: *The Black Balloon* (autism); *Ocean Heaven* (autism), and *Mary and Max* (AS). *Bless the Child* (autism) and *Ben X* (AS) did not match in any of the above categories; in almost every other case the CARS2 summation score was more severe than the overall impression rated by the two professionals from different disciplines. The raters judged that two films, *Guarding Eddy* and *Bless the Child*, did not even depict a character with ASD.

Professionals' comments from the survey were scarce, as they only commented on films they had seen; as most of the films did not reach 'box office hit' status, only a few films were recognised by the professionals who participated in the survey. The limited public profile of most of the films suggests that professionals would likely only have viewed the films if they had a personal interest in the topic or their organisation was hosting a special viewing. The few comments that were provided for HFA and AS films were more positive than those for films about autism. For example, high commendations were given to *Snowcake*, *Mozart and the Whale*, and *Adam* as opposed to the numerous negative comments for *Rainman* and *Mercury Rising*. For this reason the ranking was recalculated without the comments from the professionals. Interestingly after the omission of professional comments, the order of the film rankings only changes for the top three films featuring a character with autism. *Ocean Heaven* would achieve the

top score (64), followed by *Rainman* (60), and then *The Black Balloon* (55). Although *The Black Balloon* is reported to be a 'better' film the archetype of 'burden' led to a slightly lower ranking than *Rainman*, who was an unintentional hero. In spite of this there is ample support to avoid viewing *Rainman* as a source of learning since the prototypical 'autistic person' portrayed in this film is savant, overly severe, and humourous from an ableist orientation according to scholars and the professionals in this study (Murray, 2006; Draaisma, 2009). Although *Rainman* may not be useful to effective and accurate learning as a whole narrative it is possible that segments or clips could be useful to highlight specific characteristics. This notion will be discussed in later chapters.

Interestingly, two of the films (*Mary and Max*; *Mozart and the Whale*) that made less than \$100,000 in the box office, were highly recommended by professionals and were in the top three of the ranking scale for HFA. Neither of these films, however, was widely released or 'mainstreamed' in their marketing. According to Internet Movie Database, Boxoffice Mojo, and Showbiz Data, the highest grossing ASD film worldwide was *Rainman* (\$354,825,435) distantly followed by *Mercury Rising* (\$93,107,289), *My Name is Khan* (\$42,345,360), and *Bless the Child* (\$40,443,010). *Ben X* and *Silent Fall* made approximately \$3,000,000; *The Black Balloon* about \$2,000,000 and *Snowcake* about \$1,000,000. The remainder of the films made less than \$1,000,000.

As previously noted, one measure of a 'good' film featuring characters with ASD is determined by the framing of ASD in the plot of the film. Framing is established through the following: the character's representation of a broad scope of characteristics associated with ASD which remain loyal to the established individuality of the character; the archetype the character fulfils and its potential influence on the social sphere; and the plausible 'truths' compared to the sensationalised 'pseudo-truths' represented in the filmic context. The challenge rests in having 'good' films such as *Mary and Max* and *Ocean Heaven* reach box office hit status, facilitating their embedding in the social conscience and their ability to provide compassionate filmic representations of the social reality.

### 5.5 Discussion: Ranking Films

Any film arguably has the potential to be successful in the box office since box office hits are impossible to predict (De Vany & Walls, 1999). For example, consider *The Blair Witch Project* (Dir. D. Myrick & E. Sanchez, 1999) or *Napolean Dynamite* (Dir. J. Hess, 2004), both of which are low budget films without famous actors and I venture to say unexpected narratives. These films were not anticipated at all by the critics but have near cult like followings. The disconcerting reality is that any of the 15 films assessed could have become a hit reaching a wide audience to become a master narrative. The imposed credibility of films, as sources of information that show viewers the 'social reality' (Bandura, 2001; Murray, 2008; Sarrett, 2011; Shah, 2011), should place an onus of responsibility on the film industry to produce images of disability that maintain the integrity of the individuals they portray. Imagine for a moment that *Bless the Child*, or *Molly*, had achieved global esteem. *Bless the Child* features a little girl with autism who possesses supernatural powers, and *Molly* features a woman who has brain surgery to cure her of the 'burden of autism'. What service would such grotesque representations of human difference provide? One low rated film, *Mercury Rising*, did reach box office status but was deemed the worst film by the professionals and scored a total of 21 on the ranking scale. Considering the literature regarding learning that occurs by viewing film, and the fostering of stigmatising attitudes which results from witnessing negative portrayals, these films fall short of the necessary production of empathetic and ethical representations of human difference.

The necessity for empathetic and ethical representations, however, may not be a realistic demand. Many films have consultants aiding them in the representation of specific characters with disability. This type of consultancy was used for *Rainman* and yet, although there was a broad range of ASD characteristics shown, the film elicited the most negative comments from professionals and earned a relatively low score on the weighted ranking. It should also be noted, however, that the film was 'inspired by' Kim Peek, a man

who in fact did not have a diagnosis of autism but one of mega-savant, a fact that is often overlooked (Brogaard, 2012).

Irrespective of the attempts to produce 'accurate' representations through a consultant's guidance, all 15 films included in the assessment are in the fiction genre. By definition, fiction, even when modelled on real people (like *Rainman* which was in part modelled on Kim Peek), is make-believe, intrinsically affording filmmakers and storywriters a license to distort reality. Furthermore, the fiction genre is not governed by ethical responsibility as the documentary genre is (Aufderheide, Jaszi, & Chandra, 2009; Hampe, 2007; Nash, 2011), although this has been attempted in the past with the 1930s introduction of the Motion Picture Production Code (MPPC) (Black, 1994) which subsequently failed.

The current system of viewer ratings replaced the MPPC in 1967. This measure of films is based on who is 'mature' enough to watch the content. These guidelines place the onus of decision on the potential viewer. Take for example the adult viewer who will need to determine whether a PG rating that has subscript, 'some scary scenes' or 'cartoon violence' is appropriate for their seven-year old child. This rating method, however, does not describe the framing of the characters in the film, which leaves the developing mind open to any number of stereotyped, disrespectful or fear-mongering images that require no subscript.

There is a very important argument related to providing guidelines for what to show, or how to show it, in film. This issue is the right to free speech and expression. As a society we do not regulate this freedom, in spite of the potential harmful effects of certain messages produced within the parameters of these rights. For example, while this study focusses on films featuring characters affected by ASD, the effects on real people of media messages relating to other disabilities found in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) are certainly not fictional. For example, Jamieson et al. (2006) highlighted a reduction in help-seeking behaviour for participants that were classed as 'vulnerable' after viewing films where suicide or attempted suicide

was shown. Similarly, Ritterfeld and Jin (2006) demonstrated the negative influence of images of schizophrenia on viewers' attitudes and knowledge about schizophrenia. Therefore, the question is, how can the potential harm to attitudes, knowledge, and social-political policy be managed whilst maintaining freedom of expression and the right to free speech?

The weighted scale created for the assessment of the films highlights the profound shortfall of the industry in producing 'good' films about ASD. There is a significant margin between realistic representations of ASD and the contrived characters featured in the assessed films. In part, the gap between authentic representations and contrived ones may appear larger than it actually is because the analysis incorporates films over approximately 30 years. As Snyder and Mitchell (2008) point out, ideas regarding positive and negative and authenticity change over time. As previously mentioned, at the time that *Change of Habit* was released the portrayal of autism related characteristics and treatment methods was arguably accurate considering the best information available at the time. As science and education have evolved so too has the definition and expectation of best practice in the field and the understanding of the diversity of the spectrum. This is particularly evident in the films portraying autism, which scored relatively low on the weighted ranking scale, as opposed to the three films that came close to achieving the highest possible mark, each of which portrayed HF autism or AS. Likewise, films that elicited positive comments from professionals were those that featured characters with HFA or AS; unfortunately these films were not necessarily the biggest box office hits. This may be due to the increasing information and inside perspective the community is gaining from individuals on the spectrum, for example Temple Grandin or Ros Blackburn. These new insights may make it easier to produce authentic representations of High Functioning or Asperger character portrayals.

The framing of ASD in films by archetype seems to be equally divided, with half being positive and half being negative. It is worth noting, however, that the positive archetypes are only deemed such because they tend to invoke empathy or admiration in viewers. This false positive is opposed to being truly positive wherein the character would be shown as conscious, purposeful and self-sufficient, which as Baker (2008) points out is a rarity in films featuring characters with ASD.

Most importantly, many of the films represent a variety of characteristics to a diagnosable level, as is evident in the CARS2 category summation score. Frequent displays of extreme affectedness across all categories could have a profound social presence. These hyper-acute representations distort the reality of having a diagnosis of ASD and project gloomy interactions between the character, their environment, their relationships, and are very likely detrimental to the people affected by the disorder (Greenburgh, 1988; Scull & Peltier, 2007). Reinforcing the idea that filmic representations show exaggerated and profound disability of certain characteristics, and limited or non-existent presence of others, is the overall score of 'severe' achieved by a majority of the films on the CARS2. This determination does not match the evaluation of 'overall impression' determined by the rating professionals, and leaves a questionable interpretation of 'autism', 'autistic' and 'mildly autistic', which are the terms used in the synopses.

The tension between producing authentic representations and producing money-making films intersects at the viewer's perspective. The viewer is responsible for interpreting and adopting or rejecting the ideas they are presented with. The notion of authenticity is likely as diverse as the spectrum itself, in that to be authentic a narrative should represent the lived experience of *someone*. In fact, characters in *The Black Balloon* are representations of the lived experience of Elissa Down (the film's producer) who's own brother is on the spectrum. This suggest at least some degree of authenticity about Down's perspective on the spectrum and its effects on the family. However, not all of the filmmakers that produce narratives featuring a character on the spectrum have a

personal and authentic experience to draw from but this is not likely imperative to authenticity since, as Snyder and Mitchell (2008) point out, there is no universal understanding of authenticity. Considering the evolving and ever changing boundaries of authenticity, and the personal perspective it requires, requesting that film producers consider *how* they represent disability, autism in particular, would be unproductive. Furthermore, Shakespeare (1999) argues that providing qualifiers for 'good' and 'bad' films could result in filmmakers omitting disability portrayals all together. However, the next section (5.5.1) of the thesis will discuss some guidelines for professionals that are providing training to inexperienced viewers and would like to use multimedia avenues, including film, and are offered to producers that would like to consider them.

#### 5.5.1 Proposed guidelines for improving the depiction of filmic characters with ASD

A set of 'duty of care guidelines' is proposed for consideration by professionals wishing to use film in training. In addition, producers that wish to include a character on the spectrum can refer to the guidelines to guide the presentation. Based upon the results of the assessment of films depicting characters with ASD, it can be argued that there are limited options for the use of whole films in providing understanding of 'authentic' experiences to inexperienced viewers. Since there are so few entertainment narratives that achieve both the authenticity agenda and the industry agenda these guidelines can be viewed as an opportunity for professionals seeking to use these films in a training context to examine the framing of autism in the filmic context. There is also an opportunity for film producers to lead in the promotion of equitable and authentic portrayals of disability. The guidelines address issues such as how to feature characters with disabilities that do not fit into a stereotyped trope, but instead feature characters in a person-first manner that corresponds with the common language of current times. Examples of person-first language in disability discourse are prominent from journal submission criteria to anti-discriminatory media campaigns like "the R-word: spread the word to end the

word”<sup>16</sup> spot by Glee star Lauren Potter. These proposed guidelines are in effect an extension of the currently used ratings in that they provide an understanding of content for both producers and viewers.

Table 5.3: Duty of care guidelines

Duty of Care Guidelines	Execution of Guideline
In the instance that disability is shown and discretely identified	Ensure the characteristics match those from the diagnostic criteria, for example through assessment using empirical tools that inform diagnosis.
Feature a person with disability rather than disability itself	If the character is present only to ‘carry’ a disability, and the plot cannot progress without that disability, then the representation should be carefully reconsidered.
Ensure that the archetype does not relate to disability	If representing a villain the villain should not have a disability to mark their role, likewise for heroes the character should not be heroic due to disability or overcoming disability.
Focus group test the film	Use qualitative analysis of focus group data collected from participants that are parents of, professionals working with, or members of the featured community to understand interpretation and influence on attitudes and knowledge.
Embellishments of the ‘truths’ should not spectacularise or originate from disability	Extraordinary skills/power or otherwise should not arise from disability or overcoming disability.

These ‘duty of care’ guidelines proposed in response to the low scores earned by films featuring characters with autism, revolve around re-framing the character’s presence in the film, or in the case of providing training, to frame the character’s portrayal in the context of authentic aspects versus creative liberties. This re-framing begins and ends with person-first representation. Person-first

<sup>16</sup> The R-word is a campaign to encourage people to refrain from using the words ‘retard’ or ‘retarded’.

representation requires a de-personification of disability where the character is shown as an individual rather than 'being a disability'. The primary function of disability in film currently is to drive the plot of the film (Baker, 2008). This utility places the disability at the forefront of the representation, essentially making the actor a vehicle for the disabled display. The proposed guidelines suggest that a movement away from this trope towards stories of a person that shows conviction, determination, effort and consciousness in the events that they participate in is desirable from a societal perspective.

There are some mental health disorders found in the DSM-IV-TR that have criteria of limited consciousness or choice in the behaviour displayed. In such instances the recommendation is to frame the character consistent with the diagnostic criteria and evoke empathy in viewers through compassionate rather than pathetic images, and triumph through personal accomplishments rather than accomplishments over disability. The proposed framing of the character can be assessed prior to actual production by reviewers and professionals in an attempt to provide constructive feedback on content, diagnostic criteria, and cohesiveness of person-first representation and language. Finally, if the writers of trailers and DVD synopses describe a character using a disability label it should be an accurate descriptor that coincides with the characteristics displayed by the character and maintain a focus on person-centred language.

## **5.6 Conclusion: Ranking Films**

The combination of severe visual presentations and dialogue with a negative valence resulted in a ranking of films in which the top-rated film featuring autism characteristics fell below the 75<sup>th</sup> percentile of the possible score (top score = 67, lowest score = 6). However, the films featuring characters with HFA/AS characteristics did slightly better with a top score of 81 of a possible 100 and low score of 24. The low scores indicates that the method by which producers incorporate spectrum conditions in film narratives is problematic.

The issues with how producers portray spectrum conditions in film led to the creation of 'duty of care' guidelines. These guidelines aim to support the creation of authentic narratives that include characters on the spectrum without using them as plot devices, by creating person-centred images. Perhaps fulfilling the duty of care guidelines could garner media interest by gaining the support of ASD organisations, the commendation of professionals that review the film for adherence to duty of care guidelines, and the presence of positive reviews on social media sites. Entering the media through a number of avenues with positive reviews could actually promote the film towards 'box office hit' status. This result would be optimal as it could motivate the film industry towards creating authentic narratives focused on the lives of individuals with disability rather than the disability itself. At the same time this avenue would provide non-stigmatising and genuine images that would be less likely to have a negative influence on attitudes held by the lay public that would ultimately result in better outcomes for individuals living with the represented condition.

### **SECTION 3 – THE STUDIES WITH TEACHERS**

**“With great power comes great responsibility”**

*(Spider Man, Director Sam Raimi 2002)*

## ***Section Overview***

This section of the thesis reports on the study involving preservice teachers, Study Two - *The Influence of a Single Film Exposure on Attitudes, Knowledge, and Recall*. This section consists of two chapters. The first chapter has two parts; Chapter 6A: Pre- Activity Survey: The Influence of Media Exposure, Professional Training, and Personal Experience on Attitudes and Knowledge of Preservice Teachers, and 6B: The Influence of Entertainment and Education Value of a Film on the Knowledge and Attitudes of Preservice Teachers. These chapters are preceded by a brief overview of the Study Two design and measurement strategies. Chapter 6A reports on the autism-related attitudes and knowledge of preservice teachers prior to participation in the Study Two film-viewing activity. Specifically, the influence of training, personal experience, and media on knowledge and attitudes is explored. In Chapter 6B the effect of viewing one of four films is examined from the perspective of changes in attitude and knowledge immediately after viewing the film and four weeks later. In Chapter 7: The Lasting Memories for Preservice Teachers, the memorable scenes and details recalled from the films the participants viewed are explored.

## 6.1 Description of the Research Approach

The intervention study involved preservice teachers and used a five-group quasi-experimental comparison group design. The study consisted of a pre-activity survey, film viewing post-activity survey, with the film condition being manipulated between groups, and a follow-up survey. Ethics approval for the study was provided by the University Human Research Ethics Committee; all participants consented to the anonymous use of the information they provided. Participants were preservice teachers enrolled in the Graduate Diploma of Education (GDE) and fourth year Bachelor of Education programs at a single university in Australia. The students were presented with the opportunity to participate in the study at the beginning of their course; students who participated in the study were offered a certificate of attendance for a professional development seminar on autism.

Films were selected using the weighted ranking scores (Table 5.2). Each of the four selected films had been assigned to one of the predetermined timeslots prior to the students selecting their preferred timeslot. To maximise the likelihood of group equivalence, participants were asked to select one of five possible timeslots that would be convenient for their attendance at the film-based activity. Before arriving at the lecture theatre the participants were blind to the subject matter of the film assigned to their timeslot. Upon arrival at the lecture theatre the participants completed the pre-activity assessment instrument (Appendix B). Data from the pre-activity survey are reported in Chapter 6A. Participants then viewed the assigned film in a standard lecture theatre with a large screen; refreshments were provided. The post-activity survey (Appendix C) was completed with paper and pen immediately following the film viewing. The online follow-up activity survey (Appendix D) was administered four weeks following viewing of the film. Data from the pre-activity survey is used as a baseline, and post activity and follow-up activity survey data are reported in Chapter 6B.

The survey included items related to personal demographics such as age and gender (pre-activity survey only), as well as items that assessed participants'

attitudes and knowledge about autism and Asperger Syndrome (pre, post, and follow-up activity surveys). Information on perceptions of the entertainment and educational value of the film they just viewed (post-activity survey only), and their prior exposure and experience with spectrum conditions (pre-activity survey only) was also collected.

Of the 312 students enrolled in the programs, 163 (52%) completed the online pre- activity survey, 104 (33%) attended the film viewing activity and completed the paper post-activity survey, and 89 (29%) responded to the online follow-up survey. Of the participants that attended the film viewing activity, 77 (74%) completed all three surveys (Figure 6.1). Using a one-way ANOVA significant differences were found on some of the demographic variables. Specifically the *Molly* post activity group was younger than the *Snowcake* group (mean age 2.94 vs 3.06) ( $F(3,68) = 3.713, p=.02$ ); more of the *Mad Love* group were male than the other post-activity groups ( $F(3,68) = 7.151, p = .000$ ), less of the *Black Balloon* group than the *Snowcake* group had lived in Australia for the last five years (71% vs 100%) ( $F(3,68) = 3.497, p = .02$ ). However no differences in the course (Primary or Secondary) were found between the four Post-activity groups (N=77 total participants) (Figure 6.1).

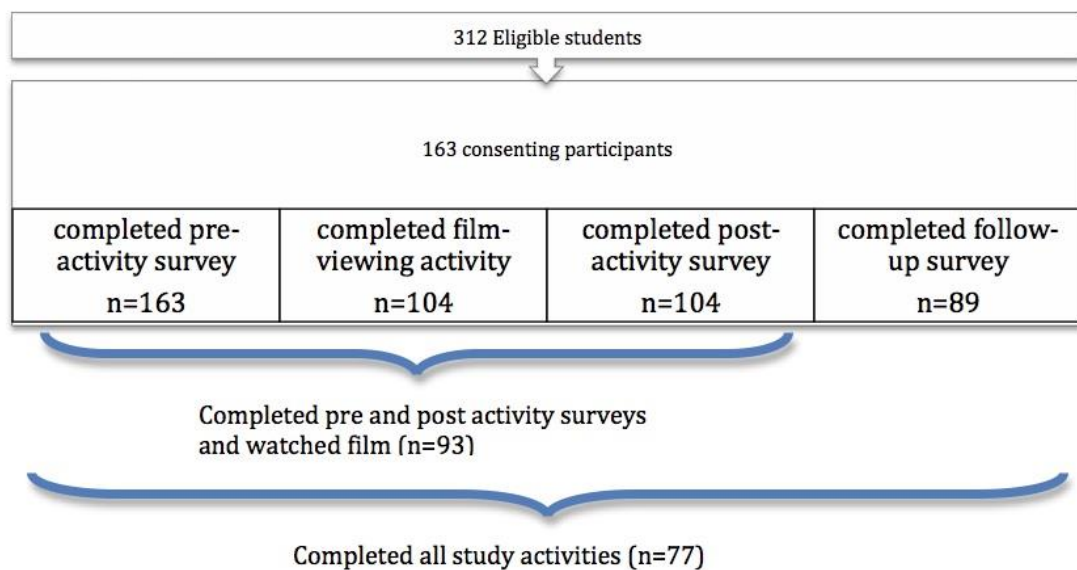


Figure 6.1: Number of participants by completed survey

**Table 6.1: Demographic information by post-activity group**

	<u>Snowcake</u>	<u>The Black Balloon</u>	<u>Molly</u>	<u>Mad Love</u>
Number of participants	13	17	17	18
From Australia	100%	71%	94%	94%
From North America	0%	25%	6%	6%
From Asia	0%	4%	0%	0%
Age 21-23	39%	42%	70%	61%
Age 24-26	8%	29%	18%	11%
Age 27-30	15%	24%	6%	17%
Female	95%	91.7%	88%	50%
Male	5%	8%	12%	50%

To ensure the differences between post-activity groups did not impact responses, the data were analysed for significant differences in response between groups (e.g. attitude scales, knowledge scores, expectations) and no significant differences were found based on sex, age, or continent lived on.

## 6.2 Measurement of the Variables

The two outcome variables, attitudes towards autism and autism-related knowledge, were assessed on three occasions: before the film viewing (pre-activity survey), immediately after the viewing (post-activity survey), and four weeks after the viewing (follow-up activity survey). The follow-up survey was administered four weeks after exposure to test the longevity of the film-related effects. To account for the participants' previous exposure to autism and Asperger Syndrome questions were included on the pre-activity survey pertaining to: prior media exposure (films the participant thought contained characters portraying autism); professional training (i.e., courses, workshops, on the job); and personal experience (i.e., identifying a relationship with an individual from the Autistic Community). To control for new exposures to autism, Asperger Syndrome or other disabilities during professional learning placements or through other interactions, in the subsequent surveys the participants were asked whether they had any new exposure since the last survey and, if so, to identify the nature of the exposure.

The qualitative component of the survey consisted of an open-ended question that asked participants to describe any of the scenes they remembered from the film they viewed in the activity. This question was asked at post-activity and at follow-up to compare the level of detail in descriptions of the scenes, and to determine which events were recalled immediately after viewing the film and four weeks later.

## **Chapter 6A: Pre-Activity Survey: The Influence of Media Exposure, Professional Training, and Personal Experience on Attitudes and Knowledge of Preservice Teachers**

Stage one of Study Two is focused on the influence of personal experience, professional training, and exposure to entertainment media on attitudes and knowledge held by preservice teachers prior to the viewing intervention.

### **6.A.1 Teachers' Autism-Related Attitudes and Knowledge**

The attitudes of student teachers have been found to predict, or correlate with, those they adopt in practice (Buell et al., 1999). Preservice teachers who have negative attitudes towards students with special learning needs are difficult to manoeuvre towards perspectives that are more open because they filter all of their new experiences through a negative bias (Nel, 1992). For this reason it is important to understand the attitudes of preservice teachers towards students on the autism spectrum and then, if necessary, utilise the powerful teacher training experience to support open attitudes, and develop required knowledge (Wilson, Floden, & Ferrini-Mundy, 2002). This approach, it is argued, will enable preservice teachers to enter the profession prepared and willing to work with students on the spectrum, thereby avoiding the hesitation and frustration experienced by new teachers who encounter students on the spectrum in their classroom (Helps et al., 1999; Soto- Chodiman et al., 2012; Whitaker, 2001).

#### **6.A.1.1 Prior exposure to films**

Many factors converge in the formation of general attitudes. Relevant to the study, exposure to media has been shown to influence the formation of attitudes, including attitudes towards people with a range of disabilities and disorders. For example, Angermeyer et al. (2005) found that exposure to 'one-sided and inaccurate' media messages about schizophrenia resulted in stigmatising attitudes. Media may also contribute to these negative perceptions of disability because media often adheres to the medical model perspective that focuses on

the limitations of the individual. The medical model forms the dominant pedagogy presented in the 15 films described and analysed in the previous chapter. Frequent and regular exposure to the perspective of low ability amongst people on the autism spectrum may result in a level of frustration and low expectations and thus an unwillingness to accept students with behavioural challenges into their classrooms (Cook, 2001; Avramidis, Bayliss, & Burden, 2000; Croasmun & Hampton, 1999).

Through understanding the type of autism-related media preservice teachers have been exposed to, it should be possible to gain insight into whether there is an existing bias towards either open or stigmatising attitudes. In addition to its influence on attitudes, the media can also influence knowledge. For example, Brodie et al. (2001) found that after viewing episodes of ER (a popular US medical drama) viewers were more informed about topics covered in the show with some viewers even seeking additional information because of something they saw on the show.

Santos (2004) suggests that for the inexperienced viewer the media may be the main source of information. The overly severe portrayals of people on the spectrum (as described in Chapter 3), combined with evidence noting the influencing power of film, sets the stage for the promotion of poor attitudes and limited or inaccurate knowledge about autism. Furthermore, if entertainment films featuring characters on the spectrum are able to bestow knowledge upon the preservice teachers (as has occurred in studies using popular media to educate psychologists, doctors, teachers, and other professionals (Arawi, 2010; Kalra, 2011; Kirklin, 2001), then consideration of how films are used in professional development for teachers of students on the spectrum is vital.

#### 6.A.1.2 Prior professional training

An important contributor to the development and maintenance of teachers' negative attitudes towards students on the spectrum is inadequate training to prepare them for supporting students with diverse needs (Baglieri & Knopf,

2004; Rea, McLaughlin, & Walter-Thomas, 2002; Scruggs & Mastropieri, 1996; Jobling & Moni, 2004). Professional training has been found to improve self-efficacy and knowledge; in fact, the research literature clearly articulates the need to provide specific teacher training for the support of learners with special needs (Baker, 2012; Glashan et al., 2004; Vorndran, Addison, Lerman, & Kuhn, 2004; Whitaker, 2001). This need has also been identified in policy; for example, the Disability Action Plan put forth by the NSW government states its aim is to, “increase professional learning opportunities for teachers and counsellors to provide understanding and skill development in Autism Spectrum Disorders” (NSW Department of Education and Communities, 2011-2015, p11).

In spite of the acknowledged value of specific training, Barnhill, Polloway, and Sumutka (2011) reported that in the United States 41% of institutions offered no autism spectrum specific coursework within the special education degree. In addition, half of the educational institutions did not have any developed autism competency-based courses for educators. In Australia, a number of private organisations run specific programs as well as initiatives like Positive Partnerships that provide autism-related training to agencies and individuals. Additionally, some states have specific agencies that have collaborated with departments of education to train teachers (e.g., Autism Spectrum Australia (ASPECT) in NSW). There are also a small number of universities that offer autism specific diplomas and degrees, but the majority of courses are more generally directed at special education.

Given limited specific training, it is unlikely that the preservice teachers in this study had experienced previous teaching and learning activities tailored to improve their knowledge and understanding of spectrum conditions. As a result of not having these opportunities it can be speculated that teachers may have a continuing feeling of apprehension and under preparedness.

Those that have participated in workshops, courses, or lectures may experience a reduction in apprehension as well as being privy to the buffering effect against negative views that training has been shown to produce. For example, training

has been shown to reduce or negate the adoption of stereotypes when the training is specifically aimed at a particular group (Moll, Hermsen, Russin, Dovidio, & Kawakami, 2000). This possibility is particularly important in light of the homogenous and consistently severe portrayals of spectrum conditions that preservice teachers are exposed to in print media, news, and through popular culture mediums (Baker, 2008; Jones & Harwood, 2009; Murray, 2006). Furthermore, emergent literature is focussing on the possible benefits of using arts, and film in particular, to train professionals (Kirklin, 2001). This highlights the importance of efforts to better understand the knowledge and attitudes held by preservice teachers and the factors that contribute to their beliefs.

#### 6.A.1.3 Prior personal exposure

Personal exposure to disability has been found to reduce negative attitudes if the exposure is powerful enough to overcome stereotypes resulting from, for instance, media influence (Wai Au & Man, 2006; Philo et al., 1994). However, if the personal contact affirms the stereotype, negative attitudes can be created and existing negative attitudes strengthened (Philo et al, 1994). It is interesting to note that personal experience with certain types of disability results in varied impacts on attitudes. For example, an increase in positive emotions from the non-disabled individual has been shown to occur when the disability encountered or portrayed does not impact on communication or cognition (Farnall & Smith, 1999). With spectrum conditions, however, this positive effect may be hindered by the nature of the characteristics associated with members of the Autism Community, and specifically the social communication challenges. Thus, the first part of Chapter 6 aims to discover what prior exposure the preservice teachers have to the spectrum and what their expectations of people on the spectrum may be.

### 6.A.2 Methods: Pre-Activity Survey

One hundred and sixty-three participants completed an online survey at the start of the Study Two. The survey consisted of 220 items embedded within 35 general questions. The items focused on a range of issues including demographic information, media exposure, personal exposure, training experience, attitudes, knowledge and expectations of specified disabilities. In addition participants were asked about their familiarity with specific disabilities, and tested on their ability to identify the qualifying characteristics associated with the terms autism and Asperger Syndrome using a definition match (Appendix B). Additionally, participants were asked to identify which behaviours they would expect from a student with a spectrum condition who was in their classroom from a list of possible behaviours provided. The data from the pre-activity survey (i.e., the baseline data) were used to conduct the analyses reported here.

#### 6.A.2.1 Measurement of the Variables

##### *Prior exposure to films*

To ascertain the extent of media exposure, participants were provided with a list of films and asked to identify whether they had seen the film and what, if any, disability/disorder they thought was featured in the film. A number of popular films (N=19) that featured characters portraying a range of disabilities were selected from the original search of gray literature reported in Chapter 3 (e.g., *Rainman*, *A Beautiful Mind*, *Forrest Gump*, *The Soloist*). In terms of which disability was portrayed in the film, participants could select from the following options: ADHD, Autism, Asperger Syndrome (AS), Cerebral Palsy, Down's Syndrome, Bi-Polar Disorder, Schizophrenia, Other, None, and Haven't Seen the Film. An overall media exposure score was created for exposure to autism condition portrayals by adding all the reported film viewings by participants (Table 6.A.2).

*Prior professional training*

Training was assessed through an open-ended question regarding what training has been received and which special educational needs the training addressed. Responses were coded into one of four possible categories: (1) partial course; (2) full course; (3) repeated courses; and (4) extensive training and experience (Table 6.A.2).

*Prior personal exposure*

To determine the personal contact participants had with disabilities they were asked to identify people they knew with specific disorders (e.g., with autism; ADHD; Down's Syndrome) and their relation to the participant (e.g., my child; neighbour; student). The relationships were then rated for closeness from close (1) to distant (3) (Table 6.A.2)

*Attitude scale*

The attitude scale consisted of three subscales. Each question was repeated four times, with reference to both autism and Asperger Syndrome as well as two other disorders (either Down's Syndrome, ADHD or Cerebral Palsy). The conditions were randomly ordered within each question to mask the purpose of the study and avoid priming the participants (Ritterfeld & Jin, 2006). The first subscale focussed on beliefs about 'others' feelings, and the desire to interact with people with specified disabilities. The second subscale was used to determine the participant's emotional response towards people with disability. The third attitude subscale was used to ascertain views of capability and expectations of people with autism. For all subscales, higher mean scores indicated less 'open' attitudes towards people with autism and Asperger Syndrome (i.e., a higher level of stigma). Details of the scales can be seen in Table 6.A.2.

Factor analysis (Table 6.A.1) of the items verified the distinctiveness of the 'factors' (i.e., the three subscales). However, one item from the first subscale was moved to the third subscale ('If I met somebody who admitted to having autism I would feel quite uneasy'), and one item ('There should not be special schools for children with disabilities and disorders') was discarded as it did not weigh on any of the factors. The internal consistency of the subscales was strong: the first factor named 'desirable proximity' (Cronbach's alpha = 0.873 in pre-activity, 0.874 in post-activity and 0.92 at follow-up); the second factor named 'emotional response' (Cronbach's alpha = 0.809 in pre-test, 0.877 in post-test, and 0.77 at follow-up); and the third factor named 'judgements of capability' (Cronbach's alpha = 0.806 in pre-activity, 0.837 in post- activity, and 0.906 in follow-up).

The scores from all three subscales were added together to create an overall attitude score. This score represented the overall level of stigma towards autism. The internal consistency of the instrument (i.e., the total score of the three subscales) was excellent (Cronbach's alpha= 0.908 at pre-activity; 0.838 at post-activity; 0.936 at follow-up).

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**Table 6.A.1: Factor Analysis**

	Factors		
	1	2	3
I understand why teachers would not want students with autism in their classroom	0.764		
I understand why companies don't want to offer jobs to people with autism	0.695		
I can understand why students would not be friends with somebody that has autism	0.668		
I understand why most people dislike people with autism	0.575		
I would never hire somebody with autism as a babysitter	0.443		
I would not be able to cope with having a person living in my house who has autism	0.401		
I can't blame anybody for being scared of autism	0.378		
Resentment, because they get special privileges - autism		0.717	
Pity, because of their situation - autism		0.659	
Admiration, because they overcome so much - autism		0.604	
Awkward or embarrassed, because you don't know how to behave with them - autism		0.591	
Fear, because you feel what's happened to them might happen to you - autism		0.574	
Irritated, because they cause inconvenience - autism		0.468	
It is almost impossible for someone with autism or Asperger's Syndrome to lead a normal life			0.742
You should not expect too much from people with autism	0.361		0.65
Parents of children with autism should be less strict than other parents			0.529
People with autism should be supervised at all times			0.496
People with autism should not be expected to meet the same standards as people without autism	0.337		0.45
If I met somebody who admitted to having autism I would feel quite uneasy	0.325		0.419

### *Knowledge*

A 20-item true-false knowledge test was designed using questions modified from Duvdevany, Rimmerman, and Portowicz (1995), and Ritterfeld and Jin (2006) (see Table 6.A.2). The questions addressed common myths and common knowledge related to autism. The factor analysis of the 20-item scale identified

## STUDY TWO- PRE-ACTIVITY SURVEY

two factors with 15 items contributing to the weighting. The five questions on the pre-activity survey regarding prevalence of autism, local organisations, and specific strategies commonly used to support students with autism did not weigh on the factors and were therefore omitted from the knowledge score calculation. A higher number of correct responses indicated greater common knowledge. The internal consistency of the 10 items for autism was fair (Cronbach's alpha = 0.713) as was the internal consistency for all 15 items related to autism and Asperger Syndrome (when combined considered Autism Spectrum Disorder (ASD) (Cronbach's alpha = 0.752).

**Table 6.A.2: Prior exposure, attitude and knowledge measures**

Variable	Scale/items	Example item(s)
Previous Exposure	New measure	Media exposure – participants were provided with a list of films and asked to identify whether they had seen each film and what, if any, disability/disorder they thought was featured in the film (scores ranging from 0-10).
	New measure	Personal exposure- participants were asked to identify persons they knew with specific disorders (e.g., with autism; ADHD; Down's Syndrome) and their relation to the participant (e.g., my child; neighbour; student) ( rated for closeness from close (1) to distant (3)).
	New measure	Training – participants were asked to respond to an open-ended question regarding what training and which special educational need the training addressed (coded into one of four possible categories: partial course (1); full course (2); repeated courses (3) and; extensive training and experience (4)).

## STUDY TWO- PRE-ACTIVITY SURVEY

Variable	Scale/items	Example item(s)
Attitude towards autism	Adapted from Ritterfeld & Jin (2006). Selected relevant questions and adapted the disabilities named to each of four disabilities (i.e., autism, Asperger Syndrome, Down's Syndrome, Attention Deficit Hyperactivity Disorder (ADHD)  Factor 1	"I can't blame anybody for being scared of autism"; "I understand why teachers would not want students with autism in their classroom" (seven items measured on a five-point Likert scale from (1) completely disagree to (5) completely agree).
	Farnall & Smith (1999). Changed the disabilities named to: autism, Asperger Syndrome, ADHD, Cerebral Palsy)  Factor 2	"When you encounter a person with autism, how often do you feel": irritated, because they cause inconvenience; how often do you feel: resentment, because they get special privileges (six items on a 3-point scale ranging from 'never' to 'often').
	Adapted from Wai Au & Man (2006). Selected and modified questions for relevance and changed the disabilities named to: autism, Asperger Syndrome, Down's Syndrome, and Cerebral Palsy)  Factor 3	"You should not expect too much from people with Asperger Syndrome"; "people with autism should be supervised at all times"; "people with autism should not be expected to meet the same standards as people without autism" (six item scale ranging from (1) I disagree very much to (6) I agree very much).
Knowledge about autism	Adapted from Duvdevany, Rimmerman & Portowicz, (1995) and Ritterfeld & Jin (2006)	Common myths (e.g., autism is children with mental retardation) and common knowledge (e.g., autism affects more boys than girls; people with Asperger Syndrome have average or above average intelligence) (15 items with response options: true, false, don't know).

### 6.A.3 Results: Pre-Activity Survey

The results of the demographic items indicated that the majority of participants (75%) were aged between 21 and 30 years. There were more female than male participants (80% versus 20%); this is expected as education is a female dominated field. The majority of participants lived in Australia (89%) for the past five years; and approximately half (54%) were enrolled in the primary education program while the rest of the participants were in the secondary education program.

Participants were asked to rate their familiarity with specific disabilities. The responses range from 'very familiar' to 'not at all familiar'. A majority of participants felt they were either 'somewhat familiar' (36.4% Autism; 29.6% AS) or 'slightly familiar' (40.2% autism; 43.9% AS) with both autism and Asperger Syndrome. Participants were then asked to match definitions with diagnostic labels; 58.3% of the participants correctly identified the AS definition, and 56.1% correctly identified the autism definition.

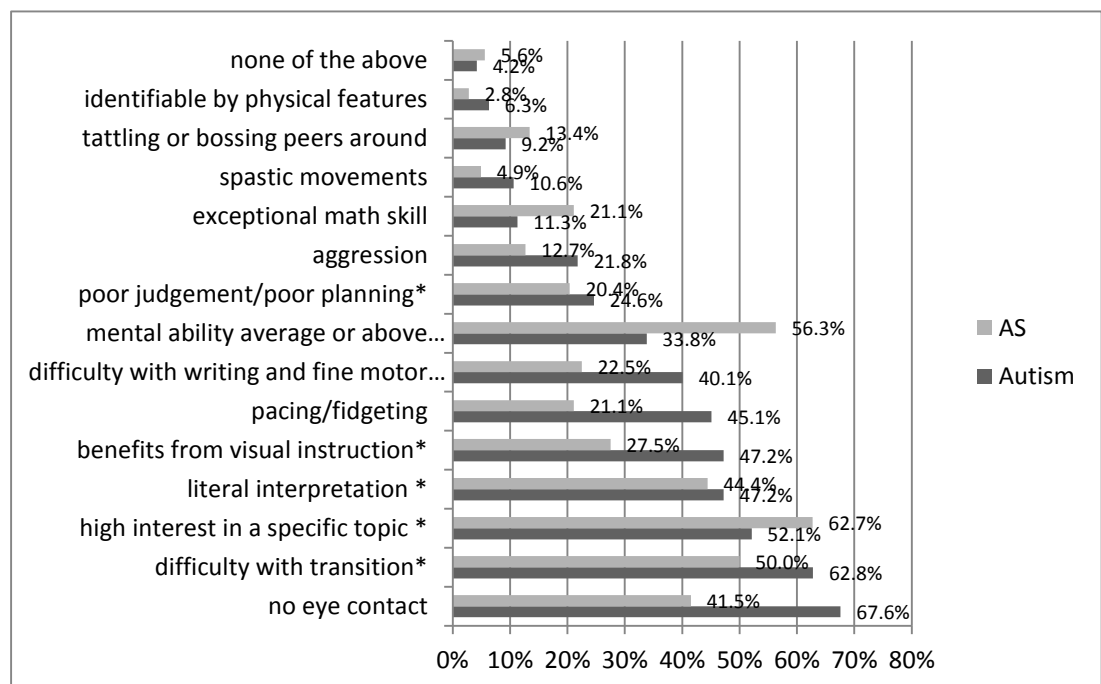


Figure 6.A.1: What participants anticipate from a student with autism and a student with ASD (N=142)

Note: \* indicates correctly anticipated behaviour/characteristics

Participants incorrectly anticipate a number of behaviours and characteristics for students with autism. Participants (68%) indicated expectations of 'no eye contact' from a student with autism (incorrect as the characteristic is 'poor quality eye contact' rather than no eye contact), 22% indicated expectations of aggression from students with autism, 45% expected pacing or fidgeting from a student with autism, and 11% expected exceptional math skills from a student with autism.

Participants also correctly identified a number of traits and behaviours for students with autism. Approximately half of the participants (52%) correctly anticipated a student with autism would have a 'high interest in a particular topic', and 63% expected 'difficulty with transitions' for students with autism.

The most correctly anticipated behaviours or challenges for students with Asperger Syndrome were, 'having high interest in specific topics' (63%), 'having a literal interpretation of language' (44%) and 'having difficulty with transitions' (50%) (see Figure 6.A.1). In addition approximately 56% of participants correctly anticipated expectation of 'mental ability average or above average'.

On the other hand 42% of participants incorrectly anticipate a student with AS showing 'no eye contact' (42%). This is a myth as the eye contact is poor quality rather than non-existent.

#### *Prior exposure to films*

Participants reported that they personally gained information about special needs and disability through multiple media channels including textbooks (69%), documentaries (61%), the Internet (60%), newspaper articles (59%), and entertainment films (44%). In contrast, the participants indicated that 'other' people relied more on the contribution of media sources towards learning about disabilities. The primary media sources for learning about disabilities for 'others', as judged by participants, were: news programs (75%), newspaper articles (74%), documentaries (70%), entertainment films (70%), the Internet (67%) and television sitcoms (63%). This indicates that participants attribute some credibility to media as a source of learning.

A high percentage of participants indicated they had not seen the listed films. The most viewed film was *Forrest Gump* (83.4%), followed by *I am Sam* (57.9%), *Rainman* (51.7%), *A Beautiful Mind* (51%), and *Good Will Hunting* (37.9%). Those that had seen one or more of the films often misidentified, or misrecalled, the disability that was supposed to be portrayed according to the DVD synopsis or film dialogue (e.g., *I am Sam* as portraying a spectrum condition (70.2%); *A Beautiful Mind* portraying a spectrum condition (64.9%). Table 6.A.3 shows the films identified in the survey along with the number of participants that thought the film featured a character portraying autism, AS, another disability, or no disability. Some participants indicated portrayals of more than one disability per film. The bold numbers indicate the correct identification of a portrayal of autism or AS as stated in either the film synopsis or the film dialogue.

Table 6.A.3: Preservice teachers' diagnosis of film characters (n=145)

	Film	Autism	Asperger Syndrome	Other	None	Haven't seen
No character with ASD	Forrest Gump	43	21	65	4	24
	Good Will Hunting	11	13	21	14	90
	What's Eating Gilbert Grape	22	1	26	3	100
	I am Sam	54	5	37	1	61
	A Beautiful Mind	22	26	28	1	71
	Mad Love	1	0	1	1	142
	As Good As It Gets	1	10	25	4	109
	Soloist	5	5	5	0	132
Characters portraying	Dear John	<b>11</b>	<b>10</b>	5	8	114
	The Black Balloon	<b>20</b>	4	5	1	120
	PS I Love You	5	<b>4</b>	8	38	92
	Ben X	0	<b>0</b>	2	1	143
	Molly	<b>5</b>	1	1	0	137
	Rainman	<b>56</b>	14	13	1	70
	Mary and Max	1	<b>1</b>	1	1	142
	Snowcake	<b>1</b>	1	0	0	143
	Mercury Rising	<b>16</b>	3	0	1	126

The results indicate that many participants misinterpret or incorrectly recall portrayals of both autism and AS in the films that they have viewed. In the case of films that did not state a portrayal of a spectrum condition on the DVD descriptor, 54.4% of participants incorrectly identified the presence of an autism portrayal. This ranged from 76.9% of those that viewed *The Soloist* to 30.6% of those that viewed *As Good As It Gets*. The most frequently incorrect identifications were for *The Soloist* (76.9%), which features a character with schizophrenia, *I am Sam* (70.2%) which features a character with severe intellectual disability, and *A Beautiful Mind* (64.9%) which features a character with schizophrenia.

In the case of films that did include a portrayal of a spectrum condition (according to the DVD descriptor or in the dialogue), 65.3% correctly identified a portrayal which ranged from 84.2% of those that viewed *Mercury Rising*, to zero for those that viewed *Ben X*. Additionally, in the case of films that stated a portrayal of a character with a spectrum condition on the DVD jacket, 48.1% identified the incorrect spectrum disorder (e.g., 18.7% of those that had seen *Rainman* reported it as featuring a character with AS rather than autism).

#### *Prior professional training*

Of the 149 participants that responded to the questions regarding training 92% (n=136) indicated that they had not sought any professional training prior to entering the Graduate Diploma in Education (GDE) program. Of the 13 participants that said they had sought training prior to enrolment approximately half (n=7) said they did so for either work related interests while the other half sought training for personal reasons (i.e., a family member was diagnosed with a disability or disorder).

In response to the question, "Do you anticipate undergoing any training in special education beyond the topics covered in the course outline in this academic year?", 97 participants (65%) said no. In response to the question, "Have you received any formal training (course work, teaching experience, readings, seminars, workshops) on special needs and/or special education?", 108 participants

(73%) said they had not received formal training. Over half of the participants (56%) said they received training as part of their undergraduate general special education courses. Participants were also asked to specify the type of training they received. The 39 participants who responded to this open-ended question indicated the training they received tended to be in the form of a course that was part of a degree.

*Prior personal exposure*

Participants attributed personal contact and experience as the primary source for learning about disability, with 68% of participants crediting family and 74% crediting experience with individuals with disability as their primary sources. Likewise, the participants indicated that family (79%) and experience (75%) are the major contributors to knowledge about disability for 'other' people.

Of the 132 participants that responded to the question about a relationship with someone with a disability, more than half of the participants (67%) reported that they do have a personal relationship. Of those that reported personal relationships (n=88), (26.2%) identified their relationship to be with a person with autism and (27%) with a person with AS. The most frequently reported relationship was specified to be with the participant's friend (37%). The relationships identified (e.g., my child; friend; co-worker) by the proximity score attributed to the relationship (e.g., my child= close; friend= near; co-worker= distant) are depicted in Figure 6.A.2.

## STUDY TWO- PRE-ACTIVITY SURVEY

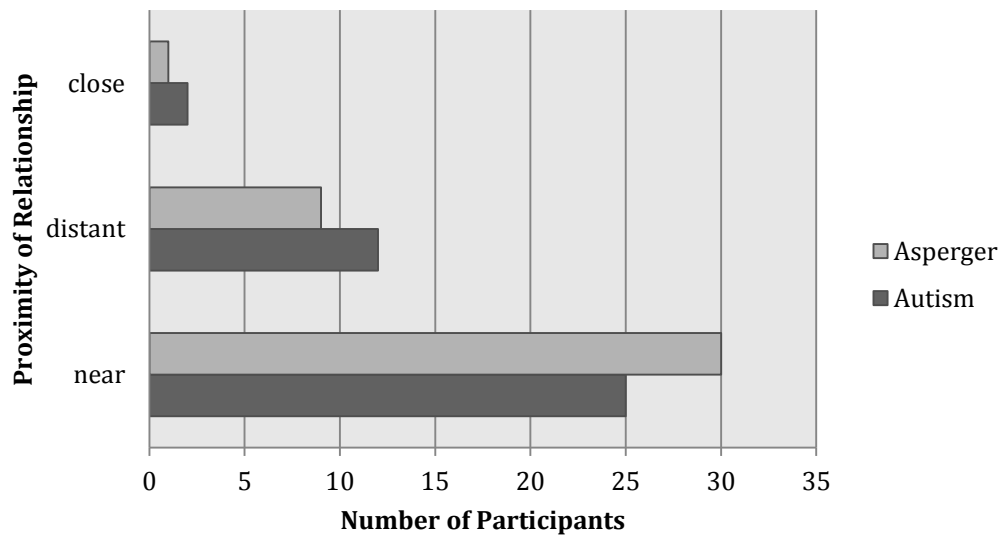


Figure 6.A.2: Proximity rating for the relationship between participant and the individual with a spectrum condition

Figure 6.A.2 indicates that a majority of the participants that have personal relationships with someone on the spectrum, have a 'near' relationship which includes friends, extended family, and students.

### 6.A.3.1 Variables influencing attitudes and knowledge

#### *Attitude Analysis*

The most 'open' score possible for the attitude scale was 19, while the most 'stigmatising' possible score was 89; the median score of the attitude scale is 54 (a neutral or ambivalent attitude is assumed to be one which falls within one standard deviation from the mean, range = 46-62). The mean score for the participants' attitudes towards autism at pre-activity survey were in the 'open' range ( $M=45.8$ ). Likewise, the mean score for the participants' attitudes towards AS at pre-activity survey was also 'open' ( $M=45.9$ ).

To test the hypothesis that the age of the participant, media exposure, training, personal experience, knowledge of and familiarity with autism are predictive of the baseline (pre-activity) attitudes of preservice teachers, a multiple regression analysis was employed. The regression assumptions of the variables were tested and the assumptions for normality and linearity were met.

In combination, these variables accounted for a non-significant 9.5% of the variability in pre-activity attitude;  $R^2=.095$ , adjusted  $R^2=.032$ ,  $F(6, 86) = 1.503$ ,  $p=.187$ . Unstandardised (B) and standardised ( $\beta$ ) regression coefficients, and squared semi- partial correlations for each predictor in the regression model are reported in Table 6.A.4.

**Table 6.A.4: Unstandardised (B) and standardised ( $\beta$ ) regression coefficients, and squared semi-partial correlations ( $sr^2$ ) for each predictor in a regression model predicting attitude towards autism.**

<b>Variable</b>	<b><math>\beta</math></b>	<b>B</b>	<b><math>sr^2</math></b>
<b>Personal</b>	<b>-2.424</b>	<b>-.125</b>	<b>.014</b>
<b>Training</b>	<b>-4.408</b>	<b>-.214</b>	<b>.034</b>
<b>Media</b>	<b>.701</b>	<b>.066</b>	<b>.004</b>
<b>Age</b>	<b>1.073*</b>	<b>.242</b>	<b>.054</b>
<b>Familiarity</b>	<b>-1.163</b>	<b>-.110</b>	<b>0.008</b>
<b>Knowledge</b>	<b>.117</b>	<b>.081</b>	<b>.005</b>

\*  $p < .05$ ,  $N=93$

Age is a significant contributor to attitudes where higher mean age related to more open attitude scores. There was a significant correlation between age and personal experience (correlation  $p=.001$ ) where higher mean scores in age were related to higher mean scores in personal experience.

#### *Knowledge Analysis*

To test the hypothesis that the age of the participant, media exposure, training, personal experience, attitude and familiarity with autism are predictive of preservice teacher knowledge of autism, a multiple regression analysis was performed. The regression assumptions of the variables were tested, and the values indicated that assumptions for normality and linearity were met.

In combination these variables accounted for a significant 18% of the variability in pre-test knowledge of autism;  $R^2=.181$ , adjusted  $R^2=.134$ ,  $F(5, 87) = 3.841$ ,  $p = .003$ . Unstandardised (B) and standardised ( $\beta$ ) regression coefficients, and squared semi-partial correlations for each predictor in the regression model are reported in Table 6.A.5.

**Table 6.A.5: Unstandardised (B) and standardised ( $\beta$ ) regression coefficients, and squared semi-Partial correlations ( $sr^2$ ) for each predictor in a regression model predicting knowledge about autism.**

Variable	$\beta$	B	$sr^2$
Personal	.072	.005	.000
Training	1.696	.119	.010
Media	.486	.066	.004
Age	.137	.045	.002
Familiarity	-2.610*	-.358	0.091

\*  $p < .05$ ,  $N=93$

#### 6.A.4 Discussion: Pre-Activity Survey

The participants perceived media and films as contributors to their learning and the learning of 'others' about autism, AS, and other disabilities. This credit to media as a source is worrisome because media often portrays limits, super skills, and stereotypes when it comes to disability, and spectrum conditions in particular. The participants did not report seeing many of the films listed; this is not particularly surprising as many were released long before the participants were born. In instances where participants had viewed the films, this tended to coincide with box office sales (for example, a majority (84%) had seen *Forrest Gump*, and just over half (53%), had seen *Rainman*, both of which made millions at the box office). In addition, the portrayals in the films that participants did view were often misunderstood, whereby many participants considered portrayals such as *Forrest Gump* (global developmental delay) and *A Beautiful Mind* (schizophrenia) to be representative of spectrum conditions. The misinterpretation of characteristics associated with autism spectrum conditions

is comprehensible as many films utilise savant characteristics and creative freedoms to make characters 'useful' in the plot (Baker, 2008; Murray, 2006, 2008). In addition, as shown in the study of films (described in Section 2) the medical model presentations often include inaccurate information and a clear belief that the individual is a burden or limited in their potential that result in autism being framed as undesirable. These issues raise the question, 'If the viewers are misattributing the characteristics of filmic portrayals of various disabilities as being representative of autism, then is there a difficulty with what is being presented, what is being consumed and corroborated, or what is being recalled?'

In line with the literature there seems to be a lack of specialised or focused training about autism spectrum conditions. Although many of the participants have received some training in special education it tends to be general in nature. This lack of exposure to quality training may explain why the participants attributed more 'learning' to their personal experiences and the media. Regardless, there is ample evidence to indicate that training is valuable, and that there is a movement towards using popular media in professional training (Arawi, 2010; Kirklin, 2001; Lyons, 2000; Singh et al., 2007). As such, it is important to understand the content and consumption of the media available to teacher trainers.

#### **6.A.5 Conclusion: Pre-Activity Survey**

The preservice teachers in this stage of the study began with a mean attitude of slightly 'open'<sup>17</sup> for both autism and AS. A number of factors may explain why the attitudes were in the 'open' range. For example, many participants reported having a relationship with an individual from the Autistic Community (53%) and this would be expected to have influenced their responses to attitude measures (emotional response, desirable proximity, capability) because they would be expected to be somewhat aware of the challenges associated with spectrum conditions (Angermeyer et al., 2005; Smith & Farnall, 1999). In addition social

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<sup>17</sup> 'open' on the opposite end of a scale between open and stigmatising

desirability bias must be considered since participants are likely aware of the 'acceptable' response. To counter this bias questions were posed to the participants about whether they felt that 'others' would want to be in close proximity to individuals with autism, thereby distancing themselves from judgement.

There are limitations arising from the questions regarding personal contact as the quantity and quality of the time spent with the individual with autism was assumed by proximity of the relationship. This may not be reflective of the actual circumstances as families may not live together, friends may live together, and there is no clear understanding of what type of relationship 'other' qualifies as. Nonetheless, personal contact was positively correlated to age and since the participants were relatively young, this may indicate that as the participants mature and gain more actual experience they may develop attitudes that are more open. The results of the pre-activity survey require cautious interpretation since the literature suggests that the attitude held by a preservice teacher at the beginning of their career is the one that they will filter all new information through. With the results of the pre-activity survey indicating that participants determine media to be a source of information for novice teachers, it is useful and necessary to explore whether the media, and film in particular, influences attitudes and knowledge related to people on the spectrum.

In Chapter 6A the attitudes and knowledge that the preservice teachers had prior to participation in this study was established. Using this information as a baseline I can now explore how exposure to the top-rated and lowest-rated films identified in Chapter 5 interact with entertainment and education effects to influence attitudes and knowledge of preservice teacher.

## **Chapter 6B: The Influence of Entertainment and Education Value of a Film on the Knowledge and Attitudes of Preservice Teachers**

### **6.B.1 Focussed Literature Review: Influence of Entertainment and Education Value**

The investigation of how films portray characteristics of autism provided a clear picture of what information is being presented for the novice viewer. Chapter 6B is an exploration of the impact of consuming the images and dialogue presented to viewers through film. The aim is to discover whether participants' beliefs about the autism spectrum are consolidated or contradicted through exposure to films that feature a character on the spectrum and understand whether reality, confusion, and empathy contribute to entertainment value.

From the pre-activity survey it is evident that the preservice teachers are approximately equal in their self-reported familiarity with Asperger Syndrome and autism, but have less stigmatising attitudes towards those with the label Asperger Syndrome. It is uncertain how participants interpret the term High-Functioning Autism (HFA) and there is limited research regarding the defining characteristics of HFA. In addition, HFA is often used interchangeably with AS. While many scholars have proposed there are differences between high-functioning autism and AS (Huang & Wheeler, 2006; Ozonoff, Rogers, & Pennington, 1991) others use the terms interchangeably (Baron-Cohen, Richler, Bisarya, Gurnathan, & Wheelwright, 2003; Howlin, 2003). The focus of this part of the study is on autism (including high-functioning autism) since both the standard and high-functioning versions of the CARS2 assessment tool were used to assess movies in Chapter 3 and the top-rated film using the HF version of the CARS 2 that met criteria was *Snowcake*. Additionally, there is no consensus on use of the term as the 'high end' of autism or as AS, and AS seemed to be less stigmatising than autism (Chapter 6A). Therefore the remainder of this chapter will focus on autism and HFA. As such, it is hypothesised that the way in which autism is represented in film will have a significant impact on

attitudes and knowledge about autism. More specifically, it is hypothesised that top- rated film portrayals of autism will decrease stigmatising attitudes and increase knowledge.

### *Portrayal of Autism Conditions in the Media*

Investigation into the contributing factors that lead to the limited knowledge and negative attitudes held by teachers, as reported in the literature (Duvdevany et al., 1995; Ritterfeld & Jin, 2006; Soto-Chodiman et al., 2012), may highlight avenues towards improved understanding and acceptance of students with autism. It is a challenge to understand how the knowledge and attitudes that are reported have been formed since there are numerous influences on these variables. One of the most prominent contributors to knowledge and attitudes, in relation to autism, is media (Baker, 2008; Jones & Harwood, 2009; Murray, 2012). The media has been described as a major influence in affecting attitudes and knowledge about new topics, like the diverse autism spectrum; the importance of the media as a shaper of knowledge and attitudes is evident through the “more than 30 years of research into television’s ability to cultivate or construct viewers’ social reality” (Busselle, 2001, p43). Of the media types, film is highly accessible across the entire population, making it an influential contributor to the collective understanding of certain topics (Assmann, 1995; Sood, 2002).

As discussed in Chapters 3 and 4 there has been an increase in production of films featuring characters on the spectrum, although these portrayals remain limited and severely dramatised. One of the challenges that teachers face is overcoming the generic homogeneous concept of ‘the person with autism’ that has arisen through general awareness avenues such as film (McGuire, 2010; Murray, 2008). The literature suggests that films offer representations of disability that are “distorted through inaccuracies, exaggerations and misinformation” (Klin & Lemish, 2008, p434), and that film plays an important role in cultivating perceptions and stigma which inform attitudes towards people with disability (Moyer-Gusé, Jain, & Chung, 2012; Ritterfeld & Jin, 2006; Stout, Villegas, &

Jennings, 2004; Wahl, 1999). Farnall and Smith (1999), for example, reported that media portrayals (particularly film portrayals) of people with disability negatively influenced viewers' emotional responses and willingness to interact, but when combined with personal experience the viewer reported more comfort interacting with individuals with certain disabilities. The combination of personal contact and media exposure for a specific disability, however, had a negative influence on feelings of comfort related to that disability. Farnall and Smith also suggest a possible explanation for this phenomenon is an awareness of the challenges related to that disability, or the quality of the relationship between the viewer and the individual with the disability. This possibility is reflected in the results of the pre-activity survey where familiarity has a negative association with attitude. Importantly, in their study of the media effect on nurses attitudes towards mental illness, Philo and colleagues (1994) found that some participants adopted the stigmatizing association of mental illness and violence portrayed through media in spite of having personal experience to the contrary. These findings suggest that whether individuals have some personal experience or not, the media will influence their experience of autism, and particularly so if there is no personal contact to interfere with para-social interactions of viewer and media (Giles, 2002).

Para-social interactions can result in the feeling of knowing or understanding students with autism based on the viewer-character relationship established whilst watching a film. The para-social relationship is strengthened through the relatability of the character. That is, the more realistic the qualities of the character are and the more plausible the storyline is, the stronger the relationship.

As argued in Chapter 2, portrayals of autism offer a unique opportunity because there is no known cause of autism, and no consensus about its characteristics or treatments (Baron-Cohen & Klin, 2006; Murray, 2012). This vague understanding of the nature of autism amongst professionals means that fiction and fact tend to be juxtaposed (Murray, 2012). The juxtaposition means that most of what a film presents is within the realm of possibility, particularly for

the preservice teacher who has limited exposure to the variance of the spectrum. The beliefs that are fostered through film exposure when the para-social relationship is developed and absorption in the narrative is accomplished, combined with the collective general knowledge the teacher has about autism, result in informing the teacher's attitude about students identified as having autism conditions.

The potential for para-social interactions to form the basis for beliefs surrounding students with autism is further substantiated by the possibility that a *singular* exposure to a film representation of autism may be all that is required to shift attitudes. As outlined in Chapter 2, Greenburgh (1988) proposed the 'drench hypothesis', which posits that particularly memorable portrayals of minority groups can create a lasting impression on viewers, more so than repeated exposures. When considered in terms of the preservice teacher, this increased impact on the new teacher can be understood as partially due to the particularly memorable portrayals that Greenburgh (1988) refers to, which are likely derived from relatable, realistic (Rubin, 2009) and emotive representations and thus draw the viewer into the narrative (Moyer-Guse & Nabi, 2010). The increased impact potential is due to the absorption in the storyline, which itself has power to influence the viewer towards particular attitudes. According to Entertainment-Education Theory (EET) (Moyer-Guse & Nabi, 2010; Moyer-Gusé, 2008), absorption in the storyline reduces the viewer's conscious questioning of the image or information content. This phenomenon would negate the need to reflect on what the viewer has seen, as the viewer may not be aware that 'new knowledge' was presented. The unacknowledged information could lead to stigmatising attitudes and adoption of myths and stereotypes considering the severity of the characteristics presented and the negatively valenced dialogue evident from the analysis (see Chapter 4B).

Furthermore, Miller and Reese (1982) claim that "dependency on a medium appears to enhance the opportunity for that medium to have predicted effects" (p245). This suggests that if the preservice teacher has only experienced media representations of autism, or is exposed to a particularly powerful portrayal of

autism affectedness, then the nature of the portrayals is of the utmost importance as it is the main source in the cultivation of their understanding of autism.

### **6.B.2 Methods: Influence of Entertainment and Education Value**

For the Chapter 6B component, four film conditions were used (based on study results reported in Section 2)(synopses available in Appendix E): the top-rated autism film; the top-rated high-functioning autism film; the lowest-rated autism film, and a control film. Top-rated films and low-rated films were awarded the highest and lowest scores respectively, based on the weighted ranking system (described in Chapter 5). The ranking considered: the accuracy of the portrayal in relation to the CARS2 criteria (standard version and high-functioning version); the archetype of the main character; the consistency between the stated diagnosis (on the DVD synopsis), the assessment tool outcome and professional opinion; and comments made by professionals experienced in working with individuals with autism. As mentioned in Chapter 4C, of the films that met the criteria, the top-rated film featuring a character with autism scored 67 of a possible 100 and the top-rated film with a character with HFA was 75 of a possible 100 (Table 5.2).

The two outcome variables, attitudes towards autism and knowledge, were assessed on three occasions; before the film activity (pre-activity survey), immediately after the activity (post-activity survey), and four weeks after the activity (follow-up activity survey). To control for new exposure to autism, Asperger Syndrome or other disabilities at post-activity and follow-up activity the participants were asked whether they had any new exposures since the previous survey and, if so, to identify the nature of the exposure.

### 6.B.2.1 Film intervention

The films designated as top-rated films were *The Black Balloon* and *Snowcake*. These films are both: entertainment films; approximately 90 minutes in length; in English; in the drama genre; feature a character portraying autism (which is stated in print on the DVD synopsis); and involve real actors (rather than using animation or claymation). Although these films had the highest rating on the scale (with a range of 0 to 100), *The Black Balloon* ‘featuring a portrayal of autism’ only received a score of 67 while *Snowcake* received a score of 75 ‘featuring a portrayal of high-functioning autism’. The scale weighted accuracy of the portrayal relative to the diagnostic criteria and archetype most heavily. The primary differences between the two films is that *The Black Balloon* features a young man with autism that requires constant supervision and is a ‘burden’ archetype, while *Snowcake* features an adult woman with ‘high-functioning’ autism who is relatively independent and is an ‘unable to adjust’ archetype.

The lowest-rated film (score of 41), *Molly*, featured a woman that needed supervision and was a ‘burden’ archetype. This film was identified as a low-ranking representation of autism, in the drama genre, but was similar in all other criteria.

The control film, *Mad Love*, was selected using the same criteria as the other films with two exceptions. Firstly, the control film did not feature a character with autism, high-functioning autism, or Asperger Syndrome but instead featured a character with depression, a disorder of equal familiarity (considering general use of the term rather than knowledge of the characteristics). Secondly, the control film was not included in the weighted ranking and therefore had no rating; as a result a match of archetype (burden/unable to adjust) and plot similarity was sought.

### 6.B.2.2 Participating sample

The sample for the film viewing activity included 76 participants: n=17 for *Snowcake*, top-rated (high-functioning autism); n=24 for *The Black Balloon*, top-rated (autism); n=18 for *Mad Love*; control film; n= 18 for *Molly* lowest-rated ASD film.

Participants selected a time slot for the activity but were unaware of which of the films they would be watching. They completed the pre-activity survey online before viewing the film, the paper-based post-activity survey immediately after viewing the film, and the online follow-up activity survey four weeks after attending the film viewing. Additional details of the methods were discussed in Chapter 6A (Table 6.A.2).

### 6.B.2.3 Measures

#### *Attitude scale*

The attitude scale consisted of three subscales: desire to interact to people with specified disabilities; emotional response towards people with disability; and views of capability and expectations of people with autism. As described in Chapter 6A a higher mean score indicates a less 'open' attitude towards people with autism and Asperger Syndrome (i.e., a higher level of stigma). Details of the scales can be seen in Table 6.A.2.

#### *Knowledge*

The knowledge test consisted of 20-items in true/false format and addressed common myths and common knowledge related to autism (see Table 6.A.2).

#### *Entertainment scales*

The entertainment scale assessed how enjoyable and engaging the film was in the perception of the participant (Table 6.B.1). The scale consisted of six items where higher total scores indicated lower entertainment value. One item was a negative statement and was reverse scored for consistency. The internal consistency of the items was excellent (Cronbach's  $\alpha=0.94$  at post-activity).

*Empathy, reality, and confusion measures*

The empathy for the main character portraying autism, the perceived reality of the film, and the confusion about the film were measured using a five point Likert scale (Table 6.B.1). The internal consistency of the items was fair for empathy (Cronbach's  $\alpha=.677$  at post-activity), good for perceived reality (Cronbach's  $\alpha=.876$  at post-activity), and good for confusion about the film (Cronbach's  $\alpha=.836$  at post-activity).

*Educational value scale*

The educational value scale was used to determine the perceived educational value of the film (Table 6.B.1). Higher total scores indicated lower perceptions of the educational value of the film. The internal consistency of the five items was fair (Cronbach's  $\alpha= 0.711$  at post-activity).

**Table 6.B.1: Measures of empathy, reality, confusion, entertainment and education value**

Variable	Scale/items	Example item(s)
Empathy with the character	Ritterfeld & Jin (2006)	"I developed bad feelings for the character with autism"; "I felt very close to the character with autism" (five items measured on a 5-point Likert scale from 'completely agree' to 'completely disagree').
Perceived reality	Ritterfeld & Jin (2006)	"The story is pure fiction. It could not have happened that way"; "The movie was not realistic" (four items measured on a 5-point Likert scale from 'completely agree' to 'completely disagree').
Confusion about the film	Ritterfeld & Jin (2006)	"I don't really know what I feel about the movie"; "For some reason I feel conflicted about this movie" (five items measured on a 5-point Likert scale from 'completely agree' to 'completely disagree').
Perceived Entertainment value	Ritterfeld & Jin (2006)	"The movie was very entertaining"; "I had the sense of being pulled right into the story"(six items measured on a 5-point Likert scale from 'completely agree' to 'completely disagree').
Perceived Educational value	Ritterfeld & Jin (2006)	"I learned a lot about disorders and disabilities by watching the movie" (5 items ranging from 'completely agree' to 'completely disagree' with one item being reverse scored).

*Data analysis*

Data was entered into SPSS 19.0 (Statistical Package for Social Sciences) software. Three separate analyses were performed. First, paired t-tests were conducted for each film-viewing group (Top-Rated (autism) n=24, Top-Rated (high-functioning autism) n=16, Low-Rated n=18, Control n=18) to identify changes in attitudes prior to and after film viewing, and again four weeks later (participants that responded to all three surveys, N=76). Paired t-tests were also

conducted for each film-viewing group to identify changes in knowledge after film viewing, and again four weeks later.

Second, a series of linear regressions with pre-activity attitude (attitude1) as the dependent variable and age, training, personal experience, media exposure, familiarity, and pre-activity knowledge (knowledge 1) as independent variables was conducted for the 93 participants that completed the pre-activity and post-activity surveys. The intent of this analysis was to determine whether these factors are predictors of attitude. These analyses were carried out again with knowledge 1 as the dependent variable and the same prior exposure factors with the addition of attitude 1.

Finally, structural equation modelling (AMOS) was used to test whether the participants' perception of the relatability to the film influenced the perceived entertainment value of the film, and whether perceived entertainment value and educational value of the film resulted in changes in attitude for each of the four film-viewing groups.

### **6.B.3 Results: Influence of Entertainment and Education Value**

#### **6.B.3.1 Analysis of changes over time**

A paired samples *t*-test with an  $\alpha$  of .05 was used to compare mean attitude scores of participants towards autism ( $N=76$ ) from pre-film exposure to post-film exposure, and from post film to follow-up for each film group. On average the attitude score for participants in the 'Low-Rated Portrayal' film group, *Molly*, and the Control film group, *Mad Love*, were not significantly different from pre to post or post to follow up, indicating the film exposures had no effect on participant attitudes about autism. On the other hand, the average attitude score for participants in the 'Top-Rated Portrayal' autism film group, *The Black Balloon*, was significantly less 'open' after viewing the film (pre  $M=36.58$ ,  $SD=10.82$ , post  $M=40.63$ ,  $SD=9.03$ ,  $t(-2.611)$ ,  $p<.05$ ) with no significant change between post and follow-up attitude scores, indicating a lasting negative effect on attitudes. Finally, participants in the high-functioning 'Top-Rated Portrayal'

film group, *Snowcake*, had no significant change in attitude from pre to post, or post to follow-up, indicating exposure to the film had no effect on attitudes towards autism.

A paired samples *t*-test with an  $\alpha$  of .05 was used to compare mean attitude scores of participants towards Asperger Syndrome ( $N=76$ ) from pre film exposure to post film exposure, and from post film to follow-up for each film group. There were no significant differences in mean scores across time points.

A paired samples *t*-test with an  $\alpha$  of .05 was used to compare mean attitude scores of participants towards ASD (autism and Asperger Syndrome combined) ( $N=76$ ) from pre film exposure to post film exposure, and from post film to follow-up for each film group. There were no significant differences in mean scores across time points.

In regards to knowledge scores the paired samples *t*-tests revealed no significant change in knowledge scores for any of the film viewing groups between pre-activity, post-activity, and follow-up.

#### 6.B.3.2 Regression analysis

##### *Film analyses*

Correlation was used to examine the direct associations between the independent variables (e.g., empathy, reality, and confusion) and entertainment value. The results of this analysis indicate that entertainment value is positively related to empathy ( $r=.643, p<.00$ ), and reality ( $r=.551, p<.00$ ), while confusion is negatively related to entertainment value ( $r=-.402, p<.00$ ). In other words, the participants' perception of entertainment value is higher for films for which they experienced greater empathy and perceived reality and lower for those with high confusion.

Multiple regression was used to test the hypothesis that lower empathy for the main character, poor perceived reality, and high confusion about the films were predictors of low entertainment scores; this is the same procedure as was used in the Ritterfeld and Jin (2006) study. Before interpreting the results of the

regression, assumptions of normality and linearity were tested and the values of the variables indicated that assumptions were met.

In combination, these variables accounted for a significant 48.8% of the perceived entertainment value of the films,  $R^2=.488$ , adjusted  $R^2=.470$ ,  $F(3, 85) = 27.031$ ,  $p=.000$ . Unstandardised ( $B$ ) and standardised ( $\beta$ ) regression coefficients, and squared semi-partial correlations for each predictor in the regression model are reported in Table 6.B.2. These results support the hypothesis and the findings similar to those in the study by Ritterfeld and Jin (2006) with the exception of the confusion variable.

**Table 6.B.2: Unstandardised ( $B$ ) and standardised ( $\beta$ ) regression coefficients, and squared semi-partial correlations ( $sr^2$ ) for each predictor in a regression model predicting entertainment value of films.**

<b>Variable</b>	<b><math>B</math></b>	<b><math>\beta</math></b>	<b><math>sr^2</math></b>
<b>Empathy</b>	<b>.674**</b>	<b>.465</b>	<b>.146</b>
<b>Reality</b>	<b>.385*</b>	<b>.291</b>	<b>.060</b>
<b>Confusion</b>	<b>-0.93</b>	<b>-.073</b>	<b>.004</b>

\*\*  $p < .001$ , \*  $p < .05$

In addition, correlation was used to examine the direct associations between the independent variables (e.g., empathy, reality, and confusion) and perceived educational value. The results of this analysis indicate that educational value is positively related to empathy ( $r = .316$ ,  $p < .00$ ), and reality ( $r = .490$ ,  $p < .00$ ), while confusion is negatively related to educational value ( $r = -.248$ ,  $p < .01$ ). In other words, the participants' perception of educational value is higher for those with greater empathy and perceived reality, and lower for those with high confusion.

A simple linear regression analysis was conducted to test whether educational value is predicted by perceived reality. As in Ritterfeld and Jin (2006), perceived reality was a significant predictor of educational value ( $\beta = .417$ ,  $p = .00$ ), accounting for 24.2% of the variation in the dependent variable.

## 6.B.3.3 Structural equation models

Structural equation modelling was used to test the hypotheses that relatability to the film (determined through measures of empathy, reality and confusion) influenced the perceived entertainment value of the film, and that the perceived entertainment and educational values affected attitude change. Models (Figures 6.B.1-6.B.4) were tested for each film group (n=4).

Figure 6.B.1 shows the significant influence of perceived reality on the educational value for the low ranked film group, *Molly* ( $\beta=.669$ ,  $p=.000^{**}$ ). The participants did not view the film to be very realistic (the plot was based on brain surgery that cured a woman of autism) which led to low perceptions of its educational value.

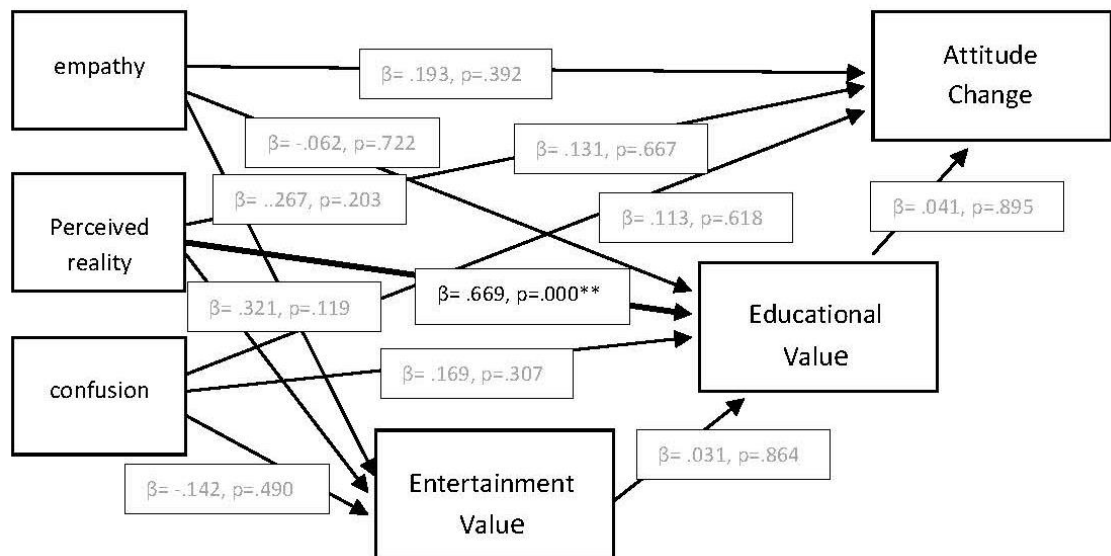


Figure 6.B.1: Structural equation modelling: influence of relatability variables, entertainment value and educational value on attitude change for the film *Molly* (Low- Rated Portrayal Film, n=18)

Figure 6.B.2 shows a significant influence of participant empathy for the main character on the perceived entertainment value of the film for the control film, *Mad Love*. The control film, which featured a young woman with clinical depression, elicited high empathy scores from the participants. The high empathy scores are significantly related to an increased perception of the entertainment value of the film ( $\beta=.503$ ,  $p=.003$ ).

## STUDY TWO- INFLUENCE OF ENTERTAINMENT AND EDUCATION VALUE

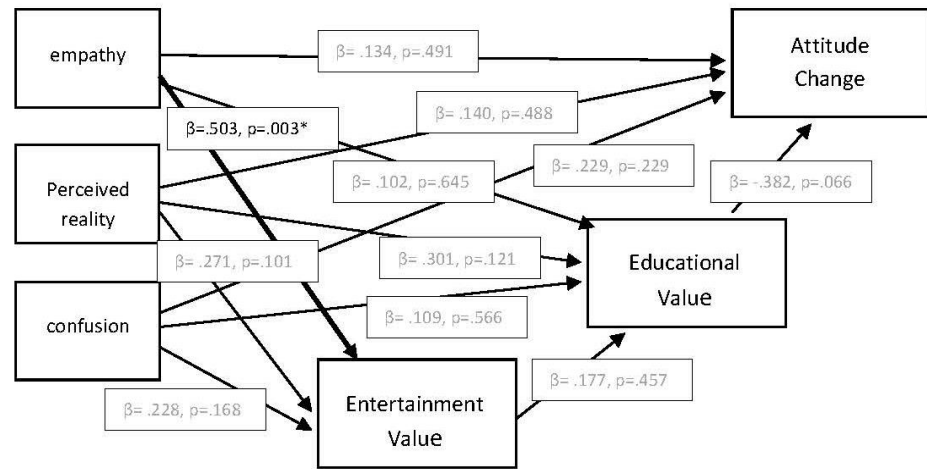
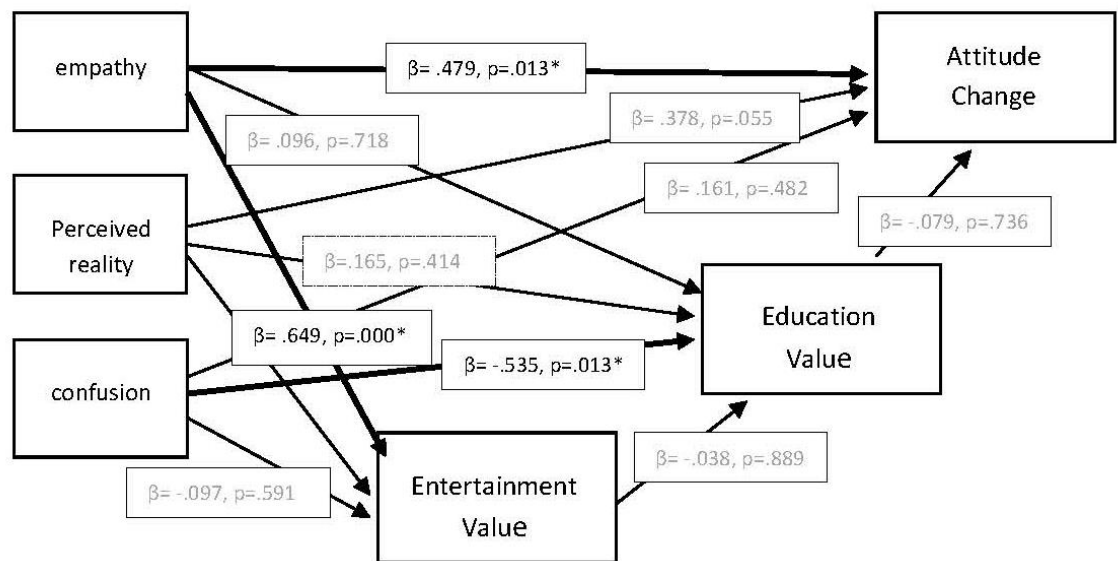


Figure 6.B.2: Structural equation modelling: influence of relatability variables, entertainment value and educational value on attitude change for the film *Mad Love* (control film,  $n=18$ ).

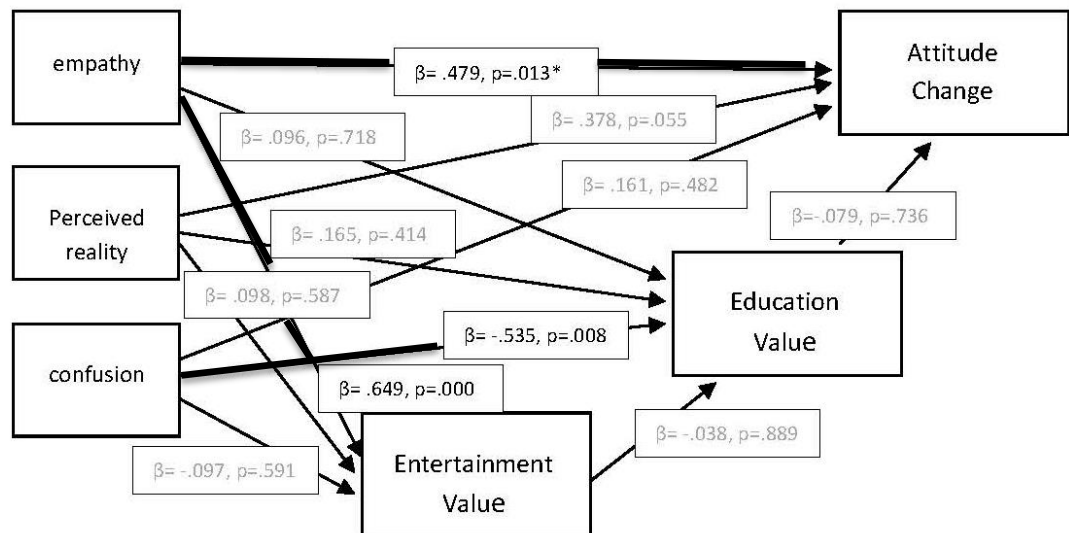
Figure 6.B.3 shows a significant influence of participant empathy score on attitude change and perceived entertainment value. Additionally, confusion scores and attitude change are significantly related, and confusion scores and education value are negatively related. This indicates that participants who viewed the top-rated film featuring a woman with high-functioning autism, *Snowcake*, showed low empathy scores that were significantly related to perceptions of entertainment value and changes in attitude from pre-activity to post-activity. Additionally, high confusion was significantly related to the lower perceived educational value of the film.

## STUDY TWO- INFLUENCE OF ENTERTAINMENT AND EDUCATION VALUE



**Figure 6.B.3.** Structural equation modelling: influence of relatability variables, entertainment value and educational value on attitude change for the film *Snowcake* (Top-Rated Portrayal High-functioning autism, n=17).

Finally, for the film *The Black Balloon* (Figure 6.B.4) attitude change ( $\beta = .479, p = .003$ ) and perception of the entertainment value of the film ( $\beta = .649, p = .000$ ) are mediated through the empathy for characters. In addition, the confusion score was negatively related ( $\beta = -.535, p = .008$ ) to the education score.



**Figure 6.B.4** Structural equation modelling: influence of relatability variables, entertainment value and educational value on attitude change for the film *The Black Balloon* (Top-Rated Portrayal autism, n=18).

#### 6.B.4 Discussion: Influence of Entertainment and Education Value

This part of Chapter 6 examined the influence of four films featuring characters portraying autism on the autism-related attitudes and knowledge of preservice teachers. The outcomes of this stage of the study are discussed in relation to the questions arising from the findings, the influence of perceived entertainment value on attitude, and the influence of perceived educational value on knowledge.

Results showed that a single viewing exposure to the top-rated (autism) portrayal had a significant negative influence on the attitudes of preservice teachers. This finding supports the drench hypothesis (Greenburgh, 1988). Additionally, the negative effects remained when participants were surveyed four weeks after viewing the film, *The Black Balloon*, suggesting the potential for a negative cumulative effect. Surprisingly, and contrary to the literature, the low-rated film (*Molly*) did not increase stigma. The lack of influence the low-rated film had on attitudes may be accounted for by the perceived low reality of the film, which would be expected to reduce the entertainment-education influence of the narrative. Furthermore, the findings do not support the hypothesis that top-ranked portrayals decrease stigmatising attitudes as neither of the top-rated films resulted in more 'open' attitudes than those the participants previously held. However, these findings highlight a number of challenges that arise from selecting specific qualifying factors to identify a 'top- ranked' film versus a 'low-ranked' film (e.g., accuracy or archetype rather than subtle messages such as lighting or body language between characters). These challenges will be discussed further below and in Chapter 8.

The negative influence on attitudes about autism for the films featuring a character with autism raises a number of questions. First, is the negative influence due to the overly severe portrayal of autism in film, affirming stigmatising attitudes and stereotypes that the viewer already held, or is it due to the creation of an opportunity to form stereotyped and stigmatising attitudes? Second, the top-rated portrayal of autism characteristics had negative effects on attitudes towards autism, while the top-rated portrayal of high-functioning autism characteristics had no effect. Thus, it is possible that

the viewer perceives these portrayals as definitively separate, or perhaps the relatability of the character and empathy evoking a para-social relationship may be evident for one autism portrayal but not the other. The results of the structured equation model suggest that empathy has a direct influence on both the entertainment value and the attitude change therefore making this latter hypothesis likely. Third, considering the combined low score of the top-ranking film (was not above the 75<sup>th</sup> percentile of the possible score), and the negative influence on attitudes, discussed above, there is the possibility that the observed and assessed criteria for ranking films (see Chapter 5) need to be modified to encompass the viewer's perspective. For example, focus on the empathy evoking qualities of the film, the relatability of the narrative, or other aspects such as lighting, tone and mood. Modifying the criteria for top-ranking films to be mediated through the viewer, rather than through the character portrayal, may aid in identifying a film that has positive effects on attitudes and improves knowledge.

The results of this study cannot provide responses for these questions but they do offer some indications for the direction of further research. In regards to the first question, it is likely that exposure to film both consolidates any pre-existing stigma and creates an opportunity for new stigmatising beliefs. The literature suggests that teachers have reservations about teaching students with spectrum conditions (Glashan et al., 2004; Huber, 2009; Robertson et al., 2003; Soto-Chodiman et al., 2012; Whitaker, 2001); the perceptions of challenging behaviours were confirmed through exposure to this film resulting in less open attitudes towards autism. The challenges and intensity of the difficulties portrayed in this film may have caused, or furthered, apprehension about having students 'like Charlie' in their class. At the same time, all of the films that were eligible for selection for this study portrayed overly severe representations of each characteristic associated with autism conditions, and conveyed little hope for happy and independent futures of people with autism. Since all of the films portrayed overly severe autism characteristics but only one had a negative effect on attitudes there must be a quality in *The Black Balloon* that does not exist in the other films. The negative valence of the film affords the opportunity to

create stigma where it may not have been, or where it could have been reduced, through less somber portrayals of life with autism.

The second question emphasises the possible confusion amongst preservice teachers regarding the word 'spectrum'. It is possible that in viewing the portrayal of high- functioning autism in *Snowcake* the viewers classed the character as definitively different from the character portraying autism in *The Black Balloon*, rather than on a spectrum with commonalities. The perceived departure from the familiar celebrity persona, 'Autism', of Linda's character in *Snowcake* may have resulted in a lack of influence on attitudes towards autism. An alternative explanation is that the relationship between the viewer and the character, or the viewer and the narrative, may have been influenced by a blanketing effect which was the result of exposure to one disability that can have an influence on the attitudes of viewers towards other disabilities (Angermeyer, Dietrich, Pott, & Matschinger, 2005; Farnall & Smith, 1999). The overall attitudes towards Asperger Syndrome reported by the preservice teachers in this study were more open to begin with, and remained unaffected by film exposure, suggesting that preservice teachers are more open and accepting of those with the Asperger Syndrome label than those with the autism label. Furthermore, when combined into ASD the influence of the films is non-significant suggesting that the terms Asperger Syndrome and ASD buffer the negative emotions towards autism. The consequences of using different terminologies are discussed in Chapter 8. Given the results of this part of the study of preservice teachers, further investigation into the entertainment and education parameters of the film *Snowcake*, or other films showing high-functioning autism, is warranted in order to increase our understanding of how people interpret the spectrum as either a continuum or a polarised axis of ability and inability.

Alternatively, the film (*Snowcake*) may have failed to influence attitudes because it failed to evoke empathy; the viewers also indicated high confusion, which may have been related to the portrayal of characteristics and atypical responses to familiar events displayed by the character, both of which may have reduced the

entertainment-education effect (Moyer-Gusé, Chung, & Jain, 2011). Likewise, the low-rated film, *Molly*, was deemed unrealistic which had a significant impact on both the entertainment and educational value of the film. This is important as the literature indicates that perceived reality is essential to the entertainment value of the film (Moyer-Guse, 2007; Potter, 2009; Ritterfeld & Jin, 2006). As the plot for the film *Molly* featured an unrealistic, and perhaps offensive, surgical cure for autism, viewers may have disregarded the content as 'pure fiction' resulting in the lack of influence on attitudes.

Finally, the archetype of the main character was distinctly different between the two top-ranking films. The character in *The Black Balloon* was a 'burden' while the archetype for the character in *Snowcake* was 'unable to adjust'. This difference may affect the influence of the film on attitudes because the burden archetype is associated with negative emotions rather than the unable to adjust which could elicit feelings of sympathy (if the film had not caused confusion). Alternatively the pronounced extreme of each autism characteristic displayed in the 'autism' film versus those portrayed in the 'high-functioning' film may have resulted in misinterpretation of HFA as something other than autism. This may occur in a similar way to the misinterpreted diagnoses (Table 6.A.2) of characters meant to be portraying schizophrenia that were frequently interpreted as representations of autism. Therefore, the portrayal may have been perceived to be inaccurate in relation to the participant's expectations of a person with autism and was therefore confusing. Confusion results in both low empathy and reduced EET (Moyer-Gusé, 2008) explaining why *Snowcake* had no significant influence on attitudes.

This final question indicates the need to further investigate the qualities of film that are used to determine whether a portrayal is positive, negative, accurate, inaccurate, realistic or unrealistic, and so on. As discussed in Chapter 4, previous research (Angermeyer & Schulze, 2001; Farnall & Smith, 1999; Owen, 2007) that has investigated the influence of portrayals using any number of terms supports the position that negative portrayals are more influential than positive ones (Farnall & Smith, 1999; Ritterfeld & Jin, 2006; Saito & Ishiyama, 2005).

However, the findings from this study indicate that there is a need to clarify the parameters of 'positive' and 'negative' portrayals. For instance, positive is not necessarily equal to accurate; likewise, negative may not be inaccurate. These terms may be more reliant on the subjective interpretation of the viewer, the viewer's personal experience, or their absorption by the narrative than ranking of accuracy or the opinions of seasoned practitioners in relation to the quality of the representation. The accuracy of the portrayal, in terms of the various characteristics shown, may be less important than the emotive valence of the portrayal, or the portrayal of overly severe characteristics. *The Black Balloon*, for instance, although achieving a top rank (primarily due to accurate representation of characteristics associated with the specified severity of autism), does little to develop the character portraying autism as an individual and emphasises a sense of burden and hopelessness that any member of the family will achieve a productive and bright future. It is difficult to consider 'positive' to be an appropriate term, in spite of the perhaps realistic, albeit slightly dark, top-rated portrayal. Furthermore, it is clear that many strategies are utilised in film, for example music or lighting, to sway viewers towards certain emotive states. Therefore, measures of accuracy, archetype, realism, empathy or positivity must be considered alongside the subjective lens of the viewer. Considering the negative influence of this singular exposure further investigation into *how* film can be used to educate, or raise awareness, whilst maintaining or developing open attitudes for those with limited personal experience, is required.

#### 6.B.4.1 How entertainment value is affected and how it affects attitudes

In addition to the realism, accuracy, and valence of the portrayal, the results suggest that the relatability of the character has an influence on attitude change. The results suggest a relationship between relatability and valence (positive or negative). For example, participants could not empathise with the *Snowflake* character, which decreased the perceived entertainment value of the film, thereby also lessening the entertainment-education effect. This phenomenon, in the context of portrayals of autism, may be explained by the narrative's ability

to elicit empathic responses from the viewers, which would likely increase the perceived entertainment value of the film. For example, the significant negative change in attitudes after viewing *The Black Balloon* (deemed a top-rated portrayal) may be attributed to the archetype of the character, in this case the burden archetype. This archetype elicits empathy from viewers for the 'typical' characters, making the narrative relatable and the character portraying autism less desirable to be around. Meanwhile, *Snowcake*, which featured a character with an 'unable to adjust' archetype did not elicit empathetic responses by viewers. Instead, the viewers of *Snowcake* were confused by the character's reactions to commonly understood experiences. Further investigation is required to explore the viewer's multifaceted empathic response (cognitive empathy or emotional empathy) to the character with the disability versus the typical characters. This avenue of exploration into the 'framing' of the character with disability would support an understanding of whether attitude change is more reliant on the type of empathy a viewer exhibits or on the qualities of the character.

Another facet of the character portrayal that may influence both cognitive and emotional empathy is the age of the character. Although this particular possibility was not explored within this study it does raise an interesting line of questioning. Murray (2006) argues that many of the characters with autism maintain a naivety, or innocence, that allows them to be endeared to us. This did not seem to be the case for the adult character in *Snowcake* as the lead character was portraying an unable to adjust, semi-independent archetype. However, both *Molly* and *The Black Balloon* featured child-like qualities and provided comic humour through social faux-pas and misunderstandings. Both of the latter films were deemed more entertaining and elicited higher empathy scores (although not necessarily for the character but rather for those taking care of them). Future research into the nature of the empathetic response and the factors that contribute to it could provide some valuable insight regarding teachers' perceptions of ability and capability with respect to young people on the spectrum.

The effect on the relationship between empathy and entertainment value, and empathy and attitude change on perceived entertainment value can be seen in the structured model of *Snowcake*. In this instance, lower empathy scores elicited lower entertainment value scores, and no significant attitude change. These findings support Entertainment-Education Theory in that the lack of absorption in the narrative demonstrated through low entertainment value scores leads to less influence on the viewer. Furthermore, viewers of *Snowcake* reported high confusion about the film which could leave the viewer conscious of the ‘reading’ of the narrative (Moyer-Gusé, 2008; Titchkosky, 2005), thereby reducing perception of the film’s entertainment value and the likelihood of adopting stigmatising values, or anything else, from the film.

#### 6.B.4.2 How educational value is affected and how it affects knowledge

The viewing of films did not have any effect on the participants’ knowledge of autism from pre to post survey, indicating there was no educational value in terms of increasing their knowledge about autism conditions. The questions in the knowledge test covered two basic areas, common myths and general facts about autism conditions. The lack of effect on knowledge is not surprising when analysis of film content is explored (Baker, 2008; Draaisma, 2009; Murray, 2006), as accurate statements relating to general facts about autism conditions were generally absent in the films’ dialogue. In addition, since many of the practitioner characters supported the medical model pedagogy of limitations and promoted the archetype of burden through their dialogue, it is not surprising to discover that the films did not increase knowledge about autism, nor did they reduce incorrect knowledge. Furthermore, the inner circle (family and friends) also presented dialogue that supported a sense of burden from a neurotypical perspective. It would be interesting to see whether a film that presented the self-report perspective had a different effect on viewers’ attitudes, although a majority of the self-reports in the films analysed in the previous section supported the myth of being ‘in another world’. The dialogue, coupled with the over- exaggerated cognitive limitations or exceptionalities often shown in the films, provide little support to dispel myths or improve accurate knowledge.

In contrast to the lack of knowledge change, there were factors that influenced perceptions of educational value. For instance, the structural equation model for *Molly* showed a negative relationship between perceived reality of the film and educational value of the film. This suggests that the viewers were aware of the unrealistic ‘surgery to cure autism’ and related that to lower perception of the educational value of the film as it was not credible. Furthermore, confusion scores increased as perceptions of educational value decreased for participants that viewed *Snowcake*. These findings indicate that irrespective of the accuracy of the portrayal and plausibility of the narrative, if the viewer is confused and unable to empathise they fail to ‘learn’ from the film.

#### 6.B.4.3 Limitations specific to Chapter 6B

The selection of films resulting from the ranking criteria presented limitations in understanding the influence on attitudes of viewing top versus low rated films. The selection criteria and language used to describe scores imply that accuracy may equate to ‘good’ film status. This is inherently limiting as the results indicate that there are other qualities in films that have greater influence on their attitudes. A second limitation was the demographic range of the participants. While the restricted geographic scope of the study limits its generalisability, there is sufficient literature on preservice teachers and teachers’ attitudes and beliefs about autism, as well as influences of media on attitudes, to assume similarity amongst Western countries. Cultural differences in perception of, and societal beliefs towards, disability may influence both the presentation of characters with autism conditions in film and the interpretation of exposure to those characters. These differences were not investigated in this part of Study Two but could provide interesting perspectives on how culture influences the collective understanding of autism. Additionally, the majority of the participants were under 30 years of age and had relatively little exposure to people from the Autistic Community or to the films used in this stage of the study. Many of the participants had viewed popular films such as *Forrest Gump* but had not viewed films featuring a character with disability. Participant preference for film genre, viewing with peers (as peers have an impact on perspectives), and

the time frame of the viewing activity schedule may have influenced both participation and responses. Although the limitation in peer influence on film interpretation was not controlled the limitation relating to social desirability in responses was reduced, in part, through use of third-party statements in the survey, for example, 'I can understand why students don't want to be friends with someone who has autism'.

The small sample size is a limitation to the study as with more participants a stronger analysis of covariates and influencing factors could have been conducted. The low p value does indicate, however, that it is unlikely that the effects on attitude could be due to chance. Furthermore, the structural equation model results may be unstable as the numbers do not meet the 5:1 (participants to variables) ratio recommended (Suhr, 2006); it should be noted, however, that the Root Mean Square Error of Approximation (RMSEA) and Comparative Fit Index (CFI) indicate good fit.

#### 6.B.4.3.1 Considerations

One issue to consider is that there could be a film that portrays autism in an accurate and positive way that was not assessed on the weighted ranking scale<sup>18</sup>, and therefore was not used in the study involving preservice teachers. Furthermore, differences in the relatability of characters, the qualities of the film that evoked empathy, and the archetypes of the characters would all influence the entertainment and education value of the film. Therefore, selecting films that are particularly memorable, for example *Rainman*, may have a greater impact on attitude change; however, it is difficult to determine the components that result in making a film memorable or what aspects of the character or audience would make the attitude change in a positive direction. Additionally, any positive attitude change resulting from an inaccurate portrayal may actually increase stigmatising attitudes towards students that do not agree with the images and beliefs about autism affectedness that result from such portrayals. Thus, caution needs to be exercised in selecting films for educational purposes, or to help

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<sup>18</sup> The author suggests *Ocean Heaven* may be a film that fulfils the positive and accurate criteria mediated through an entertaining and educational narrative but this film is subtitled, therefore not used in the study of influence on preservice teachers.

viewers understand the experience of autism. This is because, as evidenced by the influence of a single film exposure, there is a risk of globalising the character's qualities ( $n=1$ ) to the entire population of the Autistic Community if the film has high entertainment-education value and the viewer has little other experience of variability to draw from.

### **6.B.5 Conclusion: Influence of Entertainment and Education Value**

The objective of this stage of Study Two was to understand the influence of viewing an entertainment film featuring a character portraying an autism condition on the attitudes and knowledge of preservice teachers. In support of the drench hypothesis (Greenburgh, 1988) the results indicate that singular film exposures to portrayals of a character with autism can have a negative influence on viewer attitudes, whilst having no influence on their knowledge of autism. Furthermore, it is evident from the findings that emotional absorption in the narrative of the film, as well as relatability, affects how much influence the film exposure has on attitude change. Finally, to the misfortune of the actual school students with autism, the negative changes in attitude resulting from viewing the top-rated film were still evident four weeks after viewing the film, suggesting that a singular exposure that consolidates misguided beliefs perpetuates stigmatising attitudes for the preservice teachers. These findings indicate a need for critical reflective analysis of films depicting autism. Therefore, using the existing films to expose preservice teachers to disabilities, autism particularly, for the purpose of reflective analysis of attitudes and knowledge towards the featured content could provide benefits in two realms. Firstly, exposure would provide the opportunity to consciously reflect on personal perceptions, ableist notions, and emotional responses to students with autism; and secondly, it would allow practice at 'thinking deeply' about the diversity of the student population, including qualities and characteristics that may not be represented in the films, and how their personal beliefs could impact on their professional behaviours.

In this chapter the influence of exposure to a single filmic portrayal of a character on the spectrum has been explored. It is evident that certain films that are

entertaining and evoke empathy can have a sustained negative influence on attitudes. To gain a deeper understanding of the aspects of certain films that resonate with viewers I will now focus the discussion on which scenes or dialogue the preservice teachers recall from the film they viewed. The preservice teachers responded to the questions immediately after watching a specific film, and again four weeks later.

### Chapter 7: The Lasting Memories for Preservice Teachers

Armed with an understanding of what films offer in terms of the autism persona, and informed about some of the variables in film that influence the attitudes of viewers, it is important to understand what scenes in the film stand out and are memorable. Through understanding how viewers recap a film it is possible to gain perspective on which scenes are already providing an 'education' for viewers, which can then be used to inform the use of films in teacher training. This investigation is of particular interest because it is evident from the literature that films featuring characters portraying spectrum characteristics use autism as a plot device. Autism as a function of the plot leads to the hypothesis that which will be recalled from the film will be related to the characteristics associated with the spectrum rather than the plot itself. For example, in the case of *Rainman*, the hypothesis would indicate that viewers would recall the savant skill (counting cards) or the monotone speech used, rather than the plot events, such as those in the DVD synopsis below:

"In his Oscar winning role, Dustin Hoffman joins Hollywood heart-throb Tom Cruise to bring a funny and moving tale of brotherly love to the screen. Heartless Charlie Babbitt expects a vast inheritance after his estranged father dies. But Raymond, his institutionalised older brother, someone he's been totally unaware of, is willed the entire fortune instead. Raymond is an 'autistic savant' with severely limited mental abilities in some areas but with genius gifts in others. When Charlie kidnaps Raymond, the crazy cross-country drive back to Los Angeles teaches them both a few lessons in life. For as they overcome their mutual distrust of each other, a deep bond is forged as they painfully share past memories, present problems and a possible shining future together." (*Rainman*, 1988, DVD synopsis)

As such it is important not only to focus on what is presented and the influence it has on attitudes and knowledge, but also to understand what is remembered because the memorable moments are what penetrate the social discourse and can remain decades after film release (e.g., the *Jaws* soundtrack or the catch phrase "I'll be back" from *Terminator*).

### 7.1 The Impact of Memorable Events and Scenes

“We do not remember days, we remember moments. The richness of life lies in memories we have forgotten” ~ Cesare Pavese

A significant body of literature shows that the recall of details surrounding emotive events is limited by their highly emotive circumstances (Anderson & Shimamura, 2005; Butler, 2009; Mogg & Bradley, 1999), for instance, the blurry or inaccurate details provided by an eye-witness from a situation where a weapon was present (Loftus et al., 1987). Therefore, as is illustrated in the opening quote, the recall of the “event title”, for example, “my parent passed away” or “my son was born” persists while the support details fade over time. This contention is supported by Humphrey, Underwood, and Lambert (2012) who found that emotive scenes in entertainment film are often recalled with higher frequency than those scenes that have a neutral content. Some studies have found that the frequency of recall is greater when the scenes evoke emotion; however the background details or context details may be recalled inaccurately (Anderson & Shimamura, 2005; Humphrey et al., 2012).

In this chapter the memorable scenes from the four films selected for viewing by study participants as reported in Chapter 6B will be explored. The films featuring characters portraying autism provide intrigue via the unfamiliar and emotive potential through the challenges associated with autism. Investigation into what viewers remember about a character, or film plot, may shed light on the filmic contribution towards the lay definition of ‘autism’. Indeed, gaining an understanding what novice teachers remember from viewing portrayals of a community that they may have limited experience with will aid in understanding what aspects of film permeate barriers of resistance and are culturally viable. Specifically, do the teachers remember specific and spectacular moments and omit the mundane and everyday content, thereby ignoring the richness of everyday life.

Greenburgh's (1988) argument states that particularly memorable or strong portrayals of minority characters may have more influence on the viewer than less memorable but more frequent exposures, thus just a single portrayal could be the catalyst for a viewer's perception of a minority group. This power to influence viewers' perceptions about human difference rests in what is modelled in the film (Bandura, 1993), what the viewer recalls, and the credibility of the source. The understanding of what films are presenting in terms of autism spectrum portrayals was established in Section 2. The overly severe portrayals and the negative influence on attitudes discussed in Chapter 6B warrant an exploration how a viewer consumes the images they witness on the screen.

#### 7.1.1 Clarity in recall achieved through the parasocial experience

Contrary to lived experiences, which can lead to recall of details being vague, it is possible that the recall of central, or source, content for emotive events increases when the individual is distanced from the event (e.g., viewing through the media) (Anderson & Shimamura, 2005; Doerksen & Shimamura, 2001; Humphrey et al., 2012). That is to say, in removing the actuality of consequences (e.g., harm, pain, or discomfort) through increased distance the emotional cloudiness that accompanies lived events is lessened. Experiencing events by proxy in this way may thereby promote a clearer recall of events as there is no urgency. Although the emotional response is lessened through distance from the source, it is still necessary to have emotive content to imprint on the memory and engage with the narrative (Chapter 6B).

Fortunately, observed experiences evoke similar emotive responses to *lived* experiences; for example, Mogg and Bradley (1999) found that when people were presented with emotive and neutral stimuli in the form of pictures they responded faster to emotive stimuli. Furthermore, Bradley et al. (1992) found people attended longer and viewed emotive events more frequently than neutral events. Cahill et al. (1995) however, contend that information recall is increased specifically when presented in a negative emotional context. Irrespective of the direction of emotional valence, because *observed* participation evokes similar or

improved recall to *lived* experience it is likely that viewed events, such as films, can have an equal impact on behaviour towards the source content of the event. The recall of past events, lived or otherwise, influences human behaviour for future events - even without prior experience with the specific event (Mogg & Bradley, 1999). With this knowledge it is hypothesised that viewers will recall the title event but not the details surrounding the emotive scenes.

Applying personal resistance theory (Moyer-Gusé, 2008), any lack of context and detail are problematic because under this paradigm the entertainment value of the film makes the viewer more susceptible to the adoption of messages in the film. For this reason, the content of the source message is critical in understanding the relationship between disability representations through film and the influence on the viewer's contextual frame. The discussion below will report on the post activity survey and follow-up survey findings.

## **7.2 Method: Lasting Memories**

### **7.2.2 Participants**

The second, post-activity, survey was completed on paper by 104 participants after attending the two-hour film viewing session, and 78 participants completed the third survey online via Survey Monkey (Survey Monkey, 2008) four weeks after viewing the film. Survey Monkey is online software for conducting surveys and was used because participants can access it at their leisure and submit their responses anonymously.

### **7.2.3 Procedure**

As described previously, the participants were randomly assigned to a viewing group, *The Black Balloon* n=33; *Molly* n=19; *Snowcake* n=24; and *Mad Love* n=28. Immediately following the viewing of the film the participants were asked to complete a post-activity survey on paper. There were 24 questions on the educational and entertainment value of the film (measured on 5-point scales from 1 *completely agree* to 5 *completely disagree*) (modified from Ritterfeld & Jin, 2006) (see Table 6.B.1); six questions related to the disability represented in

the film, for example, 'What disability was represented?' and 'What archetype was represented?'; and two open ended questions asked participants to describe the scenes and dialogue they could recall.

Four weeks after the film-viewing participants were asked to complete an online follow-up survey using Survey Monkey (Survey Monkey, 2008). Some participants that attended a viewing session did not complete the follow-up survey. Complete follow-up surveys were received from 77 participants: *The Black Balloon* n=24; *Molly* n=18; *Snowcake* n=16; and *Mad Love* n=19. The follow-up survey contained 11 questions from the post-activity survey relating to entertainment value and the same questions regarding the disability represented in the film and the scenes or dialogue that the participant recalled from the film.

The open-ended questions were hand coded using four emergent themes (reference to the character with the disorder; reference to other characters; comment on behaviours related to the disorder; and positive or negative emotions). The responses from the open-ended questions were coded into emergent themes and are discussed under the theme headings: *most memorable scene*, *behaviour related to ASD*, and *relationships* for each film.

The matched responses for the entertainment value, educational value and disability-related questions from the post-activity and follow-up surveys are discussed in the *Recall Over Time* sections, the data is analysed using paired t-tests, adjusted with Bonferonni.

Finally, the correlation between films viewed and participants' discussion and recommendations of films was explored to gain an understanding of the potential power of the specific films to infiltrate social discourse. The recommendation of the film was determined by the question 'how likely are you to recommend this film to someone that wants to learn about that specific disability/disorder?' measured on a four point scale (absolutely (1) to not at all (4)).

### 7.3 Results: Lasting Memories

The results of the open-ended questions, those from the post activity survey and follow-up survey, are unmatched and presented as a single group (n=144). *The Black Balloon* n=24 post, n=23 follow-up; *Snowcake* n=16 post, n=12 follow-up; *Molly* n=19 post, n=15 follow-up; *Mad Love* n= 19 post, n= 16 follow-up.

The responses are discussed in three categories: most memorable scene; references to behaviour related to ASD; and references to the relationships featured in the film. Finally, post and follow-up matched responses (n= 78) are examined under the heading *Recall Over Time* for differences in recall of detail, emotive valence, descriptive language, entertainment value and educational value.

#### ***The Black Balloon***

*The Black Balloon* had the largest viewing group (n=33) and largest number of responses (n=24 completed open-ended questions post, n=23 completed open-ended questions follow-up) eliciting 47 comments which are summarised below.

*Most memorable scene.* Some of the participants provided multiple comments that referred to a number of scenes, behaviours, or relationships. A majority of the comments (n=25) identified “the fight scene” as memorable. This scene was the dramatic climax of the film and showed the frustration of the neurotypical brother, Thomas, towards the ASD affected brother, Charlie. The brothers engage in a fistfight, which takes both parents to break-up, and results in Charlie having to visit the hospital for stitches. The scene following the hospital visit demonstrates Thomas’ intense remorse and sadness over the incident. The entire sequence is highly emotive and elicited compassionate descriptors such as ‘distressing’, ‘shocking’, ‘sad’ and ‘very emotional’ (terms used by participants at post-activity).

Participants attributed Thomas’ frustration about Charlie being “different” as the catalyst for the fight; additionally they attributed the first punch to Thomas. In fact, Thomas does not throw the first punch, but breaks Charlie’s PlayStation

as retribution for embarrassing him in front of his girlfriend. Charlie throws the first punch in response to the broken PlayStation. This perception is demonstrated in the following statements made by participants: “Thomas was ashamed and embarrassed of his brother” (Participant 45); “the autistic boy being locked in the room, so his brother could maintain some sort of normalcy” (Participant 57); “when they had a fight and Thomas smashed Charlies (sic) play station.” (Participant 56); “When Thomas hits Charlie” (Participant 54); and “when the main character, the brother of the boy with autism started fighting his brother saying how much he hated him” (Participant 42).

The other memorable scenes were those regarding behaviours associated with ASD in the film, and those grounded in the relationships between the characters. These scenes are discussed below.

Behaviour related to ASD. There were a large number of comments referring to behaviours that were associated with ASD in the film ( $n=23$ ). A majority of the comments referred to the smearing of faeces on the bedroom carpet or entering a stranger’s house to urinate. The comments describing these events generally indicate a belief that Charlie had no choice in his behaviour; for example, one participant stated, “he had no idea what he was doing was not normal and didn’t comprehend what he was doing” (Participant 48).

One comment referenced spitting at another child; two comments about inappropriate social interactions involving a tampon; three comments referred to public masturbation, or “inappropriate actions at the dinner table,” as one participant referred to it; and one cited a “tantrum in the grocery shop”. In each instance the comments related to behaviours that were unacceptable for the social context.

*Relationships.* Nearly every comment made by participants about what they recalled from the film describes a relationship or an action that resulted from shifting dynamics within a relationship. For example, in describing a relationship, “they helped Charlie cope with the rainstorm and he was able to have a meaningful day” (Participant 40), versus actions resulting from the

shifting dynamics as illustrated by these participants, “Charlie said sorry to Thomas...he understood he had done something wrong” (Participant 53), or “when the brothers fought near the end, and then when they acted in the play together. It was great contrast, and I think it portrayed the true nature of the relationship between them” (Participant 73).

The second largest number of comments referred to Charlie’s relationship with the community, and often referenced Charlie being judged or teased by members of the public or students at school. For example, one participant commented, “when Charlie was teased and publicly humiliated. The constant disapproving looks and judgement from those who were ignorant stood out for me” (Participant 39).

The social and familial impact was also noted in responses to the open-ended question about whether the participants discussed the film with anyone. Most (n=21) had discussed it and noted that: “it was interesting and gave a very personal account of the families (sic) struggle and society’s view” and “I told them (my friends) what the movie was like and how living with someone with these needs affects people”.

### ***Snowcake***

*Snowcake* was viewed by 24 participants. Over half of the participants responded to the open-ended questions at post-activity (n=16) and half completed open-ended questions at follow-up (n=12 ).

*Most memorable scene.* There was no overwhelmingly climactic scene according to the participants; as a majority of the comments referred to behaviours related to ASD. The most noted scenes (n=8) from this film occurred at opposite ends of the film. The first scene being the death of Linda’s daughter, Vivienne, within 15 minutes of the beginning of the film, and the second being the funeral/wake scene that occurs in the last 15 minutes. The comments regarding these two scenes referenced the explanation of the daughter’s death and the wake, and referred to the main character’s atypical response to events that would carry a social expectation of grief and sadness. One respondent commented, “...the simplicity

of her joy contrasted with the black and white way in which she dealt with the loss of her daughter. Complex, yet beautiful” (Participant 31).

*Behaviour related to ASD.* All 24 comments referencing the main character affected by autism referred to her autistic characteristics (rigid, routined, and literal with unexpected emotional expression) or autism related behaviours (self-stimulatory behaviours like jumping on a trampoline or interest in sparkly things). These observations were noted in comments such as, “(the character’s) obsessive for cleanliness tidiness (sic) and contamination showing a syptom (sic) of a disorder” (Participant 32), and “the protagonist’s obsession with snow”. (Participant 24).

The largest number of comments pertaining to behaviours emphasised the unexpected emotional responses by Linda (the character with high functioning autism). Participants referred to Linda’s atypical responses with curiosity, for example; “she isn’t upset in a conventional (sic) way. She almost seems wise”, (Participant 22) or, when Linda is told of her daughter’s death “...she brushes it off like she is lacking the emotional side to understand what has happened.” (Participant 23).

There were also a number of references to the contrast between lack of socially anticipated emotional expression for dramatic events, like the death of a child, and the extreme emotional display over socially considered inconsequential events, like spilling liquid on the carpet. For example, one participant says Linda has “no emotion for significant event, extreme for insignificant” (Participant 25), and recalled by the same participant at follow-up “her misplaced emotions (not crying that the daughter has died, but devastated by a stain on the carpet” (Participant 25).

*Relationships.* Relationships did not receive many mentions in this film. The few (n=7) comments regarding relationships were about the unfamiliar way in which Linda connected with people around her, “music and dance was how she connected to her daughter” (Participant 26), and,

“In order to cope with the intrusion of guests to her home she plays her daughter’s favourite music loudly and danced in memory of her daughter. Linda accepted the death of Vivienne as an inevitable event that happens in life. The scene of the guests in Linda’s home after Vivienne’s funeral. People in her home was challenging and in order to regain her private life again Linda puts on one of Vivienne’s favourite music and danced in the way Vivienne did. This was the closest connection Linda displayed in her grief but it was a joyous memory of her daughter” (Participant 32).

Additionally, participants commented that they felt protective of Linda, a sentiment that was modelled by the main male character (Alex) and Linda’s daughter (Vivienne), because she was innocent. One participant commenting, “you start off not quite knowing how to react to her character, but by the end you are moved and really feel the protectiveness that the main male character and her parents feel for her” (Participant 31).

A majority of the comments, however, imply intrigue in Linda’s relationship with herself; for example: “the simplicity of her joy” (Participant 31); “Linda accepted the death of Vivienne as an inevitable event that happens in life” (Participant 32); “she almost seems wise when she does explain herself” (Participant 22); “Linda laughing and happy, eating snow and on trampoline” (Participant 21); and “the scene where the main character is dancing with her daughter (who is deceased), and also her misplaced emotions (not crying that he daughter has died, but devastated by a stain on the carpet)” (Participant 25).

### ***Molly***

The film *Molly* had the smallest viewing group (n=19) and received 44 comments from participants (n=19 completed open-ended questions post, n=15 completed open-ended questions follow-up).

*Most memorable scene.* Rather than a singular memorable scene recalled by the participants the majority of comments elicited by this film were related to the relationships between characters. There were, however, a few scenes with a number of references that can be classified into two categories. The first group were scenes of a surgery that “cured” the main character, Molly, of autism and her reversion “back to an autistic state”. The second group of scenes were humorous scenes that resulted from Molly being in a state of limbo between being neurotypical (cognitively typical) and being “autistic”. The former evoked a number of comments about being unrealistic and one participant said, “I didn’t like that she had surgery to make her ‘normal’ and that her being ‘normal’ was celebrated. Everyone is beautiful and unique in their own special way. There should be no need to change that” (Participant 73). The latter referenced scenes of “tying every piece of string in the house, interrupting a theatre production and becoming upset at a fancy restaurant” (Participant 82).

*Behaviours related to ASD.* Only 11 of the comments referred to autism-related behaviours. These scenes were intended to be humorous, and the humour resulted from the character’s difficulties in understanding social conventions. For example: “repetition of scripts from books/films by Molly; beach; lobster at dinner” (Participant 76); “in the lift when Molly punches all of the buttons” (Participant 75); “she interrupts a play that she was watching, thinking it to be true” (Participant 80); “Molly ties the shoes laces of every shoe in the house once she learnt how to tie shoe laces” (Participant 66); and “the scene where Molly wets herself” (Participant 64).

*Relationships.* Most of the comments referred to Molly and her relationship with her brother, Buck, or her love interest, Sam. Most comments about Buck related to his frustration with his sister not being neurotypical: “the brother’s obsession with his sister being ‘normal’” (Participant 70); and “when told Buck that she always knew who he was and she would wait every year to see him at Christmas. She explained that although she had difficulties expressing herself, she still loved him and cared about him when her condition was bad” (Participant 71), or his

eventual acceptance of Molly noted by this participant, “Buck realised that even though she will be as she was, she will still be a ‘person’ on the inside”(Participant 77).

Six comments were made regarding Molly’s relationship with Sam. These comments generally remarked on his acceptance of Molly and his protection of her. For example, “when Molly and Sam are sitting by the fountain and she’s afraid to ‘go back’ to her old self and he says he’ll never leave because he’ll always know it’s her.”(Participant 70).

A few comments alluded to Molly’s relationship with autism. These comments talk about her fear of losing skills she had gained since the surgery. For instance; “go back to her ‘original’ self”“(Participant 69), or explanations Molly provides about what it is like being affected by autism; “when she said that everyone talks about her as if she’s not even there and that she can understand what they are saying” (Participant 63). Additionally, participant comments related to Molly being a person “in spite” of her autism and Buck’s use of the term “vegetable” to describe Molly.

### ***Mad Love***

The control film, *Mad Love* had the second largest viewing group (n=28) and received 39 comments (n=19 completed open-ended questions post, n=16 completed open-ended questions follow-up).

*Most memorable scene.* The most memorable scene, identified by 15 comments, was a scene where Casey (the main character with severe clinical depression) glues eyes she’s cut from a magazine onto the walls of the hotel room. This impact of this scene is relayed through comments like: “being surrounded by magazine eyes-very disturbing” (Participant 12); “I believe the scene where the main character pasted eyes to a wall with toothpaste stood out the most. The magazine cut outs of the eyes and she is telling Matt ‘there (sic) watching us”” (Participant 18); and “when the character with manic depression couldn’t sleep but was cutting out images of eyes from newspapers and sticking them around the room instead” (Participant 7).

The second most memorable scene showed a suicide attempt with a gun near the end of the movie. For example “when the character with disability attempted to commit suicide” (Participant 7). Two participants mentioned the suicide but incorrectly attributed it to a scene that took place in a restaurant; for example “when she was attempting to commit suicide in the toilets” (Participant 8). Additionally, one participant noted the polarised nature of the film that mirrored the disorder stating; “the trip to Mexico- the juxtaposition between happiness and complete abandon/fear/hurt/loss” (Participant 10).

*Behaviour related to the disorder.* These comments (n=32) generally revolved around two scenes; the gluing of eyes torn from a magazine on the walls, and a suicide attempt involving a gun. Comments from participants referred to the gluing of eyes scene as, “the big realisation scene - that something bigger was wrong than anxiety” (Participant 18), and “her going crazy with the eyes” (Participant 12). Although some comments referred to reckless behaviour like; “hitchhiking incident, fire-alarm” (Participant 10), or “overall the extreme highs and lows that the character had” (Participant 9).

*Relationships.* There were six comments about relationships from this film. The comments related to Matt (Casey’s boyfriend) seeking help when he realised that she was more than “a bit low”, for instance: “When Matt comes to the realisation that Casey is sick, and needs help, he calls the parents not knowing what to do” (Participant 3); “the big realisation scene- that something bigger was wrong than anxiety and they needed help” (Participant 18); and “the moment Matt calls Casey’s parents because he doesn’t know what to do as he has just realised she isn’t well” (Participant 9).

### 7.3.1 Recall Over Time

#### 7.3.1.1 Details fade but emotions remain

There was a general lack of detail in recall over time, predominantly with the names of characters or the sequence of events. Participants recalled the main, or title of the event, more often and used fewer descriptive words, for example: “When the other main character hits his autistic brother” (Participant

54); “When the brother felt distraught from not paying attention to his sister previously (sic)” (Participant 78); “the main character dancing with her deceased daughter at the wake” (Participant 27); and “The breakdown scene.” (Participant 20).

A majority of comments from the post-activity survey for *The Black Balloon* were negatively valenced (n=18), for instance using words like ‘shame’, ‘anger’, ‘unfair’, ‘bullying’, or ‘remorse’ to describe scenes. Similarly, the follow-up survey results showed a greater recall of negatively valenced scenes (n=20) with nearly all comments referring to the fight scene.

There were a few scenes from *The Black Balloon* post-activity survey that the participants remembered which had a positive valence (n=4). These scenes were referenced with terms like ‘support’, ‘affection’ and ‘connection’. Likewise, the follow-up survey results showed a small number of participants recalled positively valenced scenes (n=6), for example using words such as ‘supportive’ and ‘acceptance’ to describe scenes featuring forgiveness and accepting others differences.

Only two comments from participants that viewed *Snowcake* were negatively valenced and referred to a car accident in which Linda’s daughter is killed. Four comments were positively valenced and referred to the main character’s “*child-like joy*”. All of the valenced observations were made by the same two participants in both post and follow-up activity surveys. These observations are summed up by one participant’s comment,

“The way in which the mother reacted to the news of her daughter’s death - it was very blunt, very black and white, and that made me feel quite uneasy at first but after watching the rest of the movie, there is a beauty in the simplicity that she saw in the world around her” (Participant 31).

The remaining comments were observations of curiosity or intrigue about the character's marriage of ability and "disability" and were not emotionally valenced but instead classified as neutral.

A majority of the comments made by participants that viewed *Molly* were negatively valenced (n=23) and related to a surgery to cure autism or the character's "regression back to autism". Participants had strong emotive responses to this event commenting; "I didn't like that she had surgery to make her 'normal' and that her being 'normal' was celebrated," (Participant 73), and, "the brother's obsession with his sister being 'normal'" (Participant 70).

Nearly all of the 39 comments from viewers of *Mad Love* were negatively valenced (n=32) using terms such as "breakdown", "not coping" and "something wrong" to describe Casey.

#### 7.3.1.2 Recall of Diagnosis

The participants that viewed *The Black Balloon* were asked what diagnosis they thought was portrayed by the character in the film. The correct response was Autism and ADHD. Nine participants recorded the same descriptor on the post and follow-up surveys, for example either "autism" or "autism and ADHD". However, 12 participants identified the diagnosis differently, usually omitting the ADHD descriptor from the follow-up survey, or adding Asperger Syndrome to the descriptor in the follow-up survey.

The diagnosis in *Snowcake* was high-functioning autism which only one participant recorded. Participants identified the diagnosis represented as autism most often and did so consistently over time (n=12 recorded the same terms at post and follow-up, and n=1 recorded 'not sure' what diagnosis was portrayed at either time point).

The participants that viewed *Molly* consistently identified the diagnosis of the Molly character correctly, as autism, at both time points (n=18), although one participant could not remember the diagnosis at follow-up and one participant

added the descriptor “mild mental retardation” at post and “mental retardation” at follow-up.

The participants that viewed *Mad Love* used a number of terms to describe Casey. Any term using the word “depression” was accepted, as the film did not clearly label the portrayal. Participants were not consistent in their recall of the diagnosis over time (n=7 same and 9 different). The differences were usually in recording “clinical depression” at post survey and “depression” at follow-up although one participant added “split-personality” at follow-up.

### 7.3.1.3 Recall of Archetypes

**Table 7.1: Archetypes recalled over time**

Film	Archetype	Archetype	Significant
	post-activity	follow-up activity	
<b><i>The Black Balloon</i></b>	7 burden	8 unintentional hero	-
<b><i>Snowcake</i></b>	7 unintentional-hero	10 unintentional hero	-
<b><i>Molly</i></b>	5 burden	7 victim	$p=0.05^*$
<b><i>Mad Love</i></b>	9 burden	5 burden 5 victim	-

There was a significant difference in the recall of archetype for *Molly*, from ‘burden’ to ‘victim’ ( $p=.05$ ) (Table 7.1). Although there was not a significant difference in the change in archetype from post to follow-up survey response for the other films there is a trend towards recalling the archetypes that have to

do with “others” (e.g. unintentional hero<sup>19</sup>; burden; victim) rather than “self” (e.g. villain; hero; unable to adjust) for the films collectively (Figure 7.1)

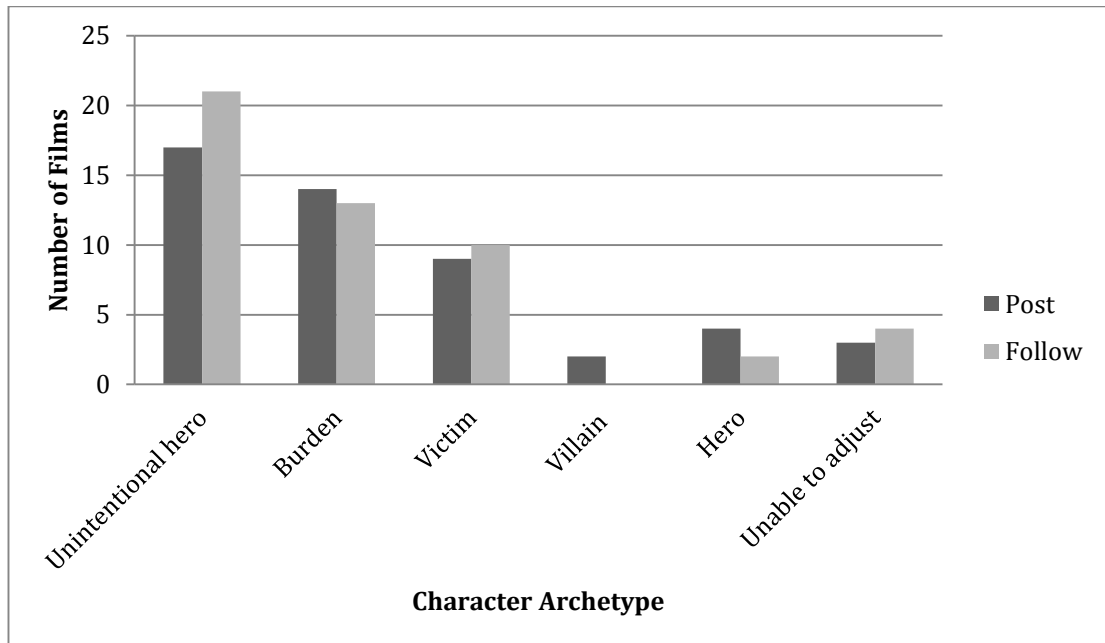


Figure 7.1: Changes in archetype T1 and T2

#### 7.3.1.4 Recalling entertainment and education value of films

When the entertainment scale was analysed by item, and all four of the films were taken as a singular group, two items showed significant differences. The participants rated the films as slightly less entertaining over time as indicated by the item ‘the movie was very entertaining’ ( $p=0.015$ ). Additionally, the films were deemed less involving and interesting over time as indicated by the item ‘I stayed “outside” the story’ ( $p=0.033$ ) (Table 7.2). However, the overall entertainment value and education value were not significantly different at the two time points.

A paired t-test for *Snowcake* showed near but non-significance for ‘the movie changes my perception of people with disorders’ over time ( $p=0.068$ ) where the mean score at post activity survey was  $M= 2.33$  and at follow-up it was  $M= 2.8$ . This means that immediately after viewing the film the participants

<sup>19</sup> Unintentional here is grouped with ‘others’ because the character is only a hero as a result of the circumstances and efforts of others opposed to ‘hero’ which is of their own intended action.

felt the movie changed their perception of people with disorders but four weeks later they were less likely to attribute changes in perception to the film.

For the participants that viewed *Molly*, the item ‘the topic of the movie was not presented in an educational way’ was significantly different ( $p= 0.030$ ) at post-activity and follow-up survey ( $M=2.95$  at post activity survey;  $M=2.4$  at the follow-up). This means that immediately after viewing the film the participants felt the movie was presented in an educational way but four weeks later they did not feel the movie was presented in an educational way.

**Table 7.2: Changes in recall of entertainment and education value over time**

Film	Entertainment Value			Educational Value		
	Post M	Follow M	Sig	Post M	Follow M	Sig
<i>The Black Balloon</i>	26.3	27.7	-	17.5	17.6	-
<i>Snowcake</i>	24.1	26.6	-	17.4	18.0	-
<i>Molly</i>	25.1	25.0	-	16.5	16.1	-
<i>Mad Love</i>	16	18.9	-	11.9	13.9	-

### 7.3.2 Perpetuating Images

The follow-up survey asked questions about whether the participants had discussed the film with anyone and whether they would recommend it to people wishing to learn more about the featured disability. There were 91 participants that responded to the questions pertaining to discourse and discussion. Each of the four films elicited responses from approximately 20 participants (*The Black Balloon*,  $n=24$ ; *Mad Love*,  $n=20$ ; *Molly*,  $n=22$ , *Snowcake*,  $n=21$ ; and other  $n=4$ ). The category ‘other’ indicates that the participant could not correctly identify which film they viewed. Crosstab analysis showed that for each of the films featuring a character with ASD, the participants found the film both entertaining and involving, while the control film was found to be neither entertaining nor involving.

When asked if they had discussed the film with peers, colleagues or family 75.8% said they did (*The Black Balloon*,  $n=21/24$ ; *Mad Love*,  $n=12/20$ ; *Molly*,  $n=15/22$ , *Snowcake*,  $n=18/21$ ; and 'other'  $n=3/4$ ). Additionally, when asked how likely they were to recommend the film to someone that wants to learn about the specific disorder/disability featured in the film, 70.4% said they would do so. A mean comparison showed that *The Black Balloon* ( $M=1.5$ ,  $n=24$ ) was the most recommended, followed by *Snowcake* ( $M= 1.88$ ,  $n=17$ ), then *Molly* ( $M=2.28$ ,  $n=18$ ) and finally *Mad Love* ( $M=2.78$ ,  $n=18$ ).

#### 7.4 Discussion: Lasting Memories

Consistent with the literature, the investigation into recall and memorable scenes found that highly emotive scenes, particularly those with negative valence, were recalled most frequently. It should be noted, however, that while *The Black Balloon* and *Mad Love* had specifically memorable scenes, *Molly* elicited recall around relationships and *Snowcake* around ASD-related behaviours. Irrespective, it is evident that exposure to emotional content in film can be recalled over time as demonstrated by the recall of emotionally valenced scenes on the post-activity survey and the follow-up survey four weeks later. There is also evidence to support the memory of the title event rather than the details of the circumstances surrounding the events. These moments are recalled, at times inaccurately, but these are the instances that are emotionally charged. In films featuring characters portraying disability these moments are the fragments of time in which the individual is not coping or has not responded to a situation "appropriately", which when recalled later as title events and paired with the label of autism can have enormous negative impacts on individuals affected by this disorder. For instance, Greenburgh (1988) contends particularly memorable or strong portrayals of characters may have more influence on the viewer than less memorable but more frequent exposures; thus a single portrayal could shape a viewer's attitude towards a minority group. The negative impact rests in the recall of these scenes that afford the viewer the opportunity to reduce the complexity of living with an Autism Spectrum Disorder down to a snapshot (Valentine, 2001).

The specific moments that are remembered from each film are particularly concerning because for each of the films, with the exception of *Snowcake*, recall of negatively valenced scenes was most common. A secondary theme in the recall responses was scenes that related to the characteristics of the disability that diverged from the commonly anticipated response for the situation, or demonstrated the extreme, uncontrolled emotional response of the character; for example, as one viewer of *Snowcake* observed, "...misplaced emotions, not crying that her daughter has died, but devastated by a stain on the carpet" (Participant 25).

In each of the films the focus was primarily on two main characters; the character affected by the disorder and the carer/significant other relationship. The *Black Balloon* elicited a larger number of empathetic comments with negative valence from the viewers than any of the other films in the study. The *Black Balloon* focuses on the relationship between the teen with ASD and his brother, however, it is the only film of the four in which the neurotypical character has a longstanding relationship with the affected character. The other three films all contain characters that recently became carers due to extreme circumstances, wherein there is a feeling of succumbing to the burden of care rather than living through the daily challenges of having a loved one affected by a lifelong disorder. One participant paraphrased, "The mum explained ...he (Thomas) is very lucky in comparison to his autistic brother who will never be able to do half the things he can do" (Participant 61). It is possible that the empathy felt by the viewers can be attributed to the enduring nature of the challenges faced by the characters and the Gestalt impact these challenges have on the family.

Further exploration of the comments elicited by each film highlights an interesting phenomenon. While *Snowcake* was perceived as entertaining and involving, it evoked limited recall over time and comments that were neutral in emotive content while *Mad Love* was viewed as unengaging and not entertaining but elicited a large recall of specific scenes. This raises the question - how is it that the film that elicited so much recall was not

entertaining or involving, while the film that elicited primarily neutral comments and vague recall was viewed as involving and worthy of recommendation?

The concept of “identification” discussed in media studies’ theories such as Entertainment-Education Theory (Bandura, 2001; Cohen, 2001; Moyer - Gusé, 2008) may be applied to understand this phenomenon. Identification refers to the process by which a viewer takes on the identity of a character (Moyer - Gusé, 2008). The viewers respond more readily to things with which they are familiar and develop parasocial relationships with characters (Giles, 2002). In the instance of *Snowcake* the viewer may have been familiar with the actress or actor but not with the characteristics associated with high-functioning autism. This lack of familiarity could offer an explanation for the neutral tone of the comments. Likewise, a possible explanation for the consistency in participants’ comments for *Mad Love* is a general cultural familiarity with the terms “depression” and “suicide”, and an ability to identify with the concepts as they are commonly discussed issues in Western societies. This empathy is illustrated through comments like, “found it hard to watch in a lot of ways, seeing someone just not being able to cope with who they are” (Participant 20).

Alternatively, it is possible that viewers are willing to recommend the film and found it engaging because they have misattributed credibility to the source of information. In this case, the source of information for the preservice teachers could be either the film narrative or the character portrayals (or actors). Fragale and Heath (2004) noted from their findings that viewers have a tendency to credit socially esteemed sources, for example the Centers for Disease Control, or sources that comply with their beliefs. If this is the case, perhaps the viewers believe that Sigourney Weaver (the actress that plays Linda in *Snowcake*), or the producer of the film, is a knowledgeable and credible source of information about autism. Alternatively, it is also possible that the viewers did not have any particular beliefs about HFA because they are not familiar with the term. This prospect offers the possibility that there was little or no resistance to overcome and that the film seemed like a ‘reasonable’ portrayal of the autism spectrum.

These possibilities are speculation, and further investigation into the attribution of source credibility would be beneficial, particularly for professionals and agencies that provide information about autism to the public. Through understanding the perceptions of credibility held by viewers, professionals may be able to select and recommend films that have already overcome resistance barriers and have authentic portrayals.

Another possibility for the vague recall of *Snowcake*, while participants still perceived it to be entertaining, is that there were no profound ‘title events’ (see Chapter 2) that evoked empathy, a parasocial sense of urgency, or something otherwise relatable. Although the participants’ ability to recall peripheral details from scenes was not explored, it is evident that the recall of details such as character names diminishes over time. In the follow-up survey most participants referred to the character by the actor’s name or the character role in the film (e.g., the *protagonist*, or *the brother of the guy with autism*). This phenomenon is also supported by the literature in that source detail is recalled better (Anderson & Shimamura, 2005).

The recall of climactic scenes may contribute to forming a ‘picture’ of a concept, for example when thinking of autism. The information the viewer retrieves from these scenes could lend insight into how complex experiences are recalled as discrete events. Furthermore, there is evidence that the participants talk to others about the films they have seen, with 75.8% stating they had discussed the film they viewed with someone. These “social mentions” further the potential impact on individuals with a disability that is featured in film, particularly if the recall is poor, generalised, and negatively valenced as is evidenced in the results discussed above. Take for example *Molly*. While nine participants said they would not recommend this film for someone that wanted to learn about the disorder 13 said that they would. Given some of the film’s content, encouraging friends and family to view this film is a potentially problematic as it increases the potential to ‘flock’ towards the obscured and unrealistic perception of living with autism displayed by the character. This film depicts a brain operation that “cures” a woman of autism and shows her

“sad decline back into autism” and yet it was deemed entertaining, involving, discussion worthy and was being recommended.

## **7.5 Conclusion: Lasting Memories**

Considering the observable power of film to draw viewers into the story, as well as the viewer’s limited accurate recall, further research into the real world impact of exposure to portrayals of human difference is required. Exploration of setting events prior to the emotive scene would be useful for developing better understanding regarding how active the viewer is in their consumption of the content (detail). This knowledge could assist in building awareness and promoting discussion of portrayals of human difference by the film industry and the educational impact of entertainment media.

The opening quote to this chapter states that we remember moments and that the ‘richness of life’ lies in what we have forgotten. In a surprising way, the findings of this stage of the study reflect this notion. They show that portrayals of the hard moments of living with disability are those that are remembered while the everyday existence (where the richness rests) fades from the memory, if it was ever noted at all.

## SECTION 4 - DISCUSSION AND CONCLUSION

**““Dark times lie ahead of us, and there will be a time when we must choose between what is easy and what is right.”**

*(Harry Potter and the Goblet of Fire, Director Mike Newell, 2005)*

## Chapter 8: Discussion

### 8.1 Thesis Overview

This thesis aimed to examine the films and the influence that exposure to entertainment film portrayals of autism had on preservice teachers, with a focus on understanding their attitudes and knowledge. The studies conducted examined the film industrys' representation of characteristics related to autism, and whether exposure to selected authentically, or inauthentically, framed portrayals affected preservice teachers' attitudes and knowledge differently, in the same way, or not at all.

To achieve this, this thesis presented the findings from two studies. Study One aimed determine the extent and nature of autism portrayals in entertainment films by collecting and analysing all English language films existing from 1979 through 2010 that feature characters with spectrum conditions. This was done to provide a picture of these conditions are represented through this medium. In summary:

- (a) The films were assessed against selection criteria, and a list was created of all entertainment films known to feature a character with Autism Spectrum Disorder (ASD);
- (b) Professionals working in the field of autism education and support were asked to complete an online survey to provide their insight on a subset of the above films featuring characters with autism or Asperger Syndrome;
- (c) The films were analysed for content and weighted on the merit of their portrayal of autism-related characteristics, archetype, the correspondence between the claimed condition and the results of the analysis, and professional comments.

The aim of Study Two was to explore how experience with autism and film exposure influences the knowledge and attitudes of preservice teachers by asking participants to: complete a pre-activity (baseline) survey; attend a viewing

activity and complete a post-activity survey; and complete a follow-up survey four weeks after the activity. In summary:

- (a) Preservice teachers registered for the Graduate Diploma in Education program at an Australian University in 2012 were recruited to participate in a study examining the impact of film viewing on their attitudes and knowledge with relation to ASD;
- (b) Participants were given an online pre-activity survey to determine their prior exposure to autism and Asperger Syndrome (AS) from media, through professional training, and through personal experience. The survey responses provided by the preservice teachers about prior exposure to disability and about specific films;
- (b) Participants attended a movie viewing activity where they viewed one of the four films and received free popcorn and drinks. Immediately following the viewing participants completed the post-activity survey;
- (c) Four weeks after the movie viewing activity participants completed a follow-up survey online;
- (d) Participants were offered an educational workshop about spectrum conditions which incorporated film and they were given a certificate of professional development for attendance.

The overall response rate was 52%; 163 pre-activity surveys were completed by the preservice teachers.

The first study discovered all films that portrayed characters with spectrum conditions and analysed the visual and aural content of 15 films that explicitly stated on the DVD synopsis that they contained a character with autism. The analysis of the films informed the creation of a weighted ranking scale, which, in turn, informed the films that were used in the second study involving preservice teachers. The findings from the second study indicate that there are specific qualities in films that resonate with viewers making certain filmic images

powerful enough to influence attitudes in a negative way. The key findings of the two studies are outlined below.

## 8.2 Key Thesis Findings

The following sections summarise and discuss the key findings of this thesis.

### 8.2.1 Key Finding One – Representations are Extreme

- *The personalities of those portrayed with autistic characteristics demonstrated extremes, rather than the more realistic characteristics of the normal distribution likely to be encountered in the school systems of Western Countries.*

In Chapter 3, 49 films that contended a portrayal of a character with autism were identified. The number of films that include characters portraying spectrum characteristics has increased over time and generally mirrors societal prevalence statistics. The majority of the 49 films were found in the drama genre (53%) and usually featured characters portraying autism (78%) rather than AS. Common themes and plotlines were evident from the synopses on the DVD jackets indicating support for literature that contends that films feature characters with autism (and often savant capabilities) to drive storylines. The films analysed in this research adhered to the medical model and used specific character roles to talk about autism in specific ways. For example, characters that are medical figures talk about autism in terms of limits opposed to characters portraying family members or friends talk about the burden of care; self-reports (the population of which is increasing) often speak of worry about not fitting in or of being different.

The analysis of filmic presentations in the second section of the thesis emphasises two main points. Firstly, the film industry continues to gravitate towards one type of character (e.g. needy and useful). Secondly, the films consistently associate the features of 'autism' with archetypes of burdens or unintentioned heroes (through savant ability), and profoundly over-dramatise the severity of the characteristics portrayed.

In films featuring characters with disability there are a number of stereotypes and archetypes that can commonly be found. Murray (2008) and Baker (2008) both describe the common archetypes found in films featuring characters portraying autism - those that are super-skilled and those that have an air of innocence that require protection (at times a burden). These archetypes make the character with autism integral in driving the plot of the film while at the same time delivering a 'hidden curriculum'<sup>20</sup> about the usefulness, or place in the world, of people with this label.

Fifteen films were included in the in depth analysis of character portrayals and dialogue regarding ASD. The CARS2 observational assessment tool was applied by a clinical psychologist and an education specialist to assess the film characters that were reported to display autism or AS related characteristics. The findings indicate, as summarised above, that filmic representations of autism are more severe than those that would be expected for the actual population. Contrary to the claims of previous literature (Baker, 2008; Conn & Bhugra, 2012; Draaisma, 2009; Murray, 2008) (and my beliefs from professional experiences prior to this thesis), the characters did portray a large number of behavioural categories; however, in accordance with literature they did this to the extreme. For example, to illustrate the common nomenclature of 'Autism', the character<sup>21</sup> can often be seen rocking (visual cognitive ability or anxiety) with a cocked head (not quite comprehending the world), eyes distinctly up and to one side (avoiding engagement, locked away, unemotional).

The exercise of having two professionals from different disciplines independently use the CARS2 to assess the filmic character portrayals resulted in both high inter-rater agreements and corresponding assessments of the 'overall' category. This indicates that professionals that are versed in the commonalities of spectrum characteristics (i.e., the triad of impairments) and how those characteristics may vary in their behavioural manifestations can use tools like the

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<sup>20</sup> Hidden curriculum is a term to describe all of the unspoken subtleties of social interaction (Brenda Smith-Myles)

<sup>21</sup> Refers to the common myths of the people with autism being unemotional, in another world, and having cognitive disabilities.

CARS2 for training and to gain accuracy in scoring methods. It should be noted that the inter-rater agreement between the educational specialist and the clinical psychologist was 87.4%, and rose to 93.5% when non-English speaking films were omitted from the analysis. This is likely because foreign films require split attention between the visual presentation of the narrative and the visual presentation of the dialogue. The inter-rater correlations are consistent with those reported by Schopler and colleagues (2010), indicating that film clips could be used in professional training for practitioners to practice using observational assessments and objective scoring.

#### 8.2.1.1 Addendum to Key Finding One- My Reflections

As a teacher and teacher educator, I frequently use film clips in teacher training forums. The analysis conducted in Study One of filmic content left me concerned that practitioners need to be mindful of what films they are utilising in training; and in training that incorporates film, need to consider a wide variety of portrayals to increase the 'experience' participants have with the vast phenotypic displays of the common characteristics of the spectrum. In the training that I have conducted I typically follow the format of education-video-clarification, a technique which has been found to be effective in increasing knowledge and improving attitudes (Chan, Mak, & Law, 2009).

Reflecting on the outcomes of these studies, especially considering the low scoring on the ranking and the homogeneous nature of the characters, I initially came to the conclusion that the use of film clips in training might be more harmful than beneficial to understanding spectrum characteristics; that is, until I analysed the film *Ocean Heaven*. This film was not used in the study with preservice teachers because it is subtitled which reduces accessibility and interferes with the inter-rater reliability in the CARS2 assessment. The purpose of this comment is to offer *Ocean Heaven* as a film that could be shown in its entirety or in clips to benefit learners. I contend that *Ocean Heaven* is the best/ highest-quality/ most authentic narrative and representation of a young man on the spectrum. The narrative acquaints the viewer with the story of a young man and his father as they deal with daily life events, where real issues occur. The narrative is focussed

on ‘morsels of truth’ displaying the life with which everyday people contend. Importantly, and respectfully, this is accomplished without explicit definition or focus on the fact that the young man is autistic.

This film, in my opinion, rates highly on the scale for a number of reasons. Firstly, it conforms to the development of a character, rather than the utility of a disability; this is consistent with the proposed duty of care guidelines. Secondly, the tone, lighting, and cinematography are soft and beautiful rather than dark and daunting (e.g., *Mercury Rising* or *The Black Balloon*). This feature of the film implies a different perspective on the family’s existence. The characters in *Ocean Heaven* DO discuss the mother’s suicide; they DO talk about the challenges; and they show the frustration, worry and challenge which is juxtaposed with love, support, affectionate humour, and getting on with the day. This film offers an everyday story, extraordinarily ordinary, and shows the young man learning, and the supporters that aim to guide him in life. It is my contention that a study of this film would result in a deep and meaningful conversation about the realities of life with, and perhaps for, individuals on the spectrum and the people that support them.

#### 8.2.2 Key Finding Two – Including Asperger Syndrome Changes the Results

- *The terminology, its interchangeable use, and the meaning attached to it impact attitudes and impressions of autism, Autistic Spectrum Disorder (ASD), and Asperger Syndrome (AS).*

‘Autism’ is in a unique space, between the medical model and the social construction model; somewhere between intriguing and confusing, with no known cause and an immeasurable number of variations in behavioural characteristics and cognitive abilities (Waterhouse, 2013). However, evidence suggests that the cumulative presentation of spectrum conditions in film portrayals is rather homogenous. This is demonstrated in the films through vague descriptors, the inaccurate and interchangeable terminology, and the images that are presented as actualities using the lens of a medical model.

To tackle the challenge of terminology and what is understood by using one word versus another, the second study separated responses to autism versus responses to Asperger Syndrome (AS). By allowing participants to identify previous exposure to both autism and AS separately, I was able to determine that participants thought they had equal amounts of personal experience with individuals with both AS and autism. I was also able to determine that participants considered more people with AS their friends than those with autism, and that participants were more accurate in identifying characteristics associated with AS correctly. This is interesting because the participants determined themselves to be slightly more familiar with autism than AS. Furthermore, the analysis of the survey data indicated that the attitudes towards AS were not significantly influenced by the filmic exposure. Likewise, when responses to questions about autism and questions about AS were combined as ASD, there was no significant change in attitudes or knowledge. These findings highlight the importance of specificity in training and investigation because, had the term ASD been used in the surveys, the participants with experience with AS may have compensated for the negative influence on attitudes masking the stigmatising effects of film exposure to autism discussed in Chapter 7.

The, arguably, essentially unknown nature of autism in combination with media coverage and the unclear use of terminology has given rise to a polarised perception of the spectrum. For example, stories in print media feature either spectacular feats or terrible tragedies (Jones & Harwood, 2009). This conception of the spectrum, as a continuum between two finite ends of an axis, serves to create a chasm and nullify the commonalities shared by members of this community. In this instance, people on the spectrum are placed on either side of a seesaw, sitting on the 'high' end or the 'low' end. The new term ASD used in the DSM-5 attempts to emphasise the commonalities within the Autistic Community; however, there is a need to understand how people interpret this term and whether the terminologies used influence the teachers' expectations. The results of the surveys of preservice teachers imply that there may be subtle differences in anticipated behaviours and challenges for students with AS versus autism (Chapter 6A).

The discussion of 'Autism' as the character is known through the abundance of literature, media and discourse surrounding him, emphasises the challenge surrounding language. Muddled terminology and the integration of qualities and characteristics that generally are not associated with autistic symptomology, but are frequently presented as commonplace, allow people to categorise (inaccurately and with detrimental effects) what the existence of an autistic person 'should be'. As novice learners try to make sense of the information with which they have been presented, they siphon through things that match and those that do not, adopting and refining their definition of ASD. The extreme presentation of the spectrum characteristics found in the films (Chapter 4A), and posted in newspaper headlines, clearly adhere to the perspective of the medical model. This perspective offers parameters for 'being autistic' through definitive language and singular labels.

### 8.2.3 Key Finding Three – Ranking Films is a Challenge

- *Film is a complex medium, involving lighting, sound, scripts, ability of actors, hidden education value, personal experiences and so on, making it difficult to provide a consistent ranking of top films.*

As discussed in Chapter 2, connection with characters, either wanting to be like them, feeling empathy or sympathy for them, or imagining the possibility of the impossible are all aspects of the film viewing experience that make movies so powerful (Dal Cin, Zanna, & Fong, 2004; Moyer-Guse & Nabi, 2010; Moyer-Gusé, 2008). Evocative images paired with catchy phrases make film one of the most accessible forms of media, so much so that you do not even have to have seen a particular film to be able to use its dialogue in a social context. For example, as discussed in Chapter 2, the film *Jerry McGuire* brought about two catch phrases: "show me the money", and "you had me at hello". These phrases, whether you have seen the film or not, are relatable. Essentially, they speak in lay language and 'catch on' – i.e., become popularized in the current culture.

As film is a social artefact, it can be used to explore the social conscience of the time, or be used for educative purposes (Arawi, 2010; Scull & Peltier, 2007). Entertainment-Education Theory (EET) describes the concealed influence of engagement with entertaining media. Although producers of film, perhaps other than those producing documentaries, may contend that they are story writing with no intention of educating the public, there is the distinct possibility that viewers are getting more than they paid for through the educative 'hidden curriculum' resulting from powerful music, lighting, camera angles, tones, and filming styles. Ranking films is a challenge because there is not only a multitude of strategies used by producers and directors to convey particular emotions, but also an infinite number of variables per individual viewer that make their interactions with the film an unknown. Regardless, a majority of people tend to stay within a specific genre of film and each genre has its own formula that works with the general viewer. Therefore, the ranking of films can be done through the analysis of authenticity, keeping in mind the 'duty of care' guidelines espoused in this thesis to avoid perpetuating stigmatising ideas or the continuation of the homogenised and personified 'Autism'.

#### 8.2.4 Key Finding Four – A Duty of Care Guideline

- *Extreme representations that adhere to the medical model may contribute to the negative emotions reported by teachers in the literature, and influence the increase in stigmatising attitudes resulting from specific film exposure; therefore care must be taken when featuring characters with spectrum conditions.*

A stigmatising effect of a singular exposure to an autism representation on preservice teachers was demonstrated. The fact that one emotive film can influence attitudes supports the 'drench' hypothesis proposed by Greenburg (1988). This hypothesis, discussed in Chapter 2, states that a highly emotive or memorable exposure can have immediate influence on attitudes and behaviours. Since the film that produced a statistically significant change in attitudes was emotive, and conflict scenes were recalled with relative clarity, it makes sense that the images from such films will become associated with beliefs about the topic.

Unfortunately when the viewers recalled the films, they recalled them with the featured disability rather than the plot synopsis. Furthermore, the films adhere closely to the paradigm of the medical model, and therefore present a perspective of 'limits' and 'burden'. It is not difficult to suppose that the novice teacher could believe that a student with an autism label would resemble the consistent images they have encountered through media. If this is the case it can be assumed that negative attitudes held by teachers will have a negative influence on their personal and professional behaviours; this may offer an explanation for the hesitation and unfavourable mindset teachers have about autistic students as reported in the literature (Helps et al., 1999; Soto-Chodiman et al., 2012).

The ranking system that was devised (Chapter 5) to identify an authentic representation of an individual on the spectrum showed that even the top film featuring a character with autism was lacking, only scoring 67 of 100 possible points. The results of the ranking system led to the design of 'Duty of Care' (DOC) guidelines for film producers (Table 5.3). The DOC guidelines emphasise the necessity to tell the individual story rather than have the disability featured as a plot device. By following the guidelines, films are more likely to promote individuality rather than further validating Autism's limited repertoire. Additionally, the themes emerging from recalled scenes (Chapter 7) indicate that narratives that focus on relationships are more memorable and evoke the essential empathy response from viewers. On the other hand, the film that focused on characteristics of autism, *Snowcake*, was not memorable and was deemed confusing, therefore unlikely to achieve the market goals of the film industry. These findings support the claim that the DOC guidelines could benefit the community and the film industry.

#### 8.2.5 Key Finding Five – Creating Empathy Through The Burden Archetype

- *Film viewers empathised with those who had to deal with individuals having autistic characteristics, rather than the character on the spectrum.*

The analysis of film dialogue (Chapter 4B) highlighted themes in how characters playing specific roles talk and feel about autism. For example, the doctors spoke of diagnostic characteristics and limitations, while the family and friends talked about the challenges of living with someone with autism. These themes were reflected in the way that the preservice teachers talked about autism as they saw it in the film (as discussed in Chapter 7). For example one participant stated, “it was interesting and gave a very personal account of the family’s struggle and society’s view”. In addition, the highly emotive films elicited greater entertainment scores and were films where empathetic comments were directed at the neurotypical characters because the participants found the characters portraying autism to be confusing. These results support Entertainment – Education Theory in that *The Black Balloon*, which was recalled with detail and was not perceived as confusing, caused an increase in stigmatising attitudes and was deemed to evoke empathy (cognitive empathy for Charlie and emotional empathy for Thomas (neurotypical)). For example, one participant demonstrated cognitive empathy for Charlie with their statement,

“the one scene that stood out to me was when Charlie got off the bus at his brothers’ (sic) school and all the high school kids started picking on him for being different. It was a rather distressing scene as I have a cousin who has a severe disability which causes him to be stared at in public. While never having experienced the violence that was demonstrated in this scene in the film, it did hit close to home about people's attitudes towards being 'different'” (Participant 42).

Another participant shows emotional empathy for the neurotypical characters by highlighting “the frustration that the family members feel; Thomas wishing (Charlie) was normal; the fight between the two brothers; Thomas crying in the toilet” (Participant 37) .

#### 8.2.6 Key Finding Six – Knowledge Did Not Change

- *Regardless of the film's portrayal of the autistic individual, the knowledge about spectrum conditions that the preservice teachers had entering the study was not significantly changed by the film.*

The fact that knowledge was unchanged is not surprising. The knowledge questions in the survey addressed common knowledge and common myths, both of which were presented through the film representations in the study. Therefore, the participants that knew the common characteristics prior to beginning the study would have maintained that knowledge but would not have improved because the portrayal of characteristics does not extend beyond the classic stereotyped version of 'Autism'. Additionally, common myths (for example, savantism being part of spectrum affectedness) are represented through film and would either confirm misguided understandings or be dismissed as myth by the more knowledgeable viewer. Furthermore, the film portrayals were generally extreme in nature and failed to show any character development or learning on behalf of the character on the spectrum. This lack of personal quality or growth and learning further promotes the generic understanding of 'Autism'. Through repeated exposures to the homogenous 'Autism' character, the learning opportunities that the viewer is provided with are limited and serve to reinforce incorrect knowledge and solidify negative beliefs.

#### 8.2.7 Key Finding Seven – Remembering the Dark Side

- *Regardless of whether the viewers have a positive or negative impression of the film, their memories of the negative events prevail.*

The preservice teachers in the second study recalled the highly emotive scenes, which were usually negatively valenced. These were the scenes that show the character portraying autism being unable to cope with everyday experiences. Furthermore, the language the participants used when describing scenes indicated their acceptance of this as a portrayal of 'Autism' rather than the individual with autistic characteristics. For example, participants often referred to the neurotypical character by name, 'Thomas', and the atypical character by

their diagnostic label, the ‘autistic boy’. Additionally, the preservice teachers used polarised language indicating their acceptance of the ‘low’ and ‘high’ functioning, or ‘low’ and ‘high’ spectrum ideology, which results in specific anticipated behaviours and skills of people with autism. For instance, when asked to identify which disability or disorder was in the film that they viewed terms such as, ‘high-functioning’, ‘severely autistic’, ‘autistic but not bad’, and ‘mild autism’ were used to describe the character.

Irrespective of the framing of the film, whether accurate or inaccurate and irrespective of the archetype, there is a detrimental lasting influence on the attitudes of the participants (demonstrated through slightly, but not significantly, less open mean scores than at pre-test). Empathy and perceived reality are key factors in determining how influential a film is, and how the audience is impacted by the representation of the spectrum; this was demonstrated in the structured equation models in Chapter 6B. This phenomenon was also demonstrated through the lack of recall surrounding *Snowcake*, which viewers found confusing due to the character’s unconventional emotional reactions in the film.

#### 8.2.8 Key Finding Eight – Autism Without Person

- *Film has transformed the person on the spectrum into ‘Autism’, disconnected from the “person”.*

The filmic presentation has given rise to the commonly known celebrity persona, ‘Autism’ about which people read, see, and get to know through virtual and social constructs such as movies and conversation. ‘Autism’, the character that the lay public has come to know through film and media exposures, carries with it some common myths. As McLeod (1977) discussed, the challenge with a myth is it can neither be accepted nor disregarded. Borrowing from McGuire’s idea of autism as a ‘thing’, film portrayals have created ‘Autism’ without person. The myths associated with the autism persona (e.g., savant skill and severe deficit in every other capacity) as it is presented through film, encases ‘Autism’ in a shell that looks like a typical human body but is restricted by limitations, oddities, and inabilities - distinctly apart from the norm. This embodiment of the autism spectrum requires the viewer to accept, or disregard, the entire being.

The familiarity and consistency with which autistic characteristics are portrayed through media allows autism to exist in a personified manner. In accomplishing this Frankenstein-esk being, Autism is encapsulated for the viewer to make his acquaintance. The idea that 'Autism' is personified and exists disconnected from the 'person' is inherently limiting and disregards the many facets of an individual's personal, social, and cognitive makeup. Furthermore, the variations across the members of the Autistic Community are reduced through both physical and verbal methods in film. For instance, in spite of the use of the term 'spectrum', film portrayals focus on similar repertoires of physical indicators of difference, and reinforce those ideas with dialogue that reiterates the perception of limitations.

In addition to the limitations arising from the personification of 'Autism', challenges arise from the homogeneity with which the spectrum is represented in film. Robert Schultz<sup>22</sup> has been quoted as saying, "when you meet one person with autism, you've met one person with autism". Although intended to highlight the individuality of each member of the Autistic Community, the corollary to this quote highlights that if you've only met one person with autism then your 'understanding' of autism comes from that one experience, creating an outlook based on one 'data point'. When you have met two or more people from the Autistic Community then you may notice some of the commonalities and some of the variations. Once you have met a dozen people from the community and observed many of the differences and commonalities, the need for an open mind and individual assessment of reinforcers, strategies, and approaches using tools that support the common characteristics becomes evident.

Unfortunately, if a person is relying on, or attributing value to, the parasocial introduction to the Autistic Community (i.e., through film) the homogeneous presentation of spectrum conditions in film means that even if they watch 10 films they only come to know one 'person' with autism (that is the celebrity persona of "Autism"). This phenomenon might result in inexperienced

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<sup>22</sup> Author and researcher

preservice teachers disregarding the first, or subsequent, students they meet that are on the spectrum as 'exceptions' to their categorical understanding of autism. The more experiences that the teacher has that are similar (whether real or perceived), the more credence is given to the preconceived idea that 'all people with autism are like X'. The exception fallacy continues, maintaining the cultural asylum of limits and 'otherness', until the preservice teacher has accumulated enough experience with individuals that do not comply with their beliefs about 'Autism'. Furthermore, Kinder, (1984) contends that the experience of having watched and listened to particular videos makes connections in the brain which results in evoking specific images in the mind of the viewer every time they hear that music. Similarly, since the viewers recalled the highly emotive 'failure to cope' scenes it is plausible that the visual images in their mind associated with the word 'autism' are likely to be tense, dramatic, and negative. In this way, if the only experience preservice teachers have of autism is through filmic or media exposure, then they will have a strong case to accept the stereotyped and severe qualities of the celebrity persona 'Autism'.

### **8.3 Limitations**

The limitations of each study have been discussed in the respective chapters. In this section the limitations of the major components of the study will be discussed, as well as the limitations as a whole.

#### **8.3.1 Films**

The exclusion criteria for the film sample may have omitted particularly authentic and well-rounded portrayals from the final list. Furthermore, the choice to exclude subtitled films from the second study meant that the top rated film featuring a character with autism was not viewed, and that cultural comparisons in the representation of spectrum conditions and their influence were not explored.

In addition, the survey directed at professionals to confirm or negate the presence of characters with disability had a low response rate and most

respondents had not seen many of the films. Thus, caution should be exercised when referring to the weighted ranking as points were awarded for professional commendations.

Finally, the method for ranking the films was primarily based on objective analysis of film content and did not account for all of the subjective variables that influence emotional response to the film, the overall tone of the film, or the personal experiences that affect interpretations.

### 8.3.2 Teachers

Recruitment of the preservice teachers was limited to one cohort of 163 members at a university in Australia in 2012. Because this thesis aimed to discover the influence of entertainment film portrayals of autism on the knowledge and attitudes of preservice teachers, it was reasonable to recruit from a University course. Although acceptance into teacher education programs is not gender or ethnicity specific, there are typically more females than males in teacher education programs in Western countries. Investigation of the knowledge and attitudes held by preservice teacher populations in other cultural climates could provide deeper insight into the role of entertainment film or media in general.

It is likely that the timing of delivery of the surveys, the voluntary participation, and nature of the intensive professional degree course affected response rates. The small sample size again warrants caution in the application of findings.

Finally, the survey methodology, in spite of having some opportunity to expand on information provided, did not produce the richness of data that could have been gained through the use of qualitative methods such as interviews.

## 8.4 Strengths of the Study

### 8.4.1 Novel approaches to analysing characters portraying autism conditions

This study used an assessment tool, the CARS2, to identify the presence of behavioural categories associated with autism. In using an empirical tool to objectively determine how character portrayals represent autistic characteristics, the analysis of the scope and severity relative to the actual population was possible. Furthermore, this method of analysis was successful in high score agreement between two independent raters with different professional backgrounds. This finding indicates the potential to use film characters to train practitioners, and to practice assessment skills, without involving children or adults.

In a second novel approach (with regard to film portrayals of the autism spectrum) the dialogue of the characters, both neurotypical and portraying the autism spectrum, was analysed. This type of in-depth analysis has not been carried out on films featuring characters with autism and was not found in the literature review of disability in entertainment media. This approach assumed that media is reflective of, or produces, social beliefs; and thereby provided insight into the current cultural climate surrounding autism spectrum conditions.

A third aspect of the approach to note is that this thesis investigated both top and bottom ranked films. This approach has clarified that it is important to consider not just the quality of the disability representation but also narrative factors, such as realism and qualities that evoke empathy.

### 8.4.2 Qualitative and quantitative data

This study used a universally accessible medium, film, to explore the influence of images of autism on the attitudes and knowledge of people in influential positions (preservice teachers). Using a combination of both qualitative and quantitative items in the surveys provided insights into how viewers (specifically teachers) read and remember images of autism. Furthermore, particularly relevant to this participant population was the inclusion and adaptation of questions from other

studies (Ritterfeld & Jin, 2006; Farnall & Smith, 1999; Wai Au & Man, 2006) to create an attitude scale that measured: comfort in proximity to people with autism; emotional response to people with autism; and perceptions of capability. These measures showed the stigmatising effect on preservice teachers of a singular exposure to an autism representation.

The qualitative aspects of the study allowed the participants to describe scenes that were meaningful to them in their own words. Having the participants complete these questions immediately after viewing the film and again four weeks later allowed for a comparison of the specific scenes that were recalled, and also the language and detail with which they were recalled. Further, the participants recorded their thoughts on what disability was being portrayed and how well they felt it was portrayed; this facilitated insight into the content and dialogue related to the disability as well as their processing of the visual presentation of characteristics associated with the disability.

Finally, the participants were invited to explain whether they would recommend the film, whether they discussed it with others, and what they said about it. This information offers a glimpse into how the films are summarised and how they enter social discourse.

## Chapter 9: Conclusions and Recommendations

### 9.1 Conclusions

This thesis set out to explore the influence of exposure to entertainment media representations of the autism spectrum on the knowledge and attitudes held by preservice teachers. To understand the entertainment media source of influence, an analysis of both the visual and auditory information about autism presented by film characters was conducted using 15 films that met the Study One inclusion criteria. The analysis of representations provided insight into the curriculum on autism spectrum disorders according to certain entertainment films. It was discovered that the entertainment media curriculum on autism outlines the 'autistic life' by covering topics such as severity without diversity, existing as a burden incapable of engaging in a meaningful life, and trapped in limitation<sup>23</sup>.

Exposure to the negatively valenced information about autism presented through these films resulted in a negative influence on the attitudes of the preservice teachers through one film viewing occasion. Surprisingly, the film that had a statistically significant negative influence on attitudes was *The Black Balloon*, a film that received top rating (albeit a relatively low score). This result may be related to the highly emotive title events (climactic scenes) found in this film which drew the viewer into the narrative thereby disarming their resistance to the 'modelling' of attitudes towards autism found in the film.

The analysis of memorable images and changes in attitude provided insight into possible reasons for the increase in stigmatising attitudes resulting from exposure to an accurate portrayal of autism characteristics (determined through assessment using the CARS2). First, the archetype of the character portraying spectrum qualities was the burden archetype. The dialogue from all of the characters in *The Black Balloon* (excluding Charlie who was non-verbal and

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<sup>23</sup> Professionals reported a number of films to be good and accurate representations that were not analysed in this thesis because they did not explicitly state the representation of ASD or they were released after the inclusion date.

therefore made no Self-Report) portrayed frustration, anxiety, and intense negative impacts on the neurotypical family members. In Chapter 6 it was demonstrated that the burden archetype is very powerful because it evoked empathetic responses from the preservice teachers. This empathetic response is essential to connect with, and be absorbed by, the narrative. These two variables, connection and absorption, are essential to being entertained (Dal Cin, Zanna, & Fong, 2004; Danescu-Niculescu-Mizil et al., 2012; Moyer-Guse & Nabi, 2010). In accord with Entertainment-Education Theory, whilst viewers are entertained they are susceptible to the 'curriculum' of the film. Since the burden archetype evokes the empathetic response there is opportunity for the negative 'hidden curriculum' to be adopted.

A second possible reason for the negative influence on attitudes resulting from viewing *The Black Balloon* is that it is realistic and relatable, particularly compared with the other ASD portrayals. These two variables afford the viewer the opportunity to imagine what it would be like to be one of those characters, because there is a potential for them to be one of those characters. However, there is an important exception to consider. The analysis indicates that the viewer is unlikely to relate to the character on the spectrum as, for example Linda in *Snowcake*; this finding is unsurprising considering all of the viewers were neurotypical and autism is not acquired, therefore the neurotypical viewer will never be like the character on the spectrum.

Finally, the scenes that the preservice teachers recalled most often related to moments of distress and failure to cope experienced by the character on the spectrum (or with the disability, as the same pattern was noted for *Mad Love*). These scenes are highly emotive but again promote the negative curriculum consolidating beliefs that people on the spectrum do not manage in 'our world'. Worryingly, this concept could translate into the belief (indicated by some teachers in the study by Gaad (2007)) that children on the spectrum do not belong in 'our' classrooms; this is a consideration for future research.

## 9.2 Further Research

Further investigation is warranted into how the unfettered acceptance of the media-endorsed image of 'Autism' translates into professional behaviours. This is required particularly since the literature states that teachers feel apprehensive, angry, and overwhelmed at having a student on the spectrum in their class.

Furthermore, understanding the use of film in training is particularly important considering the movement towards using popular cultural artefacts to demonstrate concepts to professionals. Understanding the subtleties of the film medium (e.g., lighting, music, non-verbal messages), and how they affect the entertainment value of the film, is important. This understanding would aid in producing a rating system that focused on the viewers' interpretation rather than the character presented by producers. This is important considering the potential negative influence on attitudes and the potential for film representations to corroborate myths and stereotypes held by viewers. Such investigation may also provide insight into why viewers adopt some notions presented through film and not others.

Further investigation is warranted to determine how this accessible medium can be used in preservice teacher education to build reflective practice skills and conscious 'reading' of new knowledge or new awareness in an effort to highlight the variations and individual strengths amongst members of the Autistic Community. Perhaps this could be accomplished through teaching media literacy skills to preservice teachers in an effort to produce better training outcomes (in terms of open attitudes which bolster enthusiasm) and ultimately improve the classroom situation. Through media literacy the teachers could dissect the portrayals, identify the accuracies and dramatisations, and engage in discussions that would be less passive than the traditional workshop, which may aid in engaging the teachers in a meaningful way towards an excited and inquisitive perspective of students on the spectrum. Using film in training could also increase knowledge of the commonalities related to the triad that members of the Autistic Community share.

Finally, the use of carefully selected film clips may be valuable in teaching concepts, exploring attitudes, and giving visual salience to the characteristics and behaviours being discussed. Although some researchers have investigated various models for de-stigmatising attitudes using film (Ritterfeld & Jin, 2006; Scull & Peltier, 2007), there is still little understanding about the implementation of film in training. For example, whether clips or entire films are more powerful; whether the order of clips and concepts (e.g., training-film(clip); film(clip)-training; or some other combination) makes for positive production of knowledge and open attitude; or whether there are other factors entirely that influence the productive use of entertainment media in professional training.

### **9.3 Final Thoughts On 'Autism' As Its Own Character**

These studies explicitly identified the potential consequence of exposing viewers to portrayals of a character labelled with a disorder. In the second study involving preservice teachers it was evident that certain filmic images can support preconceived notions of what a person with said disability is like. Whether a viewer has adopted the lens of a medical model or a social construction model through which they view these films, the result is the same since each representation, with a very few exceptions, is flawed in one major way. The flawed commonality amongst these films is that they all feature 'Autism', the celebrity persona, rather than an individual's story of autism affectedness. In essence, the actor could have been the same in each and every movie because the variations of spectrum affectedness portrayed are limited at best, and often combined with other unidentified diagnoses (e.g., savantism) to make the character interesting or 'useful'.

Although the conceptualisation of 'autism' may still be limited to the celebrity persona there are some changes that offer hope for more dutiful authentic representations of the experience of autism. Firstly, the inception of the 'spectrum' may begin to depolarise concepts of autism affectedness if it is perceived from the standpoint of an individual experience. Secondly, the increased production of films featuring self-report from characters portraying

the experience of being on the autism spectrum may serve to counter some of the clichéd and stereotyped expectations that inexperienced viewers may hold. The inexperienced viewer may have considered media presentations of spectrum conditions to be ‘gospel truths’ about what it means to be autistic. This possibility is reflected in a comment made by a participant that viewed *The Black Balloon*, “I told them (my friends) what the movie was like and how living with someone with these needs affects people”. The phrase ‘someone with these needs’, represents the faceless, disconnected entity of ‘Autism’. This statement highlights the impact of a single film exposure on the belief, albeit from a neurotypical standpoint, that there is a contrived understanding of the experience of living with someone on the spectrum (as though there is only one experience and one individual).

The film *The Black Balloon* had a negative influence on the attitudes held by preservice teachers and, as indicated by the comment above, resonated with the viewers quite profoundly. In addition, the participants indicated that they would recommend this film to others that wanted to learn about disability. This is cause for concern because the preservice teachers indicated that ‘word of mouth’ and ‘family’ are key sources of learning about disability, and viewing this particular film caused an increase in stigmatising attitudes towards autism. The challenge here is that the preservice teachers recalled the highly emotive scenes (moments of difficulty related to autism) and will relay the message that you can learn about autism through this filmic lens.

The implication is not that *The Black Balloon* is a ‘bad’ film, quite the contrary in fact. *The Black Balloon* is undoubtedly representative of someone’s story; meaning, I contend, that it is based on the ‘morsels of truth’ from someone’s (or many people’s) experiences actually lived. This film ranked highly on the scale because it is authentic to a particular lived experience. The difficulty is that this film, like many others, carries with it a dark tone, a burden archetype, and presents an existence that consists solely of challenge and hardship. I venture to suggest that there are many parents, friends, siblings, and partners of people in the Autistic Community that find moments challenging, endure hardships, at

times feel a sense of burden, but simultaneously feel joy, love and happiness about their situations. Therefore, taking films as a profound truth when they emphasise the negative without equal credence to the positive, or when they categorise the individual with limiting criteria rather than showing their diversity, can unsurprisingly lead to a distancing effect. The findings of this thesis have led to the conclusion that 'learning' occurs from viewing film and is mediated through the entertainment value of a film, therefore there is a need to further investigate media literacy and the use of media in professional training.

Self-reflection by viewers on their constructed ideas about autism could reduce the likelihood of categorising persons through rigid expectations and restraining those with autism to the cultural asylum. The ability of the inexperienced preservice teacher to actively confront their capture by the culture of limits presented through film and develop a critical awareness of these representations could support the preservice teachers in developing a more accurate and less homogenised understanding of the autism spectrum. The reflective adoption of 'new information' is a valuable skill for beginning a career in education that affords equal opportunities to all students.

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## **Movies Mentioned in this Thesis**

A Beautiful Mind. 2001. Dir. Ron Howard

Adam. 2009. Dir. Max Mayer

Autism: The Musical. 2007. Dir. Tricia Regan

Backstreet Dreams. 1990. Dir. Rupert Hitzig and Jason O'Malley

Batman. 1989. Dir. Tim Burton

Ben X. 2008. Dir. Nic Balthazar

Big Bang Theory. 2007 TV series. Creator Chuck Lorre and Bill Prady

Bless the Child. 2000. Dir. Chuck Russell

Burning Bright. 2010. Dir. Carlos Brooks

Change of Habit. 1969. Dir. William A. Graham

Chocolate. 2009. Dir. Prachya Pinkaew

Cube. 1998. Dir. Vincenzo Natali

Dad's in Heaven with Nixon. 2010. Dir. Tom Murray

Dark Floors. 2008. Dir. Pete Riski

Family Pictures. 1993. Dir. Philip Saville

Fielder's Choice. 2005. Dir. Kevin Connor

Fly Away. 2011. Dir. Janet Grillo

Freaks. 1932. Dir. Tod Browning

George. 1996. Dir. Henry Corra and Grahame Weinbren

Girl Interrupted. 1999. Dir. James Mangold

God's Ears. 2008. Dir. Michael Worth

Guarding Eddy. 2005. Dir. Scott McKinsey

Her Name is Sabine. 2007. Dir. Sandrine Bonnaire

If You Could Say It In Words. 2008. Dir. Nicholas Gray

Jaws. 1975. Dir. Steven Spielberg

Jerry Maguire. 1996. Dir. Cameron Crowe

JFK. 1991. Dir. Oliver Stone

Killer Diller. 2004. Dir. Tricia Brock

Mad Love. 1995. Dir. Antonia Bird

Magnificant 7. 2005. Dir.

Marathon. 2005. Dir. Yoon-Chul Jeong

Mary and Max. 2008. Dir. Adam Elliot

Mercury Rising. 1998. Dir. Harold Becker

Midwinter Night's Dream. 2004. Dir. Goran Paskaljevic

Miracle Run (The Unexpected Journey). 2004. Dir. Gregg Champion

Molly. 1999. Dir. John Duigan

Mozart and the Whale. 2006. Dir. Petter Naess

My Name is Khan. 2010. Dir. Karan Johar

Napoleon Dynamite. 2004. Dir. Jared Hess

Nell. 1994. Dir. Michael Apted

Nightworld: Lost Souls. 1998. Dir. Jeff Woolnough

Nobody Nowhere Donna Williams in development. 2009. Dir. Dan Ireland

Normal People Scare Me. 2006. Dir. Keri Bowers and Taylor Cross

Ocean Heaven. 2010. Dir. Xiao Lu Xue

One Flew Over the Cuckoo's Nest. 1975. Dir. Milos Forman

Parenthood. 2010 TV series. True Jack Productions

Prism. 2007. Dir. David G. Simmons

Psycho. 1960. Dir. Alfred Hitchcock

Rain Man. 1988. Dir. Barry Levinson

Relative Fear (The Child). 1995. George Mihalka

Silence of Adultery. 1994. Dir. Steven Hilliard Stern

Silent Fall. 1994. Dir. Bruce Beresford

Snow Cake. 2007. Dir. Marc Evans

Son-Rise: A Miracle of Love. 1979. Dir. Glenn Jordan

Spoonface Steinberg. 1998. Dir. Betsan Morris Evens

Temple Grandin. 2010. Dir. Mick Jackson

Terminator. 1984. Dir. James Cameron

The Black Balloon. 2007. Dir. Elissa Down

The Daisy Chain. 2009. Dir. Aisling Walsh

The Horse Boy. 2009. Dir. Michel Orion Scott

The Miracle Woman. 1931. Dir. Frank Capra

The Sandwich Kid. 2007. Dir. Keri Bowers

Touch of Truth (Cries from the heart). 1994. Dir. Michael Switzer

Treasure Diversity. 2008. Dir. Drew Morton Goldsmith

Under the Piano. 1995. Dir. Stefan Scaini

Wretches and Jabberers. 2011. Dir. Gerardine Wurzburg

XMen. 2000. Dir. Bryan Singer

ZigZag. 2002. Dir. David S. Goyer

## Appendices

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## Appendix A: Survey of the Professionals

### ASD Professional Survey

Welcome to the ASD representations in Entertainment Film survey!

You have been selected to participate in this survey because you work with an agency that is recognised as having specialist knowledge in the field of Autism Spectrum Disorders (ASD).\*

We are seeking to identify how 'Autism' is portrayed to the general public through the entertainment film industry. As a professional working in the field of ASD, we are seeking your opinion on the prevalence and accuracy of those portrayals. In addition, we are interested in understanding your views on teacher preparedness in effectively supporting students with ASD and what educational environments exist in your area for students with ASD.

Your responses are anonymous and should be based on your personal opinion and not necessarily those of the organization or foundation for which you work. The survey should take no more than 20 minutes. You may exit the survey at any point prior to submission. If you would like to receive findings pertaining to this research, please leave your email address at the end of the survey. This information will be separate from your answers to maintain anonymity.

Finally, the information collected from this survey may be used for further research, presentations, conferences and publications.

Thank you for your participation, let's get started!

\*For the purpose of this study, ASD is defined to include all levels of affectedness within the autism and/or Asperger's Syndrome.

**\*1. I have understood the intent of the survey and how the information I provide will be used to inform research. I hereby consent to complete this survey**

- ☐ Yes  
☐ No

**\*2. In which country are you currently employed?**

- ☐ Australia ☐ United Kingdom  
☐ Canada ☐ United States

**\*3. What is your professional role?**

- ☐ Management ☐ Education Provider  
☐ Consultant ☐ Training  
☐ Administrator ☐ Therapist  
☐ Other (please specify)

## ASD Professional Survey

**\*4. How many years have you been working in the field of Autism Spectrum Disorders?**

- ☐ 1-3      ☐ 4-6      ☐ 7-9      ☐ 10 +

**\*5. Do you have experience working in Primary and/or Secondary educational environments?**

- ☐ yes  
☐ no  
☐ both

**\*6. What are the educational options for students affected by ASD in your area?  
Please tick all that apply.**

- ☐ Mainstream (no additional support)  
☐ Mainstream (additional support, ie. educational assistant)  
☐ Satellite classrooms (resource classrooms) within mainstream schools  
☐ Special education schools (separate entities to mainstream schools)  
☐ Private educational environments (ABA/IBI schools, TEACCH, other)  
☐ I am unsure

Other (please specify)

**\*7. What terminology is commonly used in your workplace? Please tick all that apply.**

- ☐ ASD  
☐ Autism and Asperger's Syndrome  
☐ High functioning, Low functioning  
☐ Mild, moderate, severe

Other (please specify)

**\*8. If you use the term ASD what are you referring to?**

- ☐ The spectrum of autism, including Asperger's Syndrome  
☐ The spectrum of autism, excluding Asperger's Syndrome  
☐ All diagnoses under the PDD umbrella  
☐ Other

Other (please specify)

## ASD representations and teachers

## ASD Professional Survey

We would like to know what you think about teacher preparedness for working with ASD affected individuals and how, in your opinion, media may influence their attitudes and knowledge about ASD.

**\*9. Do you think the average newly qualified teacher has heard the term....**

☐ ASD
 ☐ Autism
 ☐ Asperger's Syndrome
 ☐ I don't know

**\*10. In your opinion, how accurate is the average newly qualified teachers understanding of?**

	accurate	limited	inaccurate	I don't know
Autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spectrum Disorders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Savant diagnosis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The triad of impairments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The common characteristics of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The types of support that could be provided to the student	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*11. What is the most likely source of the average teacher's 'idea' of ASD, in your opinion? Please tick all that apply.**

- ☐ news media  
☐ entertainment media  
☐ training/workshops/seminars  
☐ personal contact

Other (please specify)

## ASD Professional Survey

### \*12. How prepared do you think the average newly qualified teacher is to work with a student affected by ASD?

	very prepared	adequately prepared	underprepared	unprepared
knowledge of characteristics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
teaching strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
behavioural strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
differentiated planning skill	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
inclusive classroom management skill	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
knowing where to gain support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 13. If you were going to show pre-service teachers entertainment film representations of ASD which film would you use?

As the best/most accurate representation of autism?	<input type="text"/>
As the best/most accurate representation of Asperger's Syndrome?	<input type="text"/>
As the poorest/most inaccurate representation of autism?	<input type="text"/>
As the poorest/most inaccurate representation of Asperger's Syndrome?	<input type="text"/>

## Entertainment Media

The following questions are about media and ASD generally. For the purpose of the questionnaire visual entertainment media refers to film and/or television.

### \*14. Please respond to the following question by identifying specific topics or show titles in the blank next to the type of media (for example: television shows- episode of 'House'; news media- funding). If a specific type of media does not evoke an immediate response leave it blank.

#### When I think of ASD found in ... type of media the first thing that comes to mind is?

News media	<input type="text"/>
Television shows	<input type="text"/>
Movies	<input type="text"/>
Novels	<input type="text"/>
Newspaper articles	<input type="text"/>
Magazines	<input type="text"/>

## ASD Professional Survey

**\*15. In general, how do you feel people affected by ASD are represented by visual entertainment media in your country?**

**16. Have you used Entertainment media for training/awareness purposes?**

- ☐ yes  
☐ no

## Film Representations of ASD

This section of this survey asks you questions about different movies containing characters affected by ASD. Please offer as much information as possible in support of your opinion regarding portrayals. This information will help to inform the films to be used in the exposure to representations phase of the research.

### Rain Man

**17. Have you seen the movie 'Rain Man'?**

- ☐ yes  
☐ no  
☐ have not heard of it

**\*18. What do you think the representation is of?**

- |   |                                      |
|---|--------------------------------------|
| <input type="radio"/> Autism              | <input type="radio"/> None           |
| <input type="radio"/> Asperger's Syndrome | <input type="radio"/> I don't recall |
| <input type="radio"/> Other               |                                      |

Other (please specify)

## ASD Professional Survey

**\*19. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*20. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

- ☐ yes  
☐ no

why?

## Killer Diller

**21. Have you seen the movie 'Killer Diller'?**

- ☐ yes  
☐ no  
☐ have not heard of it

**\*22. What do you think the representation is of?**

- ☐ Autism ☐ None  
☐ Asperger's Syndrome ☐ I don't recall  
☐ Other

Other (please specify)

## ASD Professional Survey

**\*23. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*24. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

☐ yes

☐ no

why?

## Ocean Heaven

**25. Have you seen the movie 'Ocean Heaven'?**

☐ yes

☐ no

☐ have not heard of it

**\*26. What do you think the representation is of?**

☐ Autism

☐ None

☐ Asperger's Syndrome

☐ I don't recall

☐ Other

Other (please specify)

## ASD Professional Survey

**\*27. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*28. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

☐ yes

☐ no

why?

## Bless the Child

**29. Have you seen the movie 'Bless the Child'?**

☐ yes

☐ no

☐ have not heard of it

**\*30. What do you think the representation is of?**

☐ Autism

☐ None

☐ Asperger's Syndrome

☐ I don't recall

☐ Other

Other (please specify)

## ASD Professional Survey

**\*31. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*32. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

- ☐ yes  
☐ no

why?

## Silent Fall

**33. Have you seen the movie 'Silent Fall'?**

- ☐ yes  
☐ no  
☐ have not heard of it

**\*34. What do you think the representation is of?**

- ☐ Autism  
☐ Asperger's Syndrome  
☐ Other  
☐ None  
☐ I don't recall

Other (please specify)

## ASD Professional Survey

**\*35. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*36. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

☐ yes

☐ no

why?

## Chocolate

**37. Have you seen the movie 'Chocolate'?**

☐ yes

☐ no

☐ have not heard of it

**\*38. What do you think the representation is of?**

☐ Autism

☐ None

☐ Asperger's Syndrome

☐ I don't recall

☐ Other

Other (please specify)

## ASD Professional Survey

**\*39. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*40. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

☐ yes

☐ no

why?

## Snowcake

**41. Have you seen the movie 'Snowcake'?**

☐ yes

☐ no

☐ have not heard of it

**\*42. What do you think the representation is of?**

☐ Autism

☐ None

☐ Asperger's Syndrome

☐ I don't recall

☐ Other

Other (please specify)

## ASD Professional Survey

**\*43. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*44. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

- ☐ yes  
☐ no

why?

## Black Balloon

**45. Have you seen the movie 'Black Balloon'?**

- ☐ yes  
☐ no  
☐ have not heard of it

**\*46. What do you think the representation is of?**

- ☐ Autism ☐ None  
☐ Asperger's Syndrome ☐ I don't recall  
☐ Other

Other (please specify)

## ASD Professional Survey

**\*47. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*48. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

- ☐ yes  
☐ no

why?

## My Name is Khan

**49. Have you seen the movie 'My Name is Khan'?**

- ☐ yes  
☐ no  
☐ have not heard of it

**\*50. What do you think the representation is of?**

- ☐ Autism ☐ None  
☐ Asperger's Syndrome ☐ I don't recall  
☐ Other

Other (please specify)

## ASD Professional Survey

**\*51. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*52. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

☐ yes

☐ no

why?

## Mercury Rising

**53. Have you seen the movie 'Mercury Rising'?**

☐ yes

☐ no

☐ have not heard of it

**\*54. What do you think the representation is of?**

☐ Autism

☐ None

☐ Asperger's Syndrome

☐ I don't recall

☐ Other

Other (please specify)

## ASD Professional Survey

**\*55. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*56. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

- ☐ yes  
☐ no

why?

## Molly

**57. Have you seen the movie 'Molly'?**

- ☐ yes  
☐ no  
☐ have not heard of it

**\*58. What do you think the representation is of?**

- ☐ Autism ☐ None  
☐ Asperger's Syndrome ☐ I don't recall  
☐ Other

Other (please specify)

## ASD Professional Survey

**\*59. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*60. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

- ☐ yes  
☐ no

why?

## Mary and Max

**61. Have you seen the movie 'Mary and Max'?**

- ☐ yes  
☐ no  
☐ have not heard of it

**\*62. What do you think the representation is of?**

- ☐ Autism ☐ None  
☐ Asperger's Syndrome ☐ I don't recall  
☐ Other

Other (please specify)

## ASD Professional Survey

**\*63. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*64. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

- ☐ yes  
☐ no

why?

## Ben X

**65. Have you seen the movie 'Ben X'?**

- ☐ yes  
☐ no  
☐ have not heard of it

**\*66. What do you think the representation is of?**

- ☐ Autism ☐ None  
☐ Asperger's Syndrome ☐ I don't recall  
☐ Other

Other (please specify)

## ASD Professional Survey

**\*67. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*68. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

- ☐ yes  
☐ no

why?

## Mozart and the Whale

**69. Have you seen the movie 'Mozart and the Whale'?**

- ☐ yes  
☐ no  
☐ have not heard of it

**\*70. What do you think the representation is of?**

- ☐ Autism ☐ None  
☐ Asperger's Syndrome ☐ I don't recall  
☐ Other

Other (please specify)

## ASD Professional Survey

**\*71. Do you consider the portrayal of ASD to be positive or negative in this film? Please rank using the scale below.**

	very positive	positive	neither positive or negative	negative	very negative
Portrayal of ASD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact of ASD on the lives of other characters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction between other characters and ASD affected character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*72. Is the portrayal accurate to the triad of impairments (impaired social interaction, impaired social communication, and impaired imagination/flexibility of thought)?**

☐ yes

☐ no

why?

**You are 80% done!**

The next page is about entertainment films you may have heard of that potentially contain characters with ASD. Complete the list, then 2 more questions and you are done!

### Entertainment Films and ASD

The following section of the survey is the complete list of all entertainment films thought to have characters affected by ASD. This is your opportunity to confirm or negate the films on the list as representations of ASD and suggest additions of any films that you are aware of that are not on the list. Remember, for the purpose of the current study documentaries are not included.

## ASD Professional Survey

**\*73. Please tick 'yes' for the films you know contain characters affected by ASD and 'no' for films you contend do not contain characters affected by ASD.**

	Yes	No	Don't know
Backstreet Dreams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brother Carl	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When the Bough Breaks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Boys Next Door	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If you could say it in words	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guarding Eddy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Punch Drunk Love	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
About a Boy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being There	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fly Away	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
God's Ears	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After Thomas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am Sam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mr. Popper's Penguins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Killer Diller	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
David's Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Red Rose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rain Man	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bless the Child	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Boy Who Could Fly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Silent Fall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chocolate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fielder's Choice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mozart and the Whale	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
House of Cards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ben X	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mary and Max	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Molly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mercury Rising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Temple Grandin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family Picture's	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My Name is Khan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change of Habit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Black Balloon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Burning Bright	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Snowcake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## ASD Professional Survey

The Cube	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
El Cortez	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Her Name is Sabine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Daisy Chain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Down in the Delta	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dark Floors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ZigZag	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dear John	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ocean Heaven	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marathon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Miracle Run	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Midwinter Night's Dream	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Any ENTERTAINMENT films with portrayals of ASD, not on the above list

**74. If you are aware of any common misconceptions about ASD, what are they?**

**75. Are there any films that you feel represent any disability or disorder, other than ASD, in a positive way?**

**Thank you!**

We appreciate your information, your time, and your willingness to share your opinion.

We would be glad to share the resulting list of ASD films with you. If you would like this information or have any questions about the current study please contact the researcher Andrea Garner at [ag994@uow.edu.au](mailto:ag994@uow.edu.au) or by phone +61 02 4221 4587

**76. Please email me the results of the ASD representations film list**

## Appendix B: Survey of Preservice Teachers Prior Exposure (Pre-activity)

Exploration of pre-service teachers exposure to special needs
<b>Information and Instructions</b>
<p>Welcome to the Exposure to Special Needs Survey!</p> <p>You have been selected to participate in this survey because you may be working with, and will likely encounter, students with special needs in your forthcoming teaching career.</p> <p>We are seeking to identify the quality and avenue of exposure to information about special needs. There are no right or wrong answers in this survey, we just want to know what you have been taught, what you have been exposed to, and what you think and feel about this topic area.</p> <p>The survey should take no more than 30 minutes. You will be asked to generate a code using your initials and the last 4 digits of your phone number. This code gives you anonymity in your responses but allows us to compare responses with any other surveys you complete in this academic year. You may exit the survey at any point prior to submission.</p> <p>We are offering a free seminar on a specific special need and inclusive planning as a thank you for participating in the surveys over the next month. You will receive a certificate of attendance for the seminar to add to your teaching portfolio. If you would like to attend the seminar please click on the link at the end of the survey and enter your email address in the space provided. The email addresses are held separately to the survey data and in no way link you to your responses.</p> <p>Finally, the information collected from this survey may be used for further research, presentations, conferences and publications.</p> <p>Thank you for your participation, let's get started!</p> <p><b>*1. I have understood the intent of the survey and how the information I provide will be used to inform research. I hereby consent to complete this survey</b></p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p>
<b>Personal Code</b>
<p>Please enter your self generated code in the space below. You will be reminded of the formula for the code on any other surveys you complete this academic year.</p> <p><b>*2. Record your personal code below. Your code is: your initials plus the last 4 digits of your mobile telephone number (Eg. HP5072)</b></p> <div></div>
<b>Background information</b>

## Exploration of pre-service teachers exposure to special needs

**\*3. Which continent have you lived on for the last 5 years? tick all that apply**

- |  |  |
|--|--|
| <input type="checkbox"/> Australia     | <input type="checkbox"/> Asia          |
| <input type="checkbox"/> Oceania       | <input type="checkbox"/> South America |
| <input type="checkbox"/> Europe        | <input type="checkbox"/> Africa        |
| <input type="checkbox"/> North America |  |

**\*4. What sex are you?**

- ☐ Male
- ☐ Female

**\*5. Which age group are you in?**

- |                             |                             |
|-----------------------------|-----------------------------|
| <input type="radio"/> 18-20 | <input type="radio"/> 36-40 |
| <input type="radio"/> 21-23 | <input type="radio"/> 41-45 |
| <input type="radio"/> 24-26 | <input type="radio"/> 46-50 |
| <input type="radio"/> 27-30 | <input type="radio"/> >51   |
| <input type="radio"/> 31-35 |                             |

**\*6. Which course are you currently enrolled in?**

- ☐ GDE
- ☐ BEd 4th year

**\*7. Are you studying to teach primary or secondary school?**

- ☐ Primary
- ☐ Secondary
- ☐ Early Years

**\*8. Please rate your level of familiarity with each of the following conditions**

Global Developmental Delay	<input type="text"/>
ADHD	<input type="text"/>
Asperger's Syndrome	<input type="text"/>
Cerebral Palsy	<input type="text"/>
Learning Disabilities	<input type="text"/>
Autism	<input type="text"/>
Conduct Disorder	<input type="text"/>
Down's Syndrome	<input type="text"/>
Epilepsy	<input type="text"/>

## Exploration of pre-service teachers exposure to special needs

### \*9. Which condition do you think best applies to the following criteria?

Present from early childhood, characterized by difficulty in communicating and forming relationships with other people and in using language and abstract concepts

Characterized by higher than average intellectual ability coupled with impaired social skills and restrictive, repetitive patterns of interest and activities

Occurring primarily in children, including such symptoms as poor concentration and impulsivity

Condition marked by impaired muscle coordination (spastic paralysis) and/or other disabilities

Congenital disorder arising from a chromosome defect, causing intellectual impairment and physical abnormalities including short stature and a broad facial profile

## Formal Exposure

### \*10. Have you received any formal training (course work, teaching experience, readings, seminars, workshops) on special needs and/or special education?

☐ No

☐ Yes - please specify who provided the course and the topic. List all that apply. (Eg. UCLA 2nd year BEd- behaviour management for exceptional learners)

### \*11. Do you anticipate undergoing any training in special education beyond the topics covered in the course outline in this academic year?

☐ No

☐ Yes- please specify

## Exploration of pre-service teachers exposure to special needs

**\*12. Have you sought training on special needs prior to enrolment in this academic year?**

☐ No

☐ Yes - what was the topic and why did you require training for it? (Eg. music therapy- brother diagnosed with Emotional Behavioural Disorder)

**\*13. Do you anticipate having students with special needs in your classroom within your first year of teaching?**

☐ No

☐ Yes

**\*14. Would you consider a teaching job in special education?**

☐ No

☐ Yes

### Personal Exposure

**\*15. Do you have any personal contact with someone that has a disability or disorder?**

☐ No

☐ Yes

## Exploration of pre-service teachers exposure to special needs

**\*16. Choose from the list below all disabilities/disorders you have personal experience with and how the individual with that diagnosis is related to you. If you know more than one person with a particular diagnosis identify the relationship of the person with whom you have the most regular contact.**

	Your relationship	How accepting you think others are of a person with this diagnosis
ADHD	<input type="text"/>	<input type="text"/>
Asperger's Syndrome	<input type="text"/>	<input type="text"/>
Autism	<input type="text"/>	<input type="text"/>
Bi-Polar Disorder	<input type="text"/>	<input type="text"/>
Cerebral Palsy	<input type="text"/>	<input type="text"/>
Clinical Depression	<input type="text"/>	<input type="text"/>
Down's Syndrome	<input type="text"/>	<input type="text"/>
Epilepsy	<input type="text"/>	<input type="text"/>
Learning Disability	<input type="text"/>	<input type="text"/>
Physical Disability	<input type="text"/>	<input type="text"/>
Schizophrenia	<input type="text"/>	<input type="text"/>
Visual/Hearing Impairment	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>

**\*17. How have you learned about disabilities/disorders? (tick all that apply)**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> newspaper articles     | <input type="checkbox"/> autobiographies           | <input type="checkbox"/> pamphlets/posters |
| <input type="checkbox"/> magazines              | <input type="checkbox"/> text books                | <input type="checkbox"/> family members    |
| <input type="checkbox"/> news programs          | <input type="checkbox"/> seminars/workshops        | <input type="checkbox"/> experience        |
| <input type="checkbox"/> entertainment films    | <input type="checkbox"/> doctor/specialist         | <input type="checkbox"/> word of mouth     |
| <input type="checkbox"/> documentaries          | <input type="checkbox"/> psychologist/psychiatrist | <input type="checkbox"/> internet          |
| <input type="checkbox"/> novels                 | <input type="checkbox"/> television sitcoms        |  |
| <input type="checkbox"/> Other (please specify) |  |  |

## Exploration of pre-service teachers exposure to special needs

**\*18. How do you think other people learn about disabilities/disorders? (tick all that apply)**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> newspaper articles     | <input type="checkbox"/> autobiographies           | <input type="checkbox"/> pamphlets/posters |
| <input type="checkbox"/> magazines              | <input type="checkbox"/> text books                | <input type="checkbox"/> family members    |
| <input type="checkbox"/> news programs          | <input type="checkbox"/> seminars/workshops        | <input type="checkbox"/> experience        |
| <input type="checkbox"/> entertainment films    | <input type="checkbox"/> doctor/specialist         | <input type="checkbox"/> word of mouth     |
| <input type="checkbox"/> documentaries          | <input type="checkbox"/> psychologist/psychiatrist | <input type="checkbox"/> internet          |
| <input type="checkbox"/> novels                 | <input type="checkbox"/> television sitcoms        |  |
| <input type="checkbox"/> Other (please specify) |  |  |

## Media Exposure

**\*19. How often do you see a movie at the theatre?**

- ☐ never  
☐ 1-2 times per year  
☐ 3-5 times per year  
☐ > 5 times per year

**\*20. How often do you rent DVDs or videos of movies?**

- |                                   |   |
|-----------------------------------|---|
| <input type="radio"/> daily       | <input type="radio"/> 4-10 times per year |
| <input type="radio"/> weekly      | <input type="radio"/> < 3 times per year  |
| <input type="radio"/> fortnightly | <input type="radio"/> never               |
| <input type="radio"/> monthly     |   |

**\*21. How often do you purchase movies on pay per view?**

- |                                   |   |
|-----------------------------------|---|
| <input type="radio"/> daily       | <input type="radio"/> 4-10 times per year |
| <input type="radio"/> weekly      | <input type="radio"/> <3 times per year   |
| <input type="radio"/> fortnightly | <input type="radio"/> never               |
| <input type="radio"/> monthly     |   |

**\*22. How often do you stream/download movies through an online service?**

- |                                   |   |
|-----------------------------------|---|
| <input type="radio"/> daily       | <input type="radio"/> 4-10 times per year |
| <input type="radio"/> weekly      | <input type="radio"/> <3 times per year   |
| <input type="radio"/> fortnightly | <input type="radio"/> never               |
| <input type="radio"/> monthly     |   |

## Exploration of pre-service teachers exposure to special needs

**\*23. If you have you seen a full episode of any of the following television shows what disability or disorder do you think has been portrayed, if any? (tick all that apply)**

	ADHD	Autism	Asperger's Syndrome	Cerebral Palsy	Down's Syndrome	Other	None	Haven't seen the show
Family Guy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Big Bang Theory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parenthood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Breaking Bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Law and Order: SVU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCIS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
House	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grey's Anatomy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Life Goes On	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Exploration of pre-service teachers exposure to special needs

**\*24. If you've seen any of the following movies what disability or disorder do you think was portrayed, if any? (tick all that apply)**

	ADHD	Autism	Asperger's Syndrome	Cerebral Palsy	Down's Syndrome	Other	None	Haven't seen the movie
I am Sam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ben X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mercury Rising	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beautiful Mind	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dear John	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Molly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PS I Love You	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rainman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Black Balloon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mad Love	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forrest Gump	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mary and Max	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Snowcake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
As Good As It Gets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What's Eating Gilbert Grape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Soloist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Good Will Hunting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### You're on a roll!

Please answer the following statements using the scale provided. There are no right or wrong answers. Try not to overthink your response!

## Exploration of pre-service teachers exposure to special needs

### \*25. Please respond to the following?

	completely disagree	somewhat disagree	neither disagree or agree	somewhat agree	completely agree
I can't blame anybody for being scared of ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't blame anybody for being scared of Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't blame anybody for being scared of autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't blame anybody for being scared of Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having ADHD I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having Asperger's Syndrome I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having autism I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having Cerebral Palsy I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Half way there! Keep it up!**

Exploration of pre-service teachers exposure to special needs

**\*26. When you encounter a person with the named disability, how often do you feel?**

	autism	ADHD	Asperger's Syndrome	Cerebral Palsy
Irritated, because they cause inconvenience	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Fear, because you feel what's happened to them might happen to you	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Awkward or embarrassed, because you don't know how to behave with them	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Resentment, because they get special privileges	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Pity, because of their situation	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Admiration, because they overcome so much	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

## Exploration of pre-service teachers exposure to special needs

### \*27. Please respond to the following

	completely disagree	somewhat disagree	neither agree or disagree	somewhat agree	completely agree
I understand why companies don't want to offer jobs to people with autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why companies don't want to offer jobs to people with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why companies don't want to offer jobs to people with Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why companies don't want to offer jobs to people with ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with Asperger's Syndrome in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with autism in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with Cerebral Palsy in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with ADHD in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with ADHD as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with autism as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with Asperger's Syndrome as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with Down's Syndrome as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of pre-service teachers exposure to special needs

**\*28. Please use the scale provided to indicate how you feel about the following.**

	I agree very much	I agree pretty much	I agree a little	I disagree a little	I disagree pretty much	I disagree very much
You should not expect too much from people with autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You should not expect too much from people with Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You should not expect too much from people with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You should not expect too much from people with Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with autism should not be expected to meet the same standards as people without autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome should not be expected to meet the same standards as people without Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with ADHD should not be expected to meet the same standards as people without ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Down's Syndrome should not be expected to meet the same standards as people without Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with autism should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with Asperger's Syndrome should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with Down's Syndrome should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with ADHD should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There should not be special schools for children with disabilities and disorders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is almost impossible for someone with autism or Asperger's Syndrome to lead a normal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is almost impossible for someone with Cerebral Palsy or Down's Syndrome to lead a normal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is almost impossible for someone with ADHD to lead a normal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with ADHD should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with autism should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Down's Syndrome should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Almost there!**

## Exploration of pre-service teachers exposure to special needs

### \*29. Please answer true or false to the following questions.

	True	False	I don't know
Only mothers over the age of 40 have children with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Symptoms of ADHD persist through adulthood although the individual may have learned management strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ADDults is a support group for adults with ADHD in Australia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One in 1:160 children between 6-12 years old are affected by autism in Australia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome have average or above average intelligence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASPECT is the name of an autism organization in Australia.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many people with autism have a visual thinking style	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Down's Syndrome is caused by having an extra 21st chromosome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism is a lifelong developmental disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Delayed language development is a sign of Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You can tell by looking at someone if they have autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many people with Asperger's Syndrome experience difficulties with fine motor control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Symptoms of Cerebral Palsy have a range of severity and may not be visible to the untrained eye	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A person does not have to be hyperactive to have a diagnosis of ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ADHD is not a medical disorder but a condition of a child's will and poor parenting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with autism see the 'big picture' but not the details	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common characteristics of autism are deficits in social interaction, communication and flexible thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a person has an obsessive interest in a topic they have Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism is caused by childhood vaccinations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is an increasing number of babies with Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maths and sciences are special skills that all people with autism have	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bad parenting results in autistic behaviour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Cerebral Palsy either have spastic or floppy muscle tone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excessive exposure to television and video games causes ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medication can cure ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Only boys are affected by ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
About 2 per 1000 children are affected by Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism is children with mental retardation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism can be cured with the right interventions and diet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome don't want to have friendships or relationships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Down's Syndrome have a full range of emotions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cerebral Palsy is a genetic disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Suicide is a danger for people with Asperger's Syndrome because they feel detached and different from other people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Down's Syndrome have mental retardation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome are often aggressive and verbally abusive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism affects more boys than girls	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of pre-service teachers exposure to special needs

### This is the last leg!!!

The following is a scenario you may encounter during your student placements or in your professional career. Consider the scenario and which symptoms you would anticipate from a student with identified diagnosis.

You are about to take a class of students for the first time. The regular teacher has left a classroom seating chart and one of the students has a diagnosis written beside his name with no supplementary information. Considering what you know at this moment what would you anticipate from this student?

#### \*30. What would you anticipate from the student with autism? Tick all that apply

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> exceptional math skill            | <input type="checkbox"/> aggression                                   | <input type="checkbox"/> difficulty with transition                     |
| <input type="checkbox"/> high interest in a specific topic | <input type="checkbox"/> tattling or bossing peers around             | <input type="checkbox"/> mental ability average or above average        |
| <input type="checkbox"/> spastic movements                 | <input type="checkbox"/> difficulty with writing and fine motor tasks | <input type="checkbox"/> literal interpretation of instruction/language |
| <input type="checkbox"/> pacing/fidgeting                  | <input type="checkbox"/> poor judgement/poor planning                 | <input type="checkbox"/> no eye contact                                 |
| <input type="checkbox"/> identifiable by physical features | <input type="checkbox"/> benefits from visual instruction             | <input type="checkbox"/> none of the above                              |

#### \*31. What would you anticipate from the student with ADHD? Tick all that apply

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> mental ability average or above average | <input type="checkbox"/> pacing/fidgeting                             | <input type="checkbox"/> high interest in a specific topic              |
| <input type="checkbox"/> poor judgement/poor planning            | <input type="checkbox"/> spastic movements                            | <input type="checkbox"/> difficulty with transition                     |
| <input type="checkbox"/> exceptional math skill                  | <input type="checkbox"/> difficulty with writing and fine motor tasks | <input type="checkbox"/> literal interpretation of instruction/language |
| <input type="checkbox"/> tattling on or bossing peers around     | <input type="checkbox"/> no eye contact                               | <input type="checkbox"/> aggression                                     |
| <input type="checkbox"/> identifiable by physical features       | <input type="checkbox"/> preference for visual instruction            | <input type="checkbox"/> none of the above                              |

#### \*32. What would you anticipate from the student with Asperger's Syndrome? Tick all that apply

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> exceptional math skill            | <input type="checkbox"/> mental ability average or above average | <input type="checkbox"/> no eye contact                                 |
| <input type="checkbox"/> preference for visual instruction | <input type="checkbox"/> difficulty with transition              | <input type="checkbox"/> spastic movements                              |
| <input type="checkbox"/> pacing/fidgeting                  | <input type="checkbox"/> tattling on or bossing peers around     | <input type="checkbox"/> literal interpretation of instruction/language |
| <input type="checkbox"/> poor judgement/poor planning      | <input type="checkbox"/> high interest in a specific topic       | <input type="checkbox"/> difficulty with writing and fine motor tasks   |
| <input type="checkbox"/> aggression                        | <input type="checkbox"/> identifiable by physical features       | <input type="checkbox"/> none of the above                              |

## Exploration of pre-service teachers exposure to special needs

### \*33. What would you anticipate from the student with Down's Syndrome? Tick all that apply

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> no eye contact                               | <input type="checkbox"/> spastic movements                              | <input type="checkbox"/> preference for visual instruction   |
| <input type="checkbox"/> aggression                                   | <input type="checkbox"/> high interest in a specific topic              | <input type="checkbox"/> tattling on or bossing peers around |
| <input type="checkbox"/> mental ability average or above average      | <input type="checkbox"/> literal interpretation of instruction/language | <input type="checkbox"/> poor judgement/poor planning        |
| <input type="checkbox"/> identifiable by physical features            | <input type="checkbox"/> difficulty with transition                     | <input type="checkbox"/> pacing/fidgeting                    |
| <input type="checkbox"/> difficulty with writing and fine motor tasks | <input type="checkbox"/> exceptional math skill                         | <input type="checkbox"/> none of the above                   |

### The activity session is the next step on your way to a certificate!

Please indicate below which night of the week would be best for you and what time you would prefer. We will do our best to accommodate your preference. The activity requires no physical exertion and will involve snacks!

### \*34. Please indicate which days and times you would be available to participate in the activity session in March?

If you have a specific concern regarding your participation in the activity please contact Andrea at [ag994@uow.edu.au](mailto:ag994@uow.edu.au)

- ☐ Tuesday March 6th, 5-7:30pm
- ☐ Tuesday March 6th, 7-9:30pm
- ☐ Wednesday March 7th, 7-9:30
- ☐ Thursday March 8th, 5-7:30pm
- ☐ Thursday March 8th, 7-9:30pm

### 35. The activity will involve a projection screen and audio feed in English. Please indicate whether you require accommodations for any of the below. We will do all that we can support your participation in the activity.

- ☐ visual impairment
- ☐ hearing impairment
- ☐ English as a second language
- ☐ Other (please specify)

### Thank you for participating!

We are offering a free professional development seminar about special needs and special education as a thank you for participating in research in this area. If you would like to attend the seminar and receive a certificate please click on the link below and add your email address to the allocated box. The email addresses will be recorded in a separate location to the survey data so you will not be linked to your responses. [Click here to leave your email](#)

## Appendix C: Survey of Preservice Teachers Post-Activity

Exploration of Exposure to Special Needs- Post activity
<b>Information and Instructions</b>
<p>Welcome to the Exposure to Special Needs Survey!</p> <p>You have been selected to participate in this survey because you may be working with, and will likely encounter, students with special needs in your forthcoming teaching career.</p> <p>We are seeking to identify the quality and avenue of exposure to information about special needs. There are no right or wrong answers in this survey, we just want to know what you have been taught, what you have been exposed to, and what you think and feel about this topic area.</p> <p>The survey should take no more than 30 minutes. You will be asked to record the self-generated code (your initials and the last 4 digits of your phone number) used on your last survey. This code gives you anonymity in your responses but allows us to compare responses with any other surveys you complete in this academic year. You may decide to discontinue the survey at any point prior to submission.</p> <p>We are offering a free seminar on a specific special need and inclusive planning as a thank you for participating in the surveys over the next month. You will receive a certificate of attendance for the seminar to add to your teaching portfolio.</p> <p>Finally, the information collected from this survey may be used for further research, presentations, conferences and publications.</p> <p>Thank you for your participation, let's get started!</p> <p><b>*1. I have understood the intent of the survey and how the information I provide will be used to inform research. I hereby consent to complete this survey</b></p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<b>Personal Code</b>
<p>Please enter your self generated code in the space below.</p> <p><b>*2. Record your personal code below. Your code is: your initials plus the last 4 digits of your mobile telephone number (Eg. HP5072)</b></p> <p><input type="text"/></p> <p><b>*3. Have you had any new exposure to persons with special needs not identified on the first survey?</b></p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>

## Exploration of Exposure to Special Needs- Post activity

**\*4. You viewed Snow Cake. Have you seen this film at any point before this evening?**

- ☐ Yes  
☐ No  
☐ Don't recall

**\*5. Was the film based on a true story?**

- ☐ Yes  
☐ No  
☐ I don't know

**\*6. Did you recognise any of the actors in the film?**

- ☐ Yes  
☐ No

**\*7. Please indicate your feelings about the actors playing main characters in the film?**

	like	dislike	neither like or dislike
Linda- Sigourney Weaver	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alex- Alan Rickman	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*8. What disorder or disability was found in the film you just viewed?**

**\*9. Do you think the character with the disorder accurately represented the disorder?**

- ☐ Yes  
☐ No  
☐ I don't know

Why?

**\*10. What role did the character with the disorder fill?**

- ☐ villan  
☐ hero  
☐ unintentional hero  
☐ Other (please specify)
- ☐ burden  
☐ victim  
☐ unable to adjust

## Exploration of Exposure to Special Needs- Post activity

### \*11. Describe any scenes or dialogue in the film that stands out for you

### \*12. What is your impression of the main character with the disability or disorder?

	completely agree	somewhat agree	neither agree or disagree	somewhat disagree	completely disagree
I developed bad feelings towards them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Their story made me cry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could not relate to them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt unmoved by them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt very empathetic toward them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*13. What is your impression of the overall film?

	completely agree	somewhat agree	neither agree or disagree	somewhat disagree	completely disagree
The story is pure fiction. It could not have happened that way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The movie was not realistic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am convinced that the main character's story could really happen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The story of the main characters felt so real	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*14. The following is regarding your feelings about the movie you just watched.

	completely agree	somewhat agree	neither agree or disagree	somewhat disagree	completely disagree
I don't really know what I feel about the movie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This movie really confused me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a lot of unanswered questions about the movie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For some reason I feel conflicted about this movie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am still struggling with the movie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of Exposure to Special Needs- Post activity

### \*15. How entertaining did you think the movie was?

	completely agree	somewhat agree	neither agree or disagree	somewhat disagree	completely disagree
The movie was very entertaining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had the sense of being pulled right into the story	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I stayed 'outside' the story. It did not interest me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wasn't involved in the movie at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I very much enjoyed watching the movie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This movie was very involving	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*16. The following are questions related to the educational value of the movie

	completely agree	somewhat agree	neither agree or disagree	somewhat disagree	completely disagree
The movie changes my perception of people with disorders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I learned a lot about disorders and disabilities by watching the movie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The topic of the movie was not presented in an educational way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After seeing the movie I would feel much more comfortable if I had to communicate with someone who had this disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am very interested in learning more about this disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*17. Which condition do you think best applies to the following criteria?

	ADHD	Autism	Asperger's Syndrome	Down's Syndrome	Cerebral Palsy	Learning disabilities	Conduct disorder	Global Developmental Delay
Occurring primarily in children, including such symptoms as poor concentration and impulsivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Condition marked by impaired muscle coordination (spastic paralysis) and/or other disabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Characterized by higher than average intellectual ability coupled with impaired social skills and restrictive, repetitive patterns of interest and activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Present from early childhood, characterized by difficulty in communicating and forming relationships with other people and in using language and abstract concepts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Congenital disorder arising from a chromosome defect, causing intellectual impairment and physical abnormalities including short stature and a broad facial profile	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of Exposure to Special Needs- Post activity

### \*18. Please rate your familiarity with each of the following conditions

	very familiar	somewhat familiar	a little familiar	not at all familiar
ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning disabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*19. Please respond to the following

	completely agree	somewhat agree	neither agree or disagree	somewhat disagree	completely disagree
I can't blame anybody for being scared of ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't blame anybody for being scared of Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't blame anybody for being scared of autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't blame anybody for being scared of Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having ADHD I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having Asperger's Syndrome I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having autism I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having Cerebral Palsy I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of Exposure to Special Needs- Post activity

### \*20. When you encounter a person with autism, how often do you feel?

	often	occasionally	never	don't know
Irritated, because they cause inconvenience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fear, because you feel what's happened to them might happen to you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Awkward or embarrassed,because you don't know how to behave with them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentment, because they get special privileges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity, because of their situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Admiration, because they overcome so much	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*21. When you encounter a person with ADHD, how often do you feel?

	often	occasionally	never	don't know
Irritated, because they cause inconvenience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fear, because you feel what's happened to them might happen to you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Awkward or embarrassed,because you don't know how to behave with them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentment, because they get special privileges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity, because of their situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Admiration, because they overcome so much	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*22. When you encounter a person with Asperger's Syndrome, how often do you feel?

	often	occasionally	never	don't know
Irritated, because they cause inconvenience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fear, because you feel what's happened to them might happen to you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Awkward or embarrassed,because you don't know how to behave with them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentment, because they get special privileges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity, because of their situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Admiration, because they overcome so much	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*23. When you encounter a person with Cerebral Palsy, how often do you feel?

	often	occasionally	never	don't know
Irritated, because they cause inconvenience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fear, because you feel what's happened to them might happen to you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Awkward or embarrassed,because you don't know how to behave with them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentment, because they get special privileges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity, because of their situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Admiration, because they overcome so much	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of Exposure to Special Needs- Post activity

### \*24. Please response to the following

	completely agree	somewhat agree	neither agree or disagree	somewhat disagree	completely disagree
I understand why companies don't want to offer jobs to people with autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why companies don't want to offer jobs to people with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why companies don't want to offer jobs to people with Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why companies don't want to offer jobs to people with ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with Asperger's Syndrome in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with autism in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with Cerebral Palsy in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with ADHD in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with ADHD as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with autism as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with Asperger's Syndrome as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with Down's Syndrome as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of Exposure to Special Needs- Post activity

### \*25. Please respond to the following

	I agree very much	I agree pretty much	I agree a little	I disagree a little	I disagree pretty much	I disagree very much
You should not expect too much from people with autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You should not expect too much from people with Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You should not expect too much from people with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You should not expect too much from people with Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with autism should not be expected to meet the same standards as people without autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome should not be expected to meet the same standards as people without Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with ADHD should not be expected to meet the same standards as people without ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Down's Syndrome should not be expected to meet the same standards as people without Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with autism should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with Asperger's Syndrome should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with Down's Syndrome should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with ADHD should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There should not be special schools for children with disabilities and disorders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is almost impossible for someone with autism or Asperger's Syndrome to lead a normal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is almost impossible for someone with Cerebral Palsy or Down's Syndrome to lead a normal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is almost impossible for someone with ADHD to lead a normal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with ADHD should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with autism should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Down's Syndrome should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of Exposure to Special Needs- Post activity

### \*26. Please respond to the following

	True	False	I don't know
Excessive exposure to television and video games causes ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome don't want to have friendships or relationships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism is a lifelong developmental disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Only mothers over the age of 40 have children with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cerebral Palsy is a genetic disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common symptoms of autism are a deficits in social interaction, communication and flexible thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Suicide is a danger for people with Asperger's Syndrome because they feel detached and different from other people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ADHD is not a medical disorder but a condition of a child's will and poor parenting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maths and sciences are special skills that people with autism have	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism can be cured with the right interventions and diet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism is caused by vaccinations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Down's Syndrome have mental retardation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is an increasing number of babies with Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with autism see the 'big picture' but not the details	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medication can cure ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Cerebral Palsy either have spastic or floppy muscle tone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Down's Syndrome have a full range of emotions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
About 2 per 1000 children are affected by Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASPECT is the name of an autism organization in Australia.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ADHD is another term for bored	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism affects more boys than girls	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Symptoms of ADHD persist through adulthood although the individual may have learned management strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a person has an obsessive interest in a topic they have Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome are often aggressive and verbally abusive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One in 1:160 children between 6-12 years old are affected by autism in Australia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Down's Syndrome is caused by having an extra 21st chromosome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bad parenting results in autistic behaviour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome want to be alone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome have average or above average intelligence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You can tell by looking at someone if they have autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A person does not have to be hyperactive to have a diagnosis of ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Symptoms of Cerebral Palsy have a range of severity and may not be visible to the untrained eye	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism is children with mental retardation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rocking is a common sign of Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Only boys are affected by ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many people with autism have a visual thinking style	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of Exposure to Special Needs- Post activity

The following is a scenario you may encounter during your student placements or in your professional career.

Consider the scenario and which symptoms you would anticipate from a student with identified diagnosis.

You are about to take a class of students for the first time. The regular teacher has left a classroom seating chart and one of the students has a diagnosis written beside his name with no supplementary information. Considering what you know at this moment what would you anticipate from this student?

### 27. What would you anticipate from the student with autism? Tick all that apply

- |  |   |
|--|---|
| <input type="checkbox"/> benefits from visual instruction        | <input type="checkbox"/> difficulty with writing and fine motor tasks   |
| <input type="checkbox"/> tattling or bossing peers around        | <input type="checkbox"/> high interest in a specific topic              |
| <input type="checkbox"/> identifiable by physical features       | <input type="checkbox"/> no eye contact                                 |
| <input type="checkbox"/> poor judgement/poor planning            | <input type="checkbox"/> pacing/fidgeting                               |
| <input type="checkbox"/> spastic movements                       | <input type="checkbox"/> difficulty with transition                     |
| <input type="checkbox"/> exceptional math skill                  | <input type="checkbox"/> literal interpretation of instruction/language |
| <input type="checkbox"/> aggression                              | <input type="checkbox"/> none of the above                              |
| <input type="checkbox"/> mental ability average or above average |   |

### 28. What would you anticipate from the student with ADHD? Tick all that apply

- |  |   |
|--|---|
| <input type="checkbox"/> benefits from visual instruction        | <input type="checkbox"/> difficulty with writing and fine motor tasks   |
| <input type="checkbox"/> tattling or bossing peers around        | <input type="checkbox"/> high interest in a specific topic              |
| <input type="checkbox"/> identifiable by physical features       | <input type="checkbox"/> no eye contact                                 |
| <input type="checkbox"/> poor judgement/poor planning            | <input type="checkbox"/> pacing/fidgeting                               |
| <input type="checkbox"/> spastic movements                       | <input type="checkbox"/> difficulty with transition                     |
| <input type="checkbox"/> exceptional math skill                  | <input type="checkbox"/> literal interpretation of instruction/language |
| <input type="checkbox"/> aggression                              | <input type="checkbox"/> none of the above                              |
| <input type="checkbox"/> mental ability average or above average |   |

## Exploration of Exposure to Special Needs- Post activity

### 29. What would you anticipate from the student with Asperger's Syndrome? Tick all that apply

- |  |   |
|--|---|
| <input type="checkbox"/> benefits from visual instruction        | <input type="checkbox"/> difficulty with writing and fine motor tasks   |
| <input type="checkbox"/> tattling or bossing peers around        | <input type="checkbox"/> high interest in a specific topic              |
| <input type="checkbox"/> identifiable by physical features       | <input type="checkbox"/> no eye contact                                 |
| <input type="checkbox"/> poor judgement/poor planning            | <input type="checkbox"/> pacing/fidgeting                               |
| <input type="checkbox"/> spastic movements                       | <input type="checkbox"/> difficulty with transition                     |
| <input type="checkbox"/> exceptional math skill                  | <input type="checkbox"/> literal interpretation of instruction/language |
| <input type="checkbox"/> aggression                              | <input type="checkbox"/> none of the above                              |
| <input type="checkbox"/> mental ability average or above average |   |

### 30. What would you anticipate from the student with Down's Syndrome? Tick all that apply

- |  |   |
|--|---|
| <input type="checkbox"/> benefits from visual instruction        | <input type="checkbox"/> difficulty with writing and fine motor tasks   |
| <input type="checkbox"/> tattling or bossing peers around        | <input type="checkbox"/> high interest in a specific topic              |
| <input type="checkbox"/> identifiable by physical features       | <input type="checkbox"/> no eye contact                                 |
| <input type="checkbox"/> poor judgement/poor planning            | <input type="checkbox"/> pacing/fidgeting                               |
| <input type="checkbox"/> spastic movements                       | <input type="checkbox"/> difficulty with transition                     |
| <input type="checkbox"/> exceptional math skill                  | <input type="checkbox"/> literal interpretation of instruction/language |
| <input type="checkbox"/> aggression                              | <input type="checkbox"/> none of the above                              |
| <input type="checkbox"/> mental ability average or above average |   |

## Thank you!

Thank you for participating in the film viewing activity! We hope you enjoyed your viewing experience and appreciate you taking the time to complete this survey.

The last step before the seminar and certificate is to complete the final online survey. You will be notified when the survey is open for responses- in about 2 weeks.

## Appendix D : Survey of Preservice Teachers Follow-up

### Exploration of Exposure to Special Needs- Follow-up

#### Information and Instructions

Welcome to the Exposure to Special Needs FINAL Survey!

You have been selected to participate in this survey because you may be working with, and will likely encounter, students with special needs in your forthcoming teaching career.

There are no right or wrong answers in this survey, we just want to know what you have been taught, what you have been exposed to, and what you think and feel about this topic area.

The survey should take no more than 30 minutes. You will be asked to record the self-generated code (your initials and the last 4 digits of your phone number) used on your last survey. This code gives you anonymity in your responses but allows us to compare responses with any other surveys you complete in this academic year. You may decide to discontinue the survey at any point prior to submission.

We are offering a free seminar on special needs and inclusive planning as a thank you for participating in the surveys. You will receive a certificate of attendance for the seminar to add to your teaching portfolio.

Finally, the information collected from this survey may be used for further research, presentations, conferences and publications.

Thank you for your participation, let's get started!

**\*1. I have understood the intent of the survey and how the information I provide will be used to inform research. I hereby consent to complete this survey**

- ☐ Yes  
☐ No

#### Personal Code

Please enter your self generated code in the space below.

**\*2. Record your personal code below. Your code is: your initials plus the last 4 digits of your mobile telephone number (Eg. HP5072)**

**\*3. Have you had any new exposure to persons with special needs since the film viewing activity?**

- ☐ Yes  
☐ No

## Exploration of Exposure to Special Needs- Follow-up

### \*4. What was the nature of the exposure?

- ☐ PEX placement  
☐ personal  
☐ training  
☐ media  
☐ other

### \*5. What special need were you exposed to?

### \*6. What do you think the study was trying to assess?

### \*7. Which film did you view?

- ☐ Black Balloon  
☐ Mad Love  
☐ Molly  
☐ Snowcave  
☐ Other

### \*8. What disorders or disabilities were in the film you viewed?

### \*9. Do you think the character with the disorder accurately represented the disorder?

- ☐ Yes  
☐ No  
☐ I don't know

### \*10. Did you seek out any information about the disorder/disability in the film since participating in the viewing activity?

If you have, or intend to find information, what method would you use

yes	<input type="text"/>
no, intend to	<input type="text"/>
no, don't intend to	<input type="text"/>

## Exploration of Exposure to Special Needs- Follow-up

**\*11. Did you discuss the film with your peers, colleagues or family?**

- ☐ yes  
☐ no

Why?

**\*12. Have you noticed any articles, news segments or other media about the disability since watching the film?**

- ☐ yes  
☐ no  
☐ not that I recall

**\*13. What role did the character with the disorder fill?**

- |  |  |
|--|--|
| <input type="radio"/> villan                 | <input type="radio"/> burden           |
| <input type="radio"/> hero                   | <input type="radio"/> victim           |
| <input type="radio"/> unintentional hero     | <input type="radio"/> unable to adjust |
| <input type="radio"/> Other (please specify) |  |

**\*14. Describe any scenes or dialogue in the film that stands out for you**

**\*15. How likely are you to recommend the film to someone that wants to learn about that specific disorder/disability?**

- ☐ absolutely  
☐ likely  
☐ unlikely  
☐ not at all

## Exploration of Exposure to Special Needs- Follow-up

### \*16. How entertaining did you think the movie was?

	completely agree	somewhat agree	neither agree or disagree	somewhat disagree	completely disagree
The movie was very entertaining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had the sense of being pulled right into the story	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I stayed 'outside' the story. It did not interest me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wasn't involved in the movie at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I very much enjoyed watching the movie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This movie was very involving	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*17. The following are questions related to the educational value of the movie

	completely agree	somewhat agree	neither agree or disagree	somewhat disagree	completely disagree
The movie changes my perception of people with disorders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I learned a lot about disorders and disabilities by watching the movie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The topic of the movie was not presented in an educational way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After seeing the movie I would feel much more comfortable if I had to communicate with someone who had this disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am very interested in learning more about this disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*18. Please rate your familiarity with each of the following conditions

	very familiar	somewhat familiar	a little familiar	not at all familiar
ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning disabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of Exposure to Special Needs- Follow-up

### \*19. Please respond to the following

	completely agree	somewhat agree	neither agree or disagree	somewhat disagree	completely disagree
I can't blame anybody for being scared of ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't blame anybody for being scared of Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't blame anybody for being scared of autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't blame anybody for being scared of Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why most people dislike people with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not be able to cope with having a person living in my house who has Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having ADHD I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having Asperger's Syndrome I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having autism I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I met somebody who admitted to having Cerebral Palsy I would feel quite uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*20. When you encounter a person with the named disability/disorder, how often do you feel?

	autism	ADHD	Asperger's Syndrome	Cerebral Palsy
Irritated, because they cause inconvenience	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Fear, because you feel what's happened to them might happen to you	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Awkward or embarrassed, because you don't know how to behave with them	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Resentment, because they get special privileges	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Pity, because of their situation	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Admiration, because they overcome so much	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

## Exploration of Exposure to Special Needs- Follow-up

**Last time you'll see these questions!**

### \*21. Please response to the following

	completely agree	somewhat agree	neither agree or disagree	somewhat disagree	completely disagree
I understand why companies don't want to offer jobs to people with autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why companies don't want to offer jobs to people with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why companies don't want to offer jobs to people with Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why companies don't want to offer jobs to people with ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with Asperger's Syndrome in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with autism in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with Cerebral Palsy in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand why teachers would not want students with ADHD in their classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with ADHD as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with autism as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with Asperger's Syndrome as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would never hire somebody with Down's Syndrome as a babysitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand why students would not be friends with somebody that has ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of Exposure to Special Needs- Follow-up

### \*22. Please respond to the following

	I agree very much	I agree pretty much	I agree a little	I disagree a little	I disagree pretty much	I disagree very much
You should not expect too much from people with autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You should not expect too much from people with Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You should not expect too much from people with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You should not expect too much from people with Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with autism should not be expected to meet the same standards as people without autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome should not be expected to meet the same standards as people without Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with ADHD should not be expected to meet the same standards as people without ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Down's Syndrome should not be expected to meet the same standards as people without Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with autism should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with Asperger's Syndrome should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with Down's Syndrome should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents of children with ADHD should be less strict than other parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There should not be special schools for children with disabilities and disorders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is almost impossible for someone with autism or Asperger's Syndrome to lead a normal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is almost impossible for someone with Cerebral Palsy or Down's Syndrome to lead a normal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is almost impossible for someone with ADHD to lead a normal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with ADHD should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with autism should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Down's Syndrome should be supervised at all times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Last page!**

## Exploration of Exposure to Special Needs- Follow-up

### \*23. Please respond to the following.

	True	False	I don't know
Only mothers over the age of 40 have children with Down's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASPECT is the name of an autism organization in Australia.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medication can cure ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism can be cured with the right interventions and diet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rocking is a common sign of Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Only boys are affected by ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome have average or above average intelligence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism is caused by childhood vaccinations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism is diagnosed after a child receives a vaccine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ADHD is not a medical disorder but a condition of a child's will and poor parenting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism is children with mental retardation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Symptoms of ADHD persist through adulthood although the individual may have learned management strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maths and sciences are special skills that all people with autism have	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One in 1:160 children between 6-12 years old are affected by autism in Australia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ADHD is another term for bored	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is an increasing number of babies with Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Down's Syndrome have mental retardation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome are often aggressive and verbally abusive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism affects more boys than girls	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Suicide is a danger for people with Asperger's Syndrome because they feel detached and different from other people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Asperger's Syndrome don't want to have friendships or relationships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You can tell by looking at someone if they have autism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common characteristics of autism are deficits in social interaction, communication and flexible thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many people with autism have a visual thinking style	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Delayed language development is a sign of Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a person has an obsessive interest in a topic they have Asperger's Syndrome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bad parenting results in autistic behaviour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cerebral Palsy is a genetic disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excessive exposure to television and video games causes ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ADDults is a support group for adults with ADHD in Australia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A person does not have to be hyperactive to have a diagnosis of ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with autism see the 'big picture' but not the details	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
About 2 per 1000 children are affected by Cerebral Palsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with Cerebral Palsy either have spastic or floppy muscle tone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many people with Asperger's Syndrome experience difficulties with fine motor control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism is a lifelong developmental disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Down's Syndrome is caused by having an extra 21st chromosome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exploration of Exposure to Special Needs- Follow-up

People with Down's Syndrome have a full range of emotions



Symptoms of Cerebral Palsy have a range of severity and may not be visible to the untrained eye



### Thank you!!!!

Thank you for participating in this study! We hope you enjoyed your viewing experience and appreciate you taking the time to complete all of the surveys. The next step is the seminar and certificate!!! You will be notified when the seminar is designed and ready for delivery! Please click this link to leave your name for printing on the certificate. [Click here to leave your name for the certificate](#) Take a big breath- you did it!!!!

## **Appendix E: Film Synopses for *Mad Love*, *The Black Balloon*, *Snowcake*, and *Molly***

***The following are the synopses taken from the DVD movie cover of each of the films used in Section 3.***

### ***Mad Love***

A lonely teenager thinks that he's found love, but it turns out to be more than he bargained for. Matt Leland (Chris O'Donnell) is an intelligent but awkward high school student who is in the market for a girlfriend but not having much luck finding one. One night, while looking at the stars through his telescope, Matt accidentally trains his vision on Casey Roberts (Drew Barrymore), a high-spirited girl who lives on the other side of the lake near their home. Matt is smitten with her, and he maps out a scheme to meet her. He finds her brash and charming, and she seems just as fond of him. However, Matt doesn't know that Casey is manic depressive and has been in and out of mental institutions for most of her life. Her father Richard (Jude Ciccolella) wants to keep her in an institution, while her mother Margaret (Joan Allen) wants the best for her daughter but isn't sure what that is. Casey, however, wants to be with Matt, and she convinces him that her parents mean to harm her. They run away, planning to go to Mexico, but Matt begins to realize that Casey's mood swings are more serious than he imagined. Set in Seattle, *Mad Love* features an on-screen appearance by the Washington-based all-female hard rock band 7 Year Bitch; the soundtrack also features music by Nirvana, Luscious Jackson, Los Lobos, Cracker, and Grant Lee Buffalo.

### ***The Black Balloon***

When Thomas (Rhys Wakefield) and his family move to a new home and he has to start at a new school, all he wants is to fit in. His pregnant mother (Toni Collette) has to take things easy and his father (Erik Thomson) puts him in charge of his autistic brother Charlie (Luke Ford).

Thomas, with the help of his girlfriend Jackie (Gemma Ward), faces his biggest challenge yet. Charlie's unusual antics take Thomas on an emotional journey that causes his pent up frustrations about his brother to pour out- in a story that is funny, confronting and ultimately heart-warming.

### ***Snowcake***

Taciturn Englishman Alex Hughes (Alan Rickman) has travelled to Canada to meet the mother of his deceased son. Driving through the winter landscape, he picks up a young hitchhiker, Vivienne, who is en route to her home town of Wawa. But when a freak road accident leaves Vivienne dead, Alex finds himself again grieving the death of someone he didn't really know. Still in a state of shock, Alex seeks out Vivienne's mother, Linda (Sigourney Weaver), who suffers from autism and is unable to show any emotion towards her daughter's fate. Staying with Linda until the funeral, Alex tries, as best he can, to take part in her life. He soon meets Linda's saucy neighbour, Maggie (Carrie-Anne Moss), and is immediately drawn to her. Together, Maggie's capacity to understand and Linda's unique approach to the world finally help Alex face a dark secret from his past.

### ***Molly***

Imagine experiencing life through the eyes of an innocent child...forever. Beautiful and vibrant, Molly McKay might have a mental disability, but she's not about to let the world pass her by. Starring Academy Award nominee Elisabeth Shue in an inspired performance, *Molly* is a joyous celebration of the irrepressible human spirit.

Autistic since birth, 28-year-old Molly (Shue) is a carefree young woman with an incredible zest for life. Her brother Buck (Aaron Eckhart), a 32-year-old with a full social calendar and a booming career, has had little contact with Molly over the years – until the facility that cares for her closes down. Now it's up to Buck to take his sister in...and that's turning into a full-time job! Bold, childlike and very energetic, Molly completely envelops her brother's life and turns his ordered world into chaos. Then, just when Buck is at his wit's end, Molly becomes a candidate for a new medical procedure that could cure her completely...but is it worth the risk? Molly sure thinks so....she's ready to experience everything!