

# **Service Dogs for Autism Spectrum Disorder: The Experiences of Caregivers in South Africa**

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

**Master of Arts in Psychology**

**At**

**Rhodes University**

**Submitted by:**

**Emma Martin**

**Supervisor:**

**Ms Henriette van Zyl**

**June 2021**

### **Abstract**

Autism spectrum disorder (ASD) is a neurodevelopmental disorder, most frequently diagnosed in childhood, with symptoms including deficits in social communication and interaction as well as restricted, repetitive patterns of behaviours, interests and activities. There is no known cure for ASD, with current treatment methods focussing upon reducing symptom severity. One such treatment method is the use of autism service dogs.

Internationally, autism service dogs have been available for over two decades, while in South Africa they have only been available since 2015. A fair amount of internationally published data is available on autism service dogs, however, at the time of this research study, no data was available within South Africa. This study aimed to provide a baseline for research on autism service dogs within South Africa, by documenting the experiences of caregivers whose ASD children had been supplied with autism service dogs, with regard to the uses, effects, accessibility and public perception of the autism service dogs, as well as recommendations for future improvements of autism service dogs within South Africa. Lastly, inquiry into the welfare of the autism service dogs was sought.

This study was qualitative in nature, with eight families who had been supplied with autism service dogs having chosen to participate. Data collection was achieved through one semi-structured interview with each family, which was then transcribed and thematically analysed using a hermeneutic phenomenological approach.

Results indicated that autism service dogs were perceived as generally accessible, useful and beneficial for ASD children and their caregivers in a variety of ways, however, they were not without their challenges, with lifestyle adjustments and public perception being especially problematic. Participants also noted recommendations for possible future improvements. Lastly, welfare concerns for the autism service dogs relating to violent behaviour exhibited by ASD children was identified, raising the question of the suitability of service dogs for the ASD population.

## Acknowledgements

To my participants, I would like to thank each and every one of you for being so willing to welcome me into your homes and for sharing your experiences with me. Without your contributions, this thesis would never have been possible. I wish you and your wonderful families all the very best for the future.

To the South African Guide Dog Association and most especially Maxine and Vincent, thank you so much for your support, honesty and willingness to take time out of your incredibly busy lives to accommodate me and my many questions. I will forever be in awe of the work that you do and hope that you and the SAGDA grow from strength to strength.

To my supervisor, Ms Henriette van Zyl, thank you so much for your support and enthusiasm regarding my research topic.

Lastly, and most importantly, to my family, both human and animal, I cannot express in words how thankful I am for your unwavering support, love and encouragement throughout my research. To my mom and dad, thank you so much for granting me the opportunity to study this degree and for believing in me no matter what. I would never have been able to do this without you.

## **DECLARATION**

I, Emma Martin, declare that 'Service Dogs for Autism Spectrum Disorder: The Experiences of Caregivers in South Africa', is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before in any other degree at any other institution.

## Table of Contents

<b>Abstract.....</b>	<b>i</b>
<b>Acknowledgements.....</b>	<b>ii</b>
<b>Declaration.....</b>	<b>iii</b>
<b>Table of Contents.....</b>	<b>iv</b>
<b>1. Introduction.....</b>	<b>1</b>
1.1) Introduction.....	1
1.2) Background to the Research Topic.....	1
1.3) Rationale for this Research.....	1
1.4) Research Aims.....	2
1.5) Research Questions.....	3
1.6) Methodological Approach.....	3
1.7) Scope of Study.....	4
1.8) Structure of Dissertation.....	4
<b>2. Literature Review.....</b>	<b>5</b>
2.1) Introduction.....	5
2.2) Autism Spectrum Disorder.....	5
2.2.1) History.....	7
2.2.2) Current Diagnostic Criteria.....	9
2.2.3) Challenges for Caregivers of Children with Autism Spectrum Disorder.....	11
2.2.4) Etiology.....	13
2.2.5) Epidemiology.....	13
2.2.6) Treatment.....	14
2.3) Animal Assisted Interventions.....	14
2.3.1) Animal Assisted Interventions for Autism Spectrum Disorder.....	15
2.4) Human Animal Bond.....	17
2.4.1) Human Animal Bond and Autism Spectrum Disorder.....	17
2.5) Benefits of Pet Ownership.....	18
2.6) Autism Service Dogs.....	19
2.6.1) Autism Service Dog Training.....	20
2.6.2) Documented Benefits of Autism Service Dogs.....	22
2.6.3) Disadvantages of Autism Service Dogs.....	28
2.6.4) Welfare of the Autism Service Dog.....	29

2.7) The South African Guide Dog Association.....	31
2.8) South African Specific Considerations.....	34
3. Methodology.....	36
3.1) Introduction.....	36
3.2) Theoretical Framework.....	36
3.2.1) Qualitative Research.....	36
3.3) Phenomenology.....	37
3.4) Hermeneutics.....	39
3.5) Hermeneutic Phenomenology.....	39
3.6) Participant Selection.....	40
3.7) Data Gathering Method.....	42
3.8) Data Analysis.....	44
3.9) Reliability and Validity in Qualitative Research.....	46
3.9.1) Credibility.....	46
3.9.2) Transferability.....	47
3.9.3) Dependability.....	47
3.9.4) Confirmability.....	47
3.10) Ethical Considerations.....	48
4. Results and Discussion.....	50
4.1) Introduction.....	50
4.2) Introduction to Participants.....	50
4.3) Results and Discussion.....	53
4.3.1) Super-ordinate Theme I: Accessibility of Autism Service Dogs in South Africa.....	53
4.3.1.a) Sub-ordinate theme 1) Application: “so easy”.....	54
4.3.1.b) Sub-ordinate Theme 2) Waiting Time: “long time coming”.....	56
4.3.1.c) Sub-ordinate Theme 3) Costs: “not exactly cheap”.....	57
4.3.1.d) Sub-ordinate Theme 4) Support from the SAGDA: “always there to help”.....	59
4.3.1.e) Super-ordinate Theme I: Conclusion.....	61
4.3.2) Super-ordinate Theme II: Adjustment to Autism Service Dogs.....	61
4.3.2.a) Sub-ordinate Theme 1) Child Adjustment: “it took a while”.....	61
4.3.2.b) Sub-ordinate Theme 2) Sibling Adjustment: “frustrating”.....	64

4.3.2.c) Sub-ordinate Theme 3) Caregiver Adjustment:	
“big, big adjustment” .....	65
4.3.2.d) Super-ordinate Theme II: Conclusion.....	68
4.3.3) Super-ordinate Theme III: Participant’s Use of	
Their Autism Service Dog .....	68
4.3.3.a) Sub-ordinate Theme 1) School: “benefit to all the kids” .....	69
4.3.3.b) Sub-ordinate Theme 2) Outings:	
“comes with us everywhere” .....	74
4.3.3.c) Sub-ordinate Theme 3) Therapy: “like an extra tool” .....	79
4.3.3.d) Sub-ordinate Theme 4) Emotional Support:	
“a constant companion” .....	82
4.3.3.e) Sub-ordinate Theme 5) Educational Tool: “learned a lot” .....	85
4.3.3.f) Super-ordinate Theme III: Conclusion.....	88
4.3.4) Super-ordinate Theme IV:	
Perceived Effects of the Autism Service Dog for the ASD Child.....	88
4.3.4.a) Sub-ordinate Theme 1) Fondness for Dogs:	
“loves dogs now” .....	88
4.3.4.b) Sub-ordinate Theme 2) Self-Confidence:	
“self-confidence has just grown so much” .....	90
4.3.4.c) Sub-ordinate Theme 3) Calmer: “far less aggressive” .....	91
4.3.4.d) Sub-ordinate Theme 4) Verbal Communication:	
“we have seen a big difference in speech” .....	93
4.3.4.e) Sub-ordinate Theme 5) Happier:	
“just so much happier now” .....	94
4.3.4.f) Sub-ordinate Theme 6) Social Skills:	
“makes an effort to interact” .....	96
4.3.4.g) Super-ordinate Theme IV: Conclusion.....	97
4.3.5) Super-ordinate Theme V: Perceived Effects of the	
Autism Service Dog for the Caregiver.....	98
4.3.5.a) Sub-ordinate Theme 1) Happiness:	
“just such a positive influence” .....	98
4.3.5.b) Sub-ordinate Theme 2) Reduced Burden:	
“gives me a break” .....	100
4.3.5.c) Sub-ordinate Theme 3) Increased Stress:	
“nerve-racking” .....	102
4.3.5.d) Sub-ordinate Theme 4) Increased Workload:	
“it’s like having another child” .....	103

4.3.5.e) Super-ordinate Theme V: Conclusion.....	105
4.3.6) Super-ordinate Theme VI: Public Response to Autism Service Dogs in South Africa.....	105
4.3.6.a) Sub-ordinate Theme 1) Attention: “far more interest and questions” .....	106
4.3.6.b) Sub-ordinate Theme 2) Business Admittance: “turned away a lot” .....	108
4.3.6.c) Sub-ordinate Theme 3) Education Deficit: “people can be really stupid” .....	110
4.3.6.d) Sub-ordinate Theme 4) Public Empathy: “much more understanding” .....	113
4.3.6.e) Sub-ordinate Theme 5) Public Dissatisfaction: “not everyone likes dogs” .....	114
4.3.6.f) Super-ordinate Theme VI: Conclusion.....	116
4.3.7) Super-ordinate Theme VII: The Welfare of Autism Service Dogs in South Africa.....	116
4.3.7.a) Sub-ordinate Theme 1) Well Cared for Dogs: “second child” .....	117
4.3.7.b) Sub-ordinate Theme 2) Safety Concerns: “tantrums can be violent” .....	119
4.3.7.c) Super-ordinate Theme VII: Conclusion.....	120
4.3.8) Super-ordinate Theme VIII: Ideas for the Improvement of Autism Service Dogs in South Africa.....	120
4.3.8.a) Sub-ordinate Theme 1) Education: “there needs to be more information available” .....	121
4.3.8.b) Sub-ordinate Theme 2) Additional Training for Autism Service Dogs: “expected more” .....	122
4.3.8.c) Sub-ordinate Theme 3) Increase Training Centres: “we need more of these dogs” .....	124
4.3.8.d) Super-ordinate Theme VIII: Conclusion.....	126
5. Conclusion.....	127
5.1) Introduction.....	127
5.2) Considering the Research Questions in Light of Results Obtained .....	127
5.2.1) Question 1: How accessible are autism service dogs for South Africans, based on the experiences of the caregivers of ASD children placed with such service dogs? .....	127



5.2.2) Question 2: How did the children with ASD, their siblings and their caregivers experience adjusting to life with the autism service dog?.....	128
5.2.3) Question 3: How are autism service dogs being used by their recipients within South Africa?.....	129
5.2.4) Question 4: What are the experienced effects, both positive and negative, of autism service dogs for the ASD children supplied with such service dogs, as described by the caregivers?.....	130
5.2.5) Question 5: What are the experienced effects, both positive and negative, of autism service dogs for the caregivers of the ASD children supplied with such service dogs?.....	132
5.2.6) Question 6: What is the general public's perception towards the use of autism service dogs within South Africa, as experienced by the caregivers of those placed with an autism service dog?.....	132
5.2.7) Question 7: What are the effects of life as a South African autism service dog on the welfare of the service dogs?.....	134
5.2.8) Question 8: What could be implemented to enhance the benefits of autism service dogs for South Africans?.....	134
5.3) Final Conclusions.....	136
5.4) Limitations.....	136
5.5) Recommendations for Future Research.....	136
References.....	138
Appendix A.....	145
Appendix B.....	147
Appendix C.....	148
Appendix D.....	150
Appendix E.....	151

## **Chapter One**

### **Introduction**

#### **1.1) Introduction**

This research study aimed to provide a baseline for research on autism service dogs within South Africa. This first chapter provides a brief insight into the background of the topic of research followed by insight into the rationale for the research, its aims, methodological approach and the scope of the study. Lastly, this chapter will provide an overview of the structure which this dissertation will follow.

#### **1.2) Background to the Research Topic**

Autism spectrum disorder (ASD) is a devastating neurodevelopmental disorder diagnosed in childhood which remains with the individual for the duration of their life, affecting both the individual diagnosed as well as their family and caregivers (Barlow & Durand, 2015). While numerous methods of treatment have been developed and utilized in an attempt to treat ASD, no cure is currently known (Barlow & Durand, 2015). Treatment developments and methods are now aimed towards reducing symptom severity and distress rather than curing the disorder (Barlow & Durand, 2015). A variety of intervention methods aimed at alleviating symptoms of ASD for both the child diagnosed with the disorder and their caregivers make use of animals as therapeutic tools (O'Haire, Guérin, Kirkham, & Daigle, 2015a). One such method is the use of autism service dogs (Berry, Borgi, Francia, Alleva, & Cirulli, 2013). Autism service dogs have been popular internationally since 1997 with a fair amount of research published on their uses and benefits (Burrows, Adams, & Millman, 2008a). From the available research it can be seen that a number of benefits were noted to have occurred from the use of autism service dogs for the ASD children and their caregivers (Berry et al., 2013). In South Africa, only one organization currently trains and supplies autism service dogs, namely the South African Guide Dogs Association (SAGDA). This is still a fairly recent addition to the services offered by the SAGDA, with the first autism service dogs being trained around the year of 2015 (South African Guide Dog Association, Personal Communication, 16 April, 2019). At the time of this research study, no published research documenting the use and value of autism service dogs in South Africa was available.

#### **1.3) Rationale for this Research**

As noted above, the researcher found that a fair amount of data on the use and value of autism service dogs for ASD children and their caregivers was available from international research studies. The internationally collected data identified a variety of possible uses, benefits and drawbacks for the ASD children who had been supplied with autism service dogs as well as for their caregivers. After a great deal of unsuccessful searching, it was found that, unfortunately, no research on autism service dogs had been conducted in South Africa at the time of the

commencement of this dissertation. A possible explanation for this could be that the training and supplying of autism service dogs in South Africa is a relatively new practice.

The deficit in available research on the topic of autism service dogs in South Africa led the researcher consider whether the findings from the international research studies would be valid and transferable to a South African population. While internationally collected data is of value to prospective researchers on the topic throughout the world, the vast differences between countries may result in the data being unsuitable to transfer to individuals from countries other than where the data was originally gathered. When considering the immense differences between South Africa and the far more developed countries where research studies on autism service dogs have been conducted, it would seem unlikely that the international results would be transferable to a South African population, however, this is merely a presumption and may not be accurate. It is due to this that the researcher believed it to be important to undertake research within South Africa on the use of autism service dogs trained by the SAGDA to identify whether the findings documented internationally could be transferred to a South African population.

#### **1.4) Research Aims**

The main aims of this research were to document the experienced effects of autism service dogs for both the children diagnosed with Autism Spectrum Disorder (ASD) and their caregivers, as well as the ways in which autism service dogs were being used by their owners in South Africa. Additionally, an understanding of the experiences of the participants in applying for, receiving, adjusting to and caring for the autism service dogs was sought to ascertain the accessibility of these dogs within South Africa. An understanding of the perception of autism service dogs by the general public in South Africa was also investigated as the role of these dogs varies so greatly from the roles generally prescribed for dogs by South Africa citizens. In addition to this, information on possible methods for enhancing the benefits of autism service dogs for those directly affected by ASD as well as the general public was investigated. Lastly, the welfare of the dogs trained and provided as autism service dogs was considered due to the possible strains placed upon them from the roles which they are expected to perform.

In order to address the aims above, information on the processes followed by the SAGDA regarding their training and placing of autism service dogs within South Africa was gathered directly from the SAGDA. This had not been considered at the outset of the research study, however, due to the lack of information available on the topic, the researcher requested the information directly from the SAGDA to allow for such processes to be discussed within a South African context. The information gathered from the SAGDA was further utilized in the results and discussion section when comparing the practices of international autism service dog suppliers to the SAGDA.

Lastly, the researcher aimed to compare data available from international research studies on autism service dogs with the data gathered from the South African participants to ascertain whether the results found internationally were transferrable to a South African population.

For all of the above mentioned aims, the researcher endeavoured to gather and interpret the information from the participants' points of view. Gathering in-depth, rich information on the lived experiences of the participants and the ways in which they made sense of these experiences was of the utmost importance.

### **1.5) Research Questions**

From the above aims, the following questions were developed to guide this research study:

**Question 1:** How accessible are autism service dogs for South Africans, based on the experiences of the caregivers of ASD children placed with such service dogs?

**Question 2:** How did the children with ASD, their siblings and their caregivers experience adjusting to life with the autism service dog?

**Question 3:** How are autism service dogs being used by their recipients within South Africa?

**Question 4:** What are the experienced effects, both positive and negative, of autism service dogs for the ASD children supplied with such service dogs, as described by the caregivers?

**Question 5:** What are the experienced effects, both positive and negative, of autism service dogs for the caregivers of the ASD children supplied with such service dogs?

**Question 6:** What is the general public's perception towards the use of autism service dogs within South Africa, as experienced by the caregivers of those placed with an autism service dog?

**Question 7:** What are the effects of life as a South African autism service dog on the welfare of the service dogs?

**Question 8:** What could be implemented to enhance the benefits of autism service dogs for South Africans?

### **1.6) Methodological Approach**

This research study was qualitative in nature as the researcher aimed to gather in depth information on personal experiences from a small group of participants with the use of in-person interviews conducted separately with each participant. The interviews followed a semi-structured schedule to ensure all topics of interest were covered yet allowing for further exploration of interesting information divulged by the participants. The interviews were recorded and transcribed verbatim by the researcher. The transcriptions were then thematically analyzed to collate and draw

out the major themes within. The data was then analyzed using a hermeneutic phenomenological framework.

### **1.7) Scope of Study**

The scope of this study was limited in nature due to constraints of time, resources and the requirements designated for a Master's dissertation. Despite this, participants were selected from five provinces within South Africa with a total of eight families having participated in the study, resulting in eight semi-structured interviews being conducted. Data was gathered from the participants with a focus on identifying the uses, perceived effects, accessibility, public response and recommendations for future improvements of autism service dogs within South Africa, however, these topics could not be deeply investigated due to time constraints. This research study aimed to provide a baseline for South African research on the topic of autism service dogs.

In addition to the data collected from the participants of this study, information was also gathered by the researcher from the South African Guide Dog Association pertaining to their process of selecting, training and supplying of autism service dogs as no information on the topic was available at the time.

### **1.8) Structure of Dissertation**

This dissertation is divided into five chapters. The current chapter provides an introduction to the research study. Chapter two provides a review of literature available on the topic of research. Chapter three provides an overview of the methodological processes followed for this research. Chapter four documents the results generated along with a discussion of said results. Lastly, chapter five provides a conclusion along with documenting the limitations of this research study and recommendations for future research on the topic of autism service dogs within South Africa.

## Chapter 2

### Literature Review

#### 2.1) Introduction

This chapter begins with an overview of autism spectrum disorder (ASD) including its history, current diagnostic criteria, its resulting challenges for the children diagnosed with the disorder as well as their caregivers, the etiology and then epidemiology of the disorder as well as documented treatment methods. In addition to this, a look into animal assisted interventions (AAI) is discussed and followed by the use of AAIs for an ASD population. Thereafter, a discussion of the human animal bond and its application to an ASD population is provided as well as a look into the benefits of pet ownership. A discussion of autism service dogs follows, along with information on the training of these dogs, the benefits and disadvantages identified internationally of autism service dog ownership and the welfare of such dogs is discussed. Lastly, information on the processes followed by the South African Guide Dog Association (SAGDA) is provided and unique considerations based on a South African population are documented.

#### 2.2) Autism Spectrum Disorder

Autism spectrum disorder (ASD) is a neurodevelopmental disorder diagnosed in early childhood with symptoms most frequently evident before three years of age (Sue, Sue, Sue, & Sue, 2014). ASD is diagnosed in both males and females, however, it is far more prevalent in boys than in girls with approximately four boys diagnosed for every one girl diagnosed (Barlow & Durand, 2015). For the first, approximately two years of life, the disorder, although believed to have developed in-utero, is often disguised by the complexity of the developing brain (Trevarthen, Aitken, Papoudi, & Robarts, 1998). Frequently babies with this disorder will be praised as ‘easy’ children who are undemanding and placid although not noticeably different from other infants (Trevarthen et al., 1998). This seemingly blissful existence is, unfortunately, short lived and at approximately two years of age, when babies usually become exceedingly aware of other people, develop a highly playful imagination and are eager for new experiences and interactions with others, these babies tend to rather become noticeably self-contained or isolated in their own internal world, become increasingly unresponsive and irritable, are difficult to understand and communicate with, develop seemingly pointless and repetitious vocalizations and movements as well as developing abnormal gestures and postures (Trevarthen et al., 1998). As the child continues to age and develop, these abnormal behaviours will continue with the addition of further deviations from what is considered to be ‘normal’ for child development (Trevarthen et al., 1998). A lack of desire for social interaction, inattention to their effects on other people, peculiar and ritualistic insistence, a strong need for sameness with extreme distress experienced from a change of routine, the development of obsessive interests, frequent and intense tantrums sometimes including self-harming behaviours, avoidance of eye contact, inappropriate use of toys, repetitive

flapping of arms as well as appearing to be in a trance like state are all common symptoms seen in children with ASD (Schreibman, 2005). Far more frequent and intense experiences of social anxiety and anxious arousal have also been found to occur in children and adolescents diagnosed with ASD compared to their typically developing peers, which may lead to further social withdrawal, limiting opportunities for the development of effective social skills and possibly causing greater sensitivity to negative social interactions, which are not uncommon for children with ASD, due to increased rates of peer victimization and bullying experienced by the autistic population (van Steensel, Bögels, & Perrin, 2011). In addition to this, speech development difficulties are highly common with approximately half of children diagnosed with ASD remaining mute or never developing enough of a vocabulary to accomplish daily needs throughout their lives (Trevvarthen et al., 1998). Others do develop sufficient speech capabilities, with some developing a highly advanced vocabulary at a very early age, however, these children will seldom make appropriate use of language and will rather echo what others have said to them (echolalia), recite television jingles repetitively, repeat parts of conversations at inappropriate times and without any obvious sense, confuse personal pronouns and use language in a highly rigid or concrete way (Sue et al., 2014). In addition to this, those who seem to have an understanding of language will often have great difficulty with negatives and reversals and will only understand literal meanings of language, resulting in them frequently missing the meanings of jokes, metaphors or sarcasm (Trevvarthen et al., 1998). A final symptom worth mentioning, due to its severe negative consequences, is the act of bolting which is common amongst children with ASD (Anderson et al., 2012). Bolting, also known as elopement, refers to when an ASD child inappropriately leaves their caregiver without permission to do so, frequently at an extreme or inappropriate pace (Anderson et al., 2012). This behavior is considerably problematic due to the severe breach of safety which results from them leaving their caregiver, often at a pace with which the caregiver is unable to match (Anderson et al., 2012).

The above mentioned symptoms are merely a fraction of the numerous problems which can plague children with ASD. Autism spectrum disorder is known to be a highly heterogeneous disorder with sufferers experiencing a multitude of different problems, with no two children experiencing a matching set of symptoms (Masi, DeMayo, Glozier, & Guastella, 2017). There are three main categories, labeled as the triad of impairments by Wing and Gould (1979), within which symptoms experienced by those diagnosed with ASD can be placed, namely: difficulties with social interactions; difficulties with communication and restricted, repetitive behaviours (Wing & Gould, 1979). These impairments seldom resolve as the child develops and, as yet, there is no known cure for ASD, meaning that it is a lifelong disorder causing endless struggles for those diagnosed as well as their family or caregivers (Sue et al., 2014). It is important to note that ASD is a disorder diagnosed on a continuum from mild to severe, meaning that some children may

experience some of the symptoms mentioned above to a far milder extent than others, however, any level of diagnosis is likely to result in difficulties for those diagnosed with the disorder as well as their families and caregivers (Barlow & Durand, 2015).

### **2.2.1) History**

The word “autism” is a word developed from the combination of two Greek words, namely, “aut-”, meaning “self”, and “-ism”, meaning “orientation” or “state” (Trevvarthen et al., 1998). ASD could then be understood as a condition of someone unusually absorbed in or preoccupied with their own internal world which, although drastically simplified and greatly lacking in detail, is a fairly accurate description of how a lay person may view a person suffering from ASD (Trevvarthen et al., 1998).

The first identification, within professional literature, of what is now termed autism spectrum disorder appeared in 1943, in a paper written by Leo Kanner, an American child psychiatrist (Mesibov, Shea, & Adams, 2001). This highly detailed, clinical account is considered the seminal article on ASD (Blacher & Christensen, 2011). In his paper, titled “Autistic Disturbances Of Affective Contact”, Kanner described 11 children from his child psychiatric unit who all appeared to be suffering from similar symptoms which were abnormal to the symptoms he was used to seeing experienced by children (Kanner, 1943). The name by which Kanner referred to this set of symptoms was early infantile autism (Kanner, 1943). These symptoms, although similar in some ways to the symptoms he observed in children with childhood schizophrenia, were unique in many ways, leading him to distinguish the symptoms, placing them into three categories, namely: peculiar language; insistence on sameness and social isolation (Kanner, 1943). These three categories were later described as the triad of impairments by Wing and Gould (1979), as previously mentioned. Kanner considered the fundamental, core issue of the disorder to be the children’s social deficits in their inability to relate to others and objects in a way deemed ordinary in society (Blacher & Christensen, 2011). He labelled this inability to relate as extreme autistic aloneness (Blacher & Christensen, 2011).

Kanner’s paper was extremely influential and widely read which is unusual due to it being the first paper documenting a disorder, however, this could be because a number of professionals were observing children with similar symptoms yet had no diagnosis for them (Mesibov et al., 2001). Considering that there was no other reference work available at the time, Kanner’s initial observations and description were remarkably accurate as he highlighted the characteristics which are used to define ASD still to this day (Mesibov et al., 2001).

Closely following Kanner’s paper, a German psychiatrist by the name of Hans Asperger published his doctoral thesis in 1944 describing a disorder similar to that described by Kanner, however, his observed symptoms appear to be slightly milder (Volkmar & Lord, 2007). The symptoms described in this paper were later classified as Asperger Syndrome and then as high



functioning autism in more recent times (Barlow & Durand, 2015). Asperger's paper was not as influential as Kanner's paper, however, this was likely due to Asperger's paper being published in German during World War II (Mesibov et al., 2001). Very few English speakers knew of Asperger's paper prior to Lorna Wing's review of it in 1981 (Mesibov et al., 2001). In his paper, Asperger described four boys all of whom displayed behaviors deemed unusual with the use of the label autistic psychopathy which was later translated as autistic personality disorder, highlighting Asperger's belief that this disorder is a stable personality trait which is present from birth rather than something that develops later in life as a psychotic process (Mesibov et al., 2001). Asperger, as did Kanner, described symptoms which fit into the triad of impairments, however, unlike Kanner, he did not mention any particular characteristics which he deemed necessary for diagnosis, nor did he mention any characteristics he believed to be primary to the disorder (Mesibov et al., 2001).

In 1981, Lorna Wing provided a review of Asperger's paper, providing a history of the disorder as outlined by Asperger and renaming it "Asperger Syndrome" (Wing, 1981). In her paper, Wing highlighted the similarities between Kanner's and Asperger's papers and raised the question of whether the two papers were in fact describing varying degrees of the same disorder (Wing, 1981). Wing documented the similarities in the observations made by Kanner and Asperger and noted the continuum of the criteria observable, starting with Kanner's lower functioning observations and progressing through to Asperger's higher functioning observations (Wing, 1981).

In 1980, the DSM-III was published, endorsing a medical diagnosis for what was labelled infantile autism for the very first time (American Psychiatric Association, 1980). The DSM-III classified infantile autism as a pervasive developmental disorder, distinguishing it from schizophrenia (Masi et al., 2017). The diagnostic criteria required that there be clear deficits in language development, failure of responsiveness to others and unusual responses to environmental stimuli (American Psychiatric Association, 1980). In addition to this, symptoms must have presented prior to 30 months of age, with an absence of schizophrenic symptoms (American Psychiatric Association, 1980).

In 1987, the DSM-III-R was published with broadened diagnostic criteria for what was then relabeled as autistic disorder in order to recognize higher functioning individuals as well as to acknowledge that the disorder was not limited to infants, by dropping the requirement for onset prior to 30 months, allowing for the inclusion of individuals whose symptoms were not great enough to have received a diagnosis in early childhood (Volkmar, Bregman, Cohen, & Cicchetti, 1988). The DSM-III-R broadened the concept of ASD by including a diagnosis for higher functioning individuals with the label pervasive developmental disorder not otherwise stated (PDD-NOS) (American Psychiatric Association, 1987). The listed criteria for diagnosis of autism disorder were also increased with 16 possible criteria mentioned which were spread across the

previously stated three categories (American Psychiatric Association, 1987). It was required that eight of these criteria be present to warrant a diagnosis (American Psychiatric Association, 1987). Although the word spectrum was not yet used, these advancements noted that, for the first time, researchers were becoming aware of the wide range of symptoms and symptom severity which is characteristic of ASD as we now know (Volkmar et al., 1988).

The DSM-IV, released in 1994, and the DSM-IV-R, released in 2000, saw ASD being categorized as a spectrum disorder for the very first time (Masi et al., 2017). The diagnostic criteria remained similar to those in the previous publication of the DSM, however, in addition to autistic disorder and PDD-NOS, three further diagnoses were added, each with their own specific set of diagnostic criteria, namely: Asperger's Disorder; childhood disintegrative disorder and rett syndrome (American Psychology Association, 1994). This was the first time that Asperger's Disorder was formally recognized using the criteria outlined by Wing from her review of Asperger's paper (Masi et al., 2017).

### **2.2.2) Current Diagnostic Criteria**

In 2013, the most recent version of the DSM, the DSM-5, was published with a great number of changes made to the diagnostic criteria for ASD (Masi et al., 2017). The additional conditions categorized in the DSM-IV were merged into one umbrella diagnosis, defined as autism spectrum disorder (ASD) with the addition of specifiers for the level of severity (McPartland, Law, & Dawson, 2016). This merging of disorders was due to concern over the lack of consistency in diagnosis of the different disorders by clinicians (McPartland et al., 2016). In addition to ASD, a related diagnosis for social communication disorder (SCD) was introduced for use when there were significant difficulties in the social use of both verbal and non-verbal communication but with the absence of restrictive or repetitive behaviour (Masi et al., 2017). This diagnosis is likely to be used for those previously diagnosed with PDD-NOS (McPartland et al., 2016).

The DSM-5 diagnostic criteria for ASD has grouped symptoms into two main categories (American Psychiatric Association, 2013).

The first category regards deficits in social communication and interaction across multiple contexts with symptoms either being currently active or having been present in the past (American Psychiatric Association, 2013). This first category includes behaviors such as deficits in social-emotional reciprocity, deficits in non-verbal communication as well as deficits in forming, understanding and maintaining relationships (American Psychiatric Association, 2013).

The second category relates to restricted, repetitive patterns of behaviour, interests of activities with symptoms either currently active or having been active in the past (American Psychiatric Association, 2013). This second category includes behaviours such as stereotyped or repetitive use of objects, movements or speech, insistence on sameness and inflexibility with routines or patterns of repetitive behaviour, highly restricted and intense interests or fixations as

well as hypo- or hyper-reactivity to sensory input or unusual interest in sensory aspects of the environment (American Psychiatric Association, 2013). This second category requires that at least two of the above mentioned abnormal behaviours be present for a diagnosis to be made (American Psychiatric Association, 2013).

Both of these categories require the practitioner to further specify the perceived severity of the symptoms from three levels, namely: level 1 which requires some support; level 2 which requires substantial support, or level 3 which requires significant support (American Psychiatric Association, 2013).

In addition to these two categories, symptoms must have been present in the early developmental stage, however, need not have fully presented themselves until later in the child's development (American Psychiatric Association, 2013). Symptoms must further cause significant impairments in social, occupational or other areas of life and must not be better explained by an intellectual disability or global developmental delay (American Psychiatric Association, 2013). Additional specifiers may be added to the diagnosis from the following: with accompanying intellectual impairment; with accompanying language impairment, associated with a known medical or genetic condition or environmental factor; associated with another known neurodevelopmental, behavioural or mental disorder; with catatonia (American Psychiatric Association, 2013).

There is a great deal of debate about the changes made to the diagnostic criteria for ASD as stated in the DMS-5, with many people in disagreement about the marked broadening of the definition of ASD, however, despite this contestation, the diagnostic criteria as stated in the DSM-5 is what is currently used by practitioners for the diagnosis of ASD (McPartland et al., 2016).

As mentioned previously, ASD is a highly heterogeneous disorder with no two individuals having the same set of symptoms (Masi et al., 2017). Most individuals with ASD find everyday social interactions to be distressing and challenging (Masi et al., 2017). Individuals with ASD generally lack motivation and the necessary social skills to interact adequately with others in their environment, frequently showing abnormal responses to the emotional displays of others as well as making use of very limited eye contact (O'Haire et al., 2015a). An additional problem commonly experienced by individuals with ASD is an abnormal stress response to a variety of stimuli (Viau et al., 2010).

ASD is further known to have a high probability of co-morbidity with problems such as depression, gastro-intestinal disorders, cognitive disorders, learning disabilities and numerous other mental and psychical health problems frequently being added to the diagnosis (Trevvarthen et al., 1998).

### **2.2.3) Challenges for caregivers of children with Autism Spectrum Disorder**

It is understandable from the above that ASD causes a great deal of difficulties in many aspects of life for individuals diagnosed with the disorder, however, it also causes a great deal of challenges and distress for the parents, siblings, relatives and caregivers of those diagnosed with ASD (Ludlow, Skelly, & Rohleder, 2012). A qualitative research study done by Ludlow et al. in 2012, where 20 parents were interviewed with the aim of exploring their experiences and challenges of raising an autistic child, highlights some of the numerous difficulties and burdens which these parents face. The results of this study documented six core categories of difficulties as mentioned by the participants, namely: difficulties managing challenging behavioural problems; harsh and negative judgments from others; difficulties negotiating changes to the routine of the child; lack of support; negative impact and increased strain on family life and social relationships as well as difficulties coping emotionally and the importance of appropriate support which can be illusive (Ludlow et al., 2012). 16 out of the 20 participants mentioned challenging behaviours to be considerably difficult, noting problems such as repetitive behaviours; temper tantrums, which are atypical from those expected of similar aged children and aggressive behaviours towards others including siblings and then also towards themselves (Ludlow et al., 2012). These aggressive behaviours were noted as particularly problematic at schools where parents frequently felt as though they were being blamed by teachers for the behaviour (Ludlow et al., 2012). Parents also felt that tantrums in public were particularly difficult due to the negative judgment which they received from the public who appeared to deem the child as 'naughty' and view the parents as simply being incapable of disciplining their child appropriately (Ludlow et al., 2012). Changes to routine were also particularly problematic, with half of the participants mentioning that slight changes to the routine of the child would cause major meltdowns, leading to the parents feeling that they lack excitement and spontaneity in their life as any activities required detailed planning (Ludlow et al., 2012). In addition to this, many parents mentioned feeling isolated due to being excluded from social events usually attended by parents, as well as due to the difficulties of inviting guests to their own homes (Ludlow et al., 2012). Parents further mentioned feeling that their parenting responsibility was all consuming and a substantial burden, causing a great deal of stress, anxiety and feelings of desperation (Ludlow et al., 2012). Difficulties to family relationships mentioned, referred to parents feeling that they were neglecting their other children, siblings becoming jealous of the excess attention being given to the child with ASD, as well as increased arguments between spouses due to stress and differing opinions of how to handle the child (Ludlow et al., 2012). It was also noted that many parents felt that they were unsupported and lacked resources and guidance from external organizations (Ludlow et al., 2012).

An additional qualitative research study also conducted in 2012, this time by Nealy, O'Hare, Powers and Swick, adds to the list of difficulties experienced by caregivers of those

diagnosed with ASD. For their research, semi-structured interviews were conducted with eight mothers of children diagnosed with ASD to explore the impact that raising a child with ASD has on a family's daily functioning (Nealy et al., 2012). From their research, four main themes arose, all of which were predominantly negative in nature (Nealy et al., 2012). These themes were as follows: emotional impact which included increased stress, worry and feelings of guilt; familial relationships which included negative impacts on the mother's relationship with her other children as well as her spouse, all of which threatened the cohesion of the family unit; social impact which included the impact that a child with ASD had on the ability to take part in social events, maintaining friendships as well as negative criticism from the public and lastly, financial impact which referred to the strain of various treatments, special educational resources and schools, doctor's visits as well as numerous other expenses which arise from raising a child with ASD and how this negatively affected the family, especially those who do not earn high salaries (Nealy et al., 2012). The mothers interviewed felt that raising a child with ASD placed a difficult strain on their lives and the lives of their families, leading to family disputes, diminished social interactions, financial difficulties and emotional strain (Nealy et al., 2012). Parents also noted that challenging and unpredictable behavioural patterns which included acts of bolting, where the child runs away from the caregiver without permission and usually at an excessive speed, caused a great deal of excess stress due to experiencing constant fear for the child's safety (Nealy et al., 2012). These difficulties strongly link with those identified by Ludlow et al. (2012) in their research as mentioned above.

It has also been noted that mothers frequently felt a sense of loss due to their child not providing the expected level of social and emotional interaction (Burrows, Adams, & Spiers, 2008b). This can lead to a myriad of psychological difficulties for the mothers since, unlike mothers of typically functioning children, these mothers provide a great deal of additional care for their child but seldom does the child show any sort of affection in return towards the mother which, understandably, can be rather disheartening (Burrows et al., 2008b). This sense of loss likely comes from the realization that the child, which they no doubt idolized and perceived to be a perfect child during gestation, is far from perfect and will never be so (Burrows et al., 2008b). This realization is likely to be exceedingly difficult as it generally comes as a shock to the parent since ASD is undetectable in-utero with symptoms being invisible to the eye and only gradually showing in behaviour as the child develops (Barlow & Durand, 2015). In addition to this, many parents are not educated on the signs and symptoms on ASD, making the abnormal behaviours and developments of their child highly confusing and making a diagnosis of ASD even more difficult to accept (Burrows et al., 2008b).

It is evident and understandable that, in general, ASD is associated with far more negative than positive properties (Nealy et al., 2012). Caregivers are faced with a myriad of difficulties in

raising children with ASD which is, at times, a serious burden to everyday life, with seemingly simple activities such as a trip to the shops or a visit to the doctor, turning into a highly stressful and virtually impossible task due to the planning involved as well as meltdowns, bolting and unpredictable behaviours, which may put the child in danger (Burrows et al., 2008b).

#### **2.2.4) Etiology**

It is clear that autism spectrum disorder is a highly complex disorder, however, it is even more complex when etiology is taken into consideration (Sue et al., 2014). At present there is no specific cause of ASD known to psychologists (Barlow & Durand, 2015). Due to this, as with any disorder where there is no definitive etiology known, numerous, vastly different theories, devised by a host of researchers, have had their moments in history (Schreibman, 2005). These theories range from the highly contested belief that ASD was the fault of the parents, where parents who came across as cold and slightly rigid were labelled as ‘refrigerator parents’ and blamed for their child’s disorder, to theories casting the blame to childhood vaccinations and even a theory which regarded ASD as an extreme version of the male brain (Schreibman, 2005). Slightly more recent and realistic theories have focused on biological, neurobiological, environmental and social effects (Sue et al., 2014). At present, ASD is believed to be the result of predominantly biological factors with the possibility of environmental and psychosocial factors contributing the disorder’s development (Masi et al., 2017). ASD is known to be far more prevalent in males than in females with the diagnosis ratio most frequently reported to be four males diagnosed to every one female (Barlow & Durand, 2015). Additionally, research has shown that a child has an increased risk of developing ASD if their sibling has been diagnosed with the condition (Masi et al., 2017).

#### **2.2.5) Epidemiology**

Published research documenting the global epidemiology of ASD is limited, however, a study conducted in 2012 which provided a systematic review of epidemiology surveys of ASD which had been conducted worldwide provided an estimate stating that approximately one out of every 160 children worldwide was diagnosed with ASD (Elsabbagh et al., 2012). This is only an approximate estimate as the reported prevalence varied greatly in the studies which were reviewed, with a number of studies reporting a far higher prevalence (Elsabbagh et al., 2012).

ASD is a disorder seen and diagnosed worldwide and in any and all ethnic groups and socioeconomic levels (Sue et al., 2014). It has been reported that epidemiological studies conducted over the past approximately 50 years have shown a global increase in the prevalence of ASD (World Health Organization, 2019). This increase in prevalence is not necessarily caused by an increasing number of children developing the disorder but rather due to changes in the definition and concepts as well as greatly increased awareness of ASD by both the public and healthcare professionals (Masi et al., 2017).

In South Africa, the prevalence of ASD grew greatly in the late 1960's and was especially documented in Cape Town around this time (Buhrmann, 1979). This influx of autism diagnoses led to the development of the Society for Autistic Children in 1966 and a private school for children diagnosed with ASD opened in Cape Town in 1970 (Buhrmann, 1979). Unfortunately, epidemiological studies of ASD in developing countries are very limited and, according to Autism South Africa, there were no reliable epidemiology statistics on the prevalence of ASD available in South Africa at the time of this research (Autism South Africa, Personal Communication, June 5, 2019). Despite this, it is agreed upon that African children living both in Africa and abroad are regularly diagnosed with ASD (Bakare & Munir, 2011).

### **2.2.6) Treatment**

Although Autism spectrum disorder has been diagnosed for decades and research into the disorder has increased a great deal, there is still no known cure for ASD (Barlow & Durand, 2015). Despite this, numerous different treatment methods have been developed, with healthcare professionals from various fields of knowledge each noting their own, unique beliefs as to what they perceive to be the most beneficial (Sue et al., 2014). Currently, treatments based on interventions designed to address social and communicative problems with the use of positive reinforcement are thought to be most beneficial (Barlow & Durand, 2015). Unfortunately, the majority of children diagnosed with ASD will retain their diagnosis and will require support throughout their lifetime, the level of which would be determined by the severity of their disorder (Sue et al., 2014). That being said, it is still of great importance that those diagnosed with ASD receive treatment as quickly as possible, since early intervention with a focus on addressing social and communication deficits as well as reinforcement of positive behaviours can reduce the severity of symptoms experienced, particularly in those diagnosed with less severe ASD symptoms (Barlow & Durand., 2015). One approach aimed at reducing symptom severity and distress for those diagnosed with ASD, as well as the parents and caregivers of sufferers, is Animal Assisted Interventions (O'Haire et al., 2015a).

### **2.3) Animal Assisted Interventions**

Animal Assisted Interventions (AAI) are, essentially, interventions where the bond between humans and animals is utilized as a therapeutic tool through the incorporation of animals into therapeutic sessions or activities (Jorgenson, 2006). This incorporation of animals into therapy is certainly not a new phenomenon and dates back to the late eighteenth century when the first recorded therapeutic use of animals occurred at the York Retreat in England, where a selection of small animals were kept at the retreat and cared for by psychiatric patients in an attempt to reduce distress and symptom severity experienced by the patients, recognizing the therapeutic effects of animal interactions (Jorgenson, 2006). Later, in 1860, Florence Nightingale recognized and noted the benefits of having a small pet for people who were ill as they act as an excellent companion

and aid in the improvement of one's mood, which is generally lowered during illness (Fine, 2002). Unfortunately, the advent of scientific medicine toward the end of the 19<sup>th</sup> century saw the displacement of the incorporation of animals into therapeutic settings until the early 1960's (Kruger & Serpell, 2006). In 1962 to be exact, the first scientific paper highlighting the benefits of AAI was published by Boris Levinson with the title 'The Dog as Co-Therapist' (Fine, 2002). Levinson was a child psychologist whose dog, 'Jingles', would frequently be present during his counselling sessions (Geist, 2011). He noted that there were almost immediate positive effects of having the dog present during his sessions, leading him to believe strongly in the beneficial effects that animals can have in psychological counselling, especially with children, which led him to write extensively about this in his book titled 'Pet-Oriented Child Psychotherapy' (Geist, 2011).

Animal Assisted Interventions have grown in popularity greatly since Levinson's seminal reports, despite the initial skepticism which was prominent after the publication of his work (Fine, 2002). With the natural advancements that occur with any phenomenon due to extensive research, Animal Assisted Interventions have been further refined and are now defined in two categories, namely, Animal Assisted Therapy (AAT) and Animal Assisted Activities (AAA) (Fine, 2002). Animal Assisted Therapy can be defined as a goal-oriented intervention, delivered by a trained health or service professional, where an animal, also well trained for a specific purpose, is utilized as an integral part of the therapy process which has been specially designed for the individual taking part in the therapy session (Fine, 2002). Animal Assisted Activities can be defined as animals accompanying facilitators, who are not necessarily trained professionals, on visits of a motivational and recreational nature, rather than goal directed, for people in need, such as the elderly or ill, and frequently take place in institutions (Fine, 2002). In addition to this, there are a few other areas where the benefits of animal interactions have been studied for people who suffer from various problems, both physical and psychological, such as Hippotherapy, Service Animals, Emotional Support Animals as well as pets where the benefits of the close bonds that are formed between pets and their owners have been scientifically researched (Kruger & Serpell, 2006). The study of all of these animal interactions, including AAI, can be grouped under one field known as Anthrozoology or Human-Animal Interaction (HAI) (Odendaal, 2000). HAI theory encompasses the dynamic and mutual relationships which form between humans and animals and the ways in which these relationships and interactions affect both physical and psychological well-being (O' Haire, 2012).

### **2.3.1) Animal Assisted Interventions for Autism Spectrum Disorder**

It is well known now that human-animal interactions can have beneficial results for people suffering from various problems, with even the simple act of owning and caring for a pet showing positive benefits and improvements in health conditions (Dotson & Hyatt, 2008). It is interesting to note that this extends to those suffering from autism where it has been found that, given the choice,



an autistic child is more likely to initiate interaction with a dog than with a human or toy (Prothmann, Ettrich, & Prothmann, 2009). This has led to the suggestion that perhaps the social aversion shown by sufferers of ASD is human specific and not necessarily passed on to animal interactions (O' Haire, 2012). It is no doubt then that an interest in the use and benefits of animal assisted activities, therapies and interactions for those suffering from ASD has led to researchers undertaking scientific research on the topic.

It was, once again, the work of Boris Levinson which initially highlighted the benefits of animals for ASD when his argument relating to socio-communicative improvements seen in ASD sufferers through the playful interaction with dogs was brought into conversation at a meeting of the American Psychology Association in 1961 (Solomon, 2010).

Results of AAI for ASD have been largely positive with significant improvements in ASD symptoms frequently reported (O' Haire, 2012). The most commonly used animals for AAI are dogs, however, horses and guinea pigs are also popular for use with sufferers of ASD (O'Haire et al., 2015a). AAI's that make use of dogs in particular include incorporating them into therapy sessions as a means to build rapport between the therapist and client, interactive games and soft touch activities (O'Haire et al., 2015a). Additional uses of dogs in therapy include facilitating the learning of new skills such as verbal communication and commands, pro-social behavior as well as sensory-motor skills (O'Haire, 2012).

Benefits of the use of various forms of animal interactions for ASD were noted by O'Haire in 2012 when she published a systematic review of research done on the use of animals, including dogs, horses and guinea pigs for ASD. The most commonly noted benefit of AAI for ASD was increased social interactions (O'Haire, 2012). Additional benefits included increased communication and language use, decreases in problematic behaviours, reduced stress and increased well-being as well as a reduction in the severity of ASD symptoms in general (O'Haire, 2012).

In a study done by Fung and Leung (2014), therapy dogs were used in therapy sessions with children diagnosed with ASD resulting in statistically significant results found for increased verbal social behaviour. Outcomes of AAI using dogs in particular for sufferers of ASD have been largely positive, with the report of increased positive social behaviours, increased social interactions, decreases in negative social behaviours and social isolation, increased use of language and verbalizations, improvements in mood and playfulness as well as decreased levels of parental stress (O'Haire et al., 2015a).

These research findings are wonderfully positive, however, it is worth noting that all of the above results were documented in international studies with little research on the use of AAI for ASD available in South Africa. One research study conducted by Surujlal and Rufus in 2011 examined the use of horses in therapy for children with intellectual disabilities, with eight of the

participants in the study having been diagnosed with ASD. Results of this study were positive in nature with reports of improved physical development, increased levels of self-esteem and confidence as well as slight improvements in social engagement (Surujlal & Rufus, 2011). This gives reason to believe that it may well be worthwhile to test the results found from international studies in South Africa by conducting additional empirical research in order to ascertain whether AAI would be beneficial for ASD in South Africa as well (Surujlal & Rufus, 2011).

## **2.4) Human Animal Bond**

Regarding the human animal bond, there is evidence, as well as prehistoric speculation, that the social relationships between humans and animals developed without coercion from the side of the humans, leading to the belief that domestication of animals was a natural process and not a unilateral decision by humans to domesticate them (Odendaal, 2000). These social relationships between humans and animals have been happening for over 10,000 years and have been classed as meaningful and mutually beneficial since the earliest of interactions, however, what likely started out as simple relationships have developed greatly over the years, becoming far more varied, intensified and complex in modern times (Odendaal, 2000). The benefits of interacting with animals in a social way and forming a relationship or bond with an animal are far reaching and extend to incorporate both adults and typically developing children (Carlisle, 2015). Some of these benefits include companionship, unconditional love, stress relief as well as positive effects on social interaction as animals appear to act as social catalysts (Carlisle, 2015).

### **2.4.1) Human Animal Bond and Autism Spectrum Disorder**

These positive benefits seem to carry over to those diagnosed with ASD and research has shown that children with ASD appear to have a preference for interacting with animals compared with humans or inanimate objects (Prothmann et al., 2009). One of the most reported benefits of animal interactions for ASD sufferers is increased social interactions and ability to partake in social interactions (O'Haire, McKenzie, Beck, & Slaughter, 2013). This is of particular importance given that one of the core problems faced by ASD sufferers is difficulties with social communication (Carlisle, 2015).

A study conducted by O'Haire et al. in 2013 provided data to confirm this improvement in social ability of ASD sufferers. In their study, 99 children were paired into groups of three, with one of the children in the group having a diagnosis of ASD (O'Haire et al., 2013). These groups were then observed during six separate 10-minute free-play sessions, three with toys and three with two guinea pigs (O'Haire et al., 2013). Results from this study showed that the participants with ASD showed greater prosocial behaviours and positive affect as well as less self-focused behaviours and negative affect in the presence of the two guinea pigs (O'Haire et al., 2013). The results further showed that the children with ASD received a greater number of positive social approaches from the typically developing participants as well as partaking in a greater number of

self-motivated social interactions with the typically developing children by approaching them in a positive social manner in the presence of the guinea pigs compared to the toys (O’Haire et al., 2013).

In another study done by O’Haire, McKenzie, Beck and Slaughter (2015b), it was found that animals may also serve as social buffers, helping to reduce anxious arousal and social stress which is frequently experienced by children with ASD. In this study, physiological arousal was measured in both typically developing children and children with ASD, in four different social contexts namely: reading silently; reading aloud in a classroom situation; free play with other children and toys and lastly free play with other children and animals which were, once again, guinea pigs (O’Haire et al., 2015b). Results for the study showed that ASD children had higher levels of anxious arousal compared to their typically developing peers in all situations except the situation with the animals (O’Haire et al., 2015b). The ASD children showed a 43% decrease in anxious arousal levels in the presence of animals compared to the presence of only other children and toys (O’Haire et al., 2015b).

## **2.5) Benefits of Pet Ownership**

Looking now at pet ownership, a study which investigated the benefits of animal interactions through pet ownership for ASD sufferers was done by Carlisle in 2015. In this study, families with ASD children who owned dogs were studied and results identified that, compared to families without pets, the children with ASD showed greater assertive behavior as well as improved social skills (Carlisle, 2015). It was also noted that 92% of the families in the study who owned dogs described their child with ASD as attached, or even very attached, to the dogs, highlighting how children with ASD frequently form strong bonds with animals (Carlisle, 2015).

In a research poll conducted by Taylor, Funk and Craighill in 2006, it was found that, when asked about close relationships, results uncovered that dogs in particular were rated higher than mothers and fathers with 94% of the participants mentioning them, compared with only 87% mentioning mothers and 74% including fathers. It was also noted that 85% of dog owners consider their dog a member of their family (Taylor et al., 2006). This highlights the strong connections humans now form with animals, especially pets. Although this research was done with typically functioning adults as participants, additional research with typically developing children found that children also tend to prioritize their relationships with their pets, describing them as a source of emotional support as well as serving as a social facilitator for interactions with other children (Triebenbacher, 1998). Additional benefits noted for children with pets include greater empathy and improved social confidence as well as improved social competence (Daly & Morton, 2006). From these findings it is no doubt that researchers were interested in whether pet ownership and forming a bond with an animal would provide similar benefits to children diagnosed with ASD as

is seen in typically developing children, as the benefits noted apply directly to some of the most frequently seen difficulties characteristic of ASD.

As mentioned previously, research has shown that children with ASD, when given the choice, appear to give preference to interacting with animals over humans or inanimate objects (Prothmann et al., 2009). In this study, the children with ASD had the option of interacting with either humans, inanimate objects (a selection of toys) or a certified therapy dog (Prothmann et al., 2009). The children were found to interact most frequently and for the longest time with the therapy dog (Prothmann et al., 2009). An explanation for this is that dogs in particular may communicate their intentions in a way that is easier for children to understand, compared to that shown by humans, as dogs lack the complex facial expressions and language usage that is common in human communication (Prothmann et al., 2009). Another explanation is that there is no need to identify what a dog is thinking or planning in order to partake in a social interaction with them, which would make interactions far less frightening and difficult for ASD sufferers (Solomon, 2012). Pets are also believed to act as transitional objects which means that children form bonds with them and then, hopefully, are able to extend these bonds on to humans (Martin & Farnum, 2002). This would be particularly useful for children with ASD as it may assist them in learning how to form emotional attachments (Martin & Farnum, 2002). It is understandable that parents of children with ASD may consider having a pet, in particular a pet dog, for their child with ASD due to the possible lessening of symptom severity as well as desire for interaction with animals as seen from these studies. Although any pet may be a beneficial addition to a family with a child diagnosed with ASD, there is another unique option available which may have some additional benefits.

## **2.6) Autism Service Dogs**

Service dogs are owned by individuals who suffer from various debilitating conditions such as blindness, motor-neuron disease or ASD and are highly trained in both basic obedience as well as condition specific skills in order to assist their owners in performing a variety of daily activities (Burgoyne et al., 2014). Although service dogs for people who have vision impairments are fairly common and frequently seen or heard of, service dogs for ASD sufferers are far less publicized (Burrows et al., 2008a). This is interesting due to the fact that these dogs have been trained and utilized for over two decades with the first autism service dog placed with an ASD child in 1997 by a Canadian Organization by the name of National Service Dogs (Burrows et al., 2008a). The use of service dogs for children with ASD has grown in popularity quite substantially since then, with research showing positive results through the improvement of quality of life for both the children and their caregivers, as well as a reduction in severity of symptoms (Berry et al., 2013). Unfortunately, despite increasing interest in training and placement of autism service dogs,

there has not been a great deal of research done on the subject, with no known research currently published on the subject from a South African perspective.

As mentioned above, Canada was the first country to train and place an autism service dog (Burrows et al., 2008a). Since then, a number of other countries have begun training and providing these service dogs to children diagnosed with ASD. South Africa has followed this trend, however, it is only in the last approximately 10 years that the South African Guide Dog Association has been training service dogs for children with ASD (South African Guide Dog Association, Personal Communication, 16 April, 2019).

The primary function of these autism service dogs is for child safety as they are specifically trained to prohibit the child from bolting whilst out in public (Burrows et al., 2008a). This came about due to the extreme difficulties and stress which caregivers endure due to bolting behaviour frequently exhibited by children with ASD and the serious consequences to safety which this may result in (Anderson et al., 2012). Although safety is the main reason why autism service dogs are trained, there is evidence that these service dogs contribute far more to children with ASD including communicative, educational and therapeutic assistance (Burrows et al., 2008a).

### **2.6.1) Autism Service Dog Training**

Internationally, the training of autism service dogs is very similar to the training of service dogs for all other disabilities (Burrows et al., 2008a). This training consists of being placed with a puppy raiser for the first 12 to 18 months where they are taught basic socialization and obedience skills as well as introduced to their service jacket through short public outings where the service jacket is worn (Burrows et al., 2008a). Following this the dogs return to the kennels at the training institution where they will undergo suitability testing and then, if suitable, will receive intense training for 6 to 8 months (Burrows et al., 2008a). Suitability testing is of the utmost importance due to the unique circumstances and job which they will be required to perform (Berry et al., 2013). The dogs are generally selectively bred by the organization with retriever breeds being preferred due to their temperament, stable personalities, trainability as well as their physical size, which is important when it is taken into account that these dogs will be required to restrain a child who is attempting to run or pull away (Burghardt, 2003). During their intensive training they will be taught advanced obedience skills as well as distraction training, command training, how to behave when in harness, how to remain focused and calm in busy situations, how to respond to behaviours which will likely be exhibited by children with ASD such as boisterous play or screaming and behaviours which accompany a meltdown, as well as what to do should their child attempt to bolt (Burrows et al., 2008a). The dogs are fully trained by 18 to 24 months of age and are then placed with their new families (Burrows et al., 2008a). Each dog is carefully matched with a child with ASD through close examination of both the dog's and child's temperament (Burrows

et al., 2008a). Frequently, quieter dogs are placed with more energetic children and more energetic dogs are placed with calmer children in an attempt to balance the temperaments (Burrows et al., 2008a). Once paired with a child, the caregivers of the child are provided with intensive training for a week prior to taking the dog home (Burrows et al., 2008a). In this week the caregivers will learn how to handle the service dog, how to give commands to the dog, basic care instructions as well as continuous training requirements of the dog (Burrows et al., 2008a). It is recommended by the organizations that the caregiver, who has chosen to be the main handler of the service dog, attempts to prevent other members of the family, besides themselves and the child, from interacting with the service dog in order to encourage a bond to form between the service dog, the child and the main caregiver only (Burrows et al., 2008a).

Autism service dogs differ from service dogs trained for other disabilities as they do not work in a dyad with their owner but rather form a unique triad between dog, child and caregiver (Burgoyne et al., 2014). The service dog is attached to the child via a belt or leash, which is attached to the dog's service jacket, while the caregiver holds a second leash, which is also attached to the dog's service jacket (Burgoyne et al., 2014). The child will walk in line with the service dog while the caregiver will walk slightly behind (Burrows et al., 2008a). The dog is trained to take commands from only the caregiver and not from the child (Burrows et al., 2008a).

As mentioned above, autism service dogs are primarily trained for safety by preventing a child with ASD from bolting (Burrows et al., 2008a). The service dogs are trained to slow the child down on command or, should the child attempt to bolt, the dog will utilize all of his strength to brace against the child in an attempt to stop the child or at least slow it down, to provide the caregiver a chance to respond and intervene (Burrows et al., 2008a). The dogs are also trained to remain calm when out, providing a calming presence for the child with the aim of preventing the child from becoming over aroused, which would usually lead to a meltdown or some form of disruptive behaviour (Burgoyne et al., 2014). Autism service dogs are allowed to accompany their child into any public spaces or institutions including restaurants, shops, medical facilities and schools (Burrows et al., 2008a). Because of this, the strict training regime is essential to ensure that the dogs know how to behave in a manner suitable for any and all facilities and situations (Burrows et al., 2008a).

In South Africa, there is no published research outlining the training processes followed by the South African Guide Dog Association (SAGDA), which is the only organization who currently trains and places certified autism service dogs with families in South Africa. Because of this, the researcher conducted an interview with the SAGDA to document the exact manner in which these dogs are raised, trained and placed with families. This information will be supplied in the section titled 'The South African Guide Dog Association'.

### 2.6.2) Documented Benefits of Autism Service Dogs

Although autism service dogs have been in service since 1997 (Burrows et al., 2008a), empirical research documenting their value is limited with no known published research on the topic relating to a South African audience currently available. There are, however, a few valuable, international research publications which document the views of families who have been supplied with autism service dogs for children with ASD. It is interesting to note that, despite these dogs being trained purely for safety reasons, the contribution of these dogs has been found to extend far beyond this and into numerous areas of the lives of both the child and the child's additional family members (Berry et al., 2013).

To begin the discussion on benefits documented for autism service dogs, the research conducted by Davis, Nattrass, O'Brien, Patronek and MacCollin in 2004 which investigated the benefits, risks and future recommendations for assistance dogs placed in the pediatric population is worth mentioning. In this research paper, the families of children, under the age of 18, placed with a service dog, were interviewed to identify their views on the contributions made by the service dog for the child and family, as well as to assess any possible risks or negative aspects of owning such a service animal (Davis et al., 2004). Although it is not clear from the paper exactly how many of the participants had children with autism service dogs, the findings do mention a number of parents referring to their child with ASD (Davis et al., 2004). Benefits of service dogs were found in 88% of the families interviewed (Davis et al., 2004). The benefits mentioned by the families were grouped into four themes, namely: physical; medical; social and, lastly, emotional and developmental (Davis et al., 2004). The physical and medical benefits appear to have been related to service dogs for physical disabilities, whereas social as well as emotional and developmental related more to those with ASD. Emotional and developmental benefits were reported by 71% of the sample and included improved focus, calming and mood elevation (Davis et al., 2004). Related specifically to ASD, service dogs were reported to assist in improving emotional expression, understanding and range as well as helping the child to understand and respect that others have differing emotional needs and feelings to that of their own, through the use of the dog as an educational tool (Davis et al., 2004). Social benefits included the way in which service dogs function as a bridge between the child and other typically functioning children, with the service dog providing a topic of conversation or interest and therefore encouraging typically functioning children to seek interaction, with 88% of the sample mentioning this benefit (Davis et al., 2004). In addition to this, social benefits included the service dog signaling to the public that there is a problem with the child, which was particularly beneficial for children with disabilities that are often not visible, such as ASD (Davis et al., 2004). This made the general public more accommodating and less judgmental towards the caregivers of the child should he/she behave in a way out of character for a child of such an age, for example, by throwing a tantrum (Davis et al.,

2004). The service dogs also were reported to provide a sense of security and compliance with routine for children with ASD as the children were frequently more motivated to complete routine tasks, such as getting ready to go into town, when the service dog would be accompanying them (Davis et al., 2004). A final and unexpected benefit was the social benefit which the service dogs had on the lives of the rest of the family (Davis et al., 2004). These benefits included the service dog being regarded as a friend for one of the mothers who felt particularly isolated as well as the service dog assisting in strengthening intra-familial bonds (Davis et al., 2004).

In 2008, a qualitative study done by Burrows et al. was published which looked specifically into the use of autism service dogs for children with ASD and their families. The sample for this study included 10 families from Canada who had been placed with an autism service dog between November of 2003 and May of 2004 (Burrows et al., 2008b). The children who were placed with these service dogs had all been diagnosed with ASD and ranged in age from four and a half years to 14 years with seven of the children being boys and three being girls (Burrows et al., 2008b). The parents in the families were the primary source of information which was gathered via semi structured interviews, participant observation and video recordings of the families (Burrows et al., 2008b). Data collected and analyzed from this study uncovered a variety of benefits contributed by these service dogs. As mentioned previously, autism service dogs are primarily trained for safety enhancement and this study confirmed that these service dogs do indeed function as such (Burrows et al., 2008b). Participants mentioned the relief felt from not having to worry about their child bolting while walking out in public, highlighting that these dogs are certainly able to perform the main task which they are trained for and the benefit of this training (Burrows et al., 2008b). Additional safety benefits were also mentioned by the participants and included the service dogs acting as a second set of eyes when at home which provided a sense of added security for the parents, especially at night when the service dog would sleep in the room of the child and alert the parents should the child wake or become upset (Burrows et al., 2008b). In addition to acting as a security measure at night, the service dog sleeping in the room of the child improved the child's sleeping habits which, in return, helped to improve the parents' sleeping habits (Burrows et al. 2008b). The service dogs also assisted the parents by keeping the child calm during daily tasks such as bathing, meal times and during car trips as well as improving compliance from the child who became more willing to participate in tasks when the service dog was with them (Burrows et al., 2008b). The service dog helped the child in developing skills such as motor control and function through tasks such as learning how to stroke the dog, throw a ball for it, groom it and feed it (Burrows et al., 2008b). Walking next to the service dog helped to improve the walking ability of the child as well as regulate the child's gate which made the process of walking far more relaxing and less stressful for the whole family (Burrows et al., 2008b). Some of parents also mentioned improvements in vocalizations as the child learned to give the dog



commands such as sit or fetch (Burrows et al., 2008b). The parents further reported an overall sense of improved happiness of their children with a reduction of anxiety, meltdowns and tantrums and increased calmness and manageability of the child, which relieved a great deal of strain felt by the parents (Burrows et al., 2008b). The service dogs were reported to help the children in maintaining a calm mood which reduced the occurrence of meltdowns or tantrums and, in the event of a meltdown, the service dog would attempt to interrupt the child's behaviour and distract the child which greatly shortened the length of such destructive acts (Burrows et al., 2008b). The service dogs helped to improve the families' social status by working as a social catalyst, encouraging people to come over and talk to the families and therefor helping them to form relationships with fellow community members and to integrate easier into public systems such as schools (Burrows et al., 2008b). It was also noted that the attention received from the public became far more positive than previously experienced during instances where the child expressed inappropriate behaviour, such as a tantrum (Burrows et al., 2008b). The families found that the public were far more empathetic and supportive in such instances rather than placing blame on the parents for poor parenting skills (Burrows et al., 2008b). The service dogs additionally drew attention away from the child with ASD and towards themselves, helping to alleviate any embarrassment and stress felt by family members as well as serving as a means to spread education about ASD, as the public would frequently ask questions about the service dog and so provide the perfect opportunity for the family to spread education and awareness about the disorder, with the hope of improving people's understanding and tolerance of ASD (Burrows et al., 2008b). Siblings of the child with ASD were found to gain a sense of pride from the service dog and were more willing to discuss their sibling with ASD in a positive way with their friends, as the service dog was viewed as something unique and special so provided the siblings with a way to discuss their brother or sister without having to talk specifically about ASD (Burrows et al., 2008b). A final benefit was the bond which was formed between the primary handler and the service dog (Burrows et al., 2008b). The caregivers of children with ASD frequently feel very isolated and it appears that the service dogs are able to alleviate some of this by forming a strong bond with the caregiver, who was reported to find a great sense of companionship from the service dog as well as respite from daily tasks and time to relax with the dog due to its daily need to be groomed and exercised (Burrows et al., 2008b). These service dogs helped to alleviate some of the negative outcomes of caring for a child with ASD by acting as a form of social support, alleviating some of the stress associated with caring for their child as well as encouraging normal patterns of living for the family, both in the home and in the community (Burrows et al., 2008b). It is clear from this paper that the benefits experienced from these service dogs strongly link to the caregivers. The service dogs are reported to have reduced parental stress, increased their sense of independence, provided time for relaxation, improved sleep, increased possibilities for activities, improved social status as well as improved intra-familial relationships and general happiness

within the family (Burrows et al., 2008b). In addition to this, benefits for the ASD child were also noted including increased safety, calmness, compliance, general happiness as well as improved motor skills and companionship (Burrows et al., 2008b).

In 2010, a research study completed by Viau et al. was published which assessed the physiological benefits of autism service dogs for children with ASD. This study aimed to determine the effect of autism service dogs on salivary cortisol secretion in children with ASD (Viau et al., 2010). This was a quantitative research study where the salivary cortisol levels of 42 children, 37 of which were boys and five of which were girls, with ASD was measured during three experimental conditions, namely, prior to introducing a service dog to the child, during the time with the service dog and then after the service dog was removed (Viau et al., 2010). Cortisol is a stress hormone that is measurable through saliva samples (Viau et al., 2010). In this study, the cortisol awakening response (CAR) of the participants was measured to determine if autism service dogs would provide any physiological benefits to the way in which children with ASD respond to stress (Viau et al., 2010). The CAR corresponds to a rise in cortisol levels directly after awakening and, in healthy children, the CAR should be 30% (Viau et al., 2010). Results from this study showed that the CAR of the participants raised to 58% prior to the introduction of the service dog, however, only raised to 10% after the introduction of the service dog (Viau et al., 2010). After the service dog was removed from the family the CAR rose once again, this time to 48% (Viau et al., 2010). These results show a statistically significant decrease in the levels of CAR in the participants after being placed with a service dog which highlights that these service dogs most certainly provide more than just safety enhancement for their children but also assist in the lessening of stress experienced by the children, which is found to be higher than the levels of stress experienced by typically developing children (Viau et al., 2010). In addition to this finding, the parents of the participants were requested to complete questionnaires on their children prior to and after being placed with a service dog (Viau et al., 2010). Results from these questionnaires were highly positive with parents noting improvements in their children after being provided with a service dog which included a reduction in the number of problematic behaviours such as self-stimulation episodes, tantrums and repetitive behaviours as well as an increased tolerance towards some noises and improved sleep patterns (Viau et al., 2010). This research study supports the potential benefits of autism service dogs for both the child and the parents due to reduction in CAR of the children as well as providing behavioural benefits for the children, which in turn result in positive benefits for the parents (Viau et al., 2010).

An additional research study worth mentioning is one published in 2014 by Burgoyne et al. This Irish study used both qualitative and quantitative data collection methods to gather information on the value of service dogs for children diagnosed with ASD according to the caregivers of the children supplied with such dogs (Burgoyne et al., 2014). A total of 134

caregivers whose children had been placed with an autism service dog as well as a total of 87 caregivers who were on a waiting list for a service dog completed the survey for this research (Burgoyne et al., 2014). This was the first research study to gather the views of such a wide population of caregivers on the value of autism service dogs (Burgoyne et al., 2014). The survey administered was divided into two sections, the first gathered quantitative data on the effects of autism service dogs for 1: child safety and environmental dangers, 2: public perception of ASD and 3: levels of caregiver strain and sense of competence (Burgoyne et al., 2014). The second section gathered qualitative data through the use of open ended questions that aimed to gather information on the caregivers' views of the benefits and constraints of having an autism service dog (Burgoyne et al., 2014). The results from the quantitative section showed that, for the questions asked on child safety, caregivers rated their children as significantly safer from environmental dangers once placed with a service dog (Burgoyne et al., 2014). For the second question asked on public perception of ASD, the research showed statistically significant results once again, with caregivers believing that the public are more respectful and act more responsibly toward their child (Burgoyne et al., 2014). For the final quantitative question regarding the levels of strain and sense of competence felt by the caregivers, results were, again, statistically significant with caregivers stating that they felt more competent about managing their ASD children once placed with a service dog (Burgoyne et al., 2014). With regard to the qualitative section of the study it was noted that there was a strong positive trend in answers with caregivers focusing particularly on the positive effects of the service dogs on the comfort and safety of their ASD children as well as referring to a sense of increased freedom and reduction of restrictions associated with ASD felt by the families (Burgoyne et al., 2014). The answers given for the open ended questions were thematically analyzed and broken into two categories: benefits and constraints (Burgoyne et al., 2014). The benefits category was further divided into three themes: physical factors; relationship factors and family factors (Burgoyne et al., 2014). The theme on physical factors refers to the caregivers' perception of the ability of the service dogs to maintain their ASD children's safety as well as assist the caregivers in their ability to manage their ASD children (Burgoyne et al., 2014). This theme was further broken down into four sub-themes: safety and security; no bolt; physiological and management (Burgoyne et al., 2014). The theme of relationship factors refers specifically to the caregivers' perception of the benefits from the relationship formed between their ASD children and their service dog and was further divided into two sub-themes: friend and calm and comfort (Burgoyne et al., 2014). The final theme labeled family factors refers to the caregivers' perceptions of the ways in which the service dogs assist in day-to-day family as well as social life and was divided into five sub-themes: visibility; emotion and stress; fun and play; social and lastly, freedom (Burgoyne et al., 2014). The results from this study, both quantitative and qualitative, appear to show a greatly positive perception of the integration of an autism service dog into the family of a child diagnosed with ASD (Burgoyne et al., 2014). The most frequently

reported benefits were safety and security, with the majority of caregivers who had been provided with a service dog, rating their ASD children as far safer from environmental hazards than caregivers who were on the waiting list (Burgoyne et al., 2014). In addition to this, caregivers mentioning having a far greater sense of competency with regard to controlling and managing their ASD children than those on the waiting list (Burgoyne et al., 2014). Those with service dogs perceive the attention generated from the public to be far more positive after receiving the service dog and believe that the service dog assists in raising awareness and acceptance of ASD (Burgoyne et al., 2014). A greater sense of freedom was also mentioned by the participants with the service dogs, due to increased ease of outings resulting from the service dogs' presence which, in turn, led to improvements in family and social life for all of the family members as well as a lessening sense of isolation for the caregivers (Burgoyne et al., 2014). Lastly, caregivers mentioned improvements for their children with ASD which included the service dogs functioning as bridges between the children and their physical and social environment as well as facilitating social interaction for the children, which assisted in them forming friendships with greater ease (Burgoyne et al., 2014). Caregivers also mentioned the service dogs' ability to promote a sense of calmness within their ASD children, which was noted as being highly beneficial for the children's wellbeing as well as the caregivers, who felt a reduced sense of tension and stress as well as an increased sense of competence in caring for their children due to the increased calmness and manageability of the children (Burgoyne et al., 2014).

Lastly, it is important to mention the benefits for ASD children from their autism service dogs accompanying them to school as the above mentioned research studies have not commented upon this topic. Autism service dogs are legally allowed access to any and all public places, including schools (Burrows et al., 2008a). Positive effects identified from autism service dogs accompany their ASD children to school include a reduction in stress pertaining to school attendance, increased calmness, providing comfort for the ASD children, decreasing aggressive behaviours towards other children and enhancing speech (Harris & Sholtis, 2016). In addition to this, the autism service dogs have been found to encourage conversation between the ASD children and their peers, working as conversational ice-breakers (Harris & Sholtis, 2016). The autism service dogs have also been successfully utilized as educational tools to assist in the teaching of empathy, turn taking, listening skills as well as gross and fine motor skills (Harris & Sholtis, 2016). While these results are highly positive, teachers must give careful consideration to allowing autism service dogs into their classroom prior to agreeing to such (Harris & Sholtis, 2016). These considerations should include the teacher's own level of comfort surrounding close interactions with dogs, the level of training provided to the service dog, how and by whom the dog will be managed while in the class, the possibility of the dog distracting the children in the class and additionally, how the other children would respond to the dog, taking into consideration a

possible fear or allergies to dogs (Harris & Sholtis, 2016). It is also imperative that the teachers are trained and knowledgeable on how to manage the service dog in the classroom and during break times (Harris & Soltis, 2016).

### **2.6.3) Disadvantages of Autism Service Dogs**

The above information, gathered through a variety of studies and by numerous researchers, paints a fairly positive, optimistic view of autism service dogs, making one believe that they should be supplied to all children with ASD due to their seemingly incredible benefits for both children with ASD and their caregivers.

Although it is clear that these service dogs can provide a great deal of assistance to families with children diagnosed with ASD, it is important to note that there have been some disadvantages of being placed with an autism service dog mentioned by the caregivers of the children placed with autism service dogs.

The research done by Burrows et al. (2008b) noted disadvantages including an increased workload for the caregivers due to the requirements of feeding, grooming, exercising and toileting the service dogs, although, most of the caregivers were fairly quick in learning how to accommodate the service dogs into their daily lives. In addition to this, caregivers did not always realize the need to maintain the service dog's training, both in and out of harness, and that a failure to do so could result in negative behaviours from the service dog as well as reduced positive effects (Burrows et al., 2008b). This would, naturally require additional time and effort from the caregivers, as the child with ASD would be unable to maintain such training which could, in turn, become an added burden and cause of stress for the caregiver (Burrows et al., 2008b). Lastly, it was noted that a number of the caregivers had unrealistic expectations about what the autism service dogs would be able to do for their ASD children, which led to a sense of disappointment in a few instances, as caregivers were less likely to see the benefits of the autism service dogs in these cases as they were caught up on the fact that the service dogs were unable to perform tasks which they had expected them to be able to achieve (Burrows et al., 2008b). It is important to note that the disadvantages mentioned above were only reported by a small number of the participants in this study with the majority of the participants rather mentioning only positive benefits of the autism service dogs for their ASD children (Burrows et al., 2008b).

As mentioned previously, the research study conducted by Burgoyne et al. in 2014 also identified some challenges with regard to autism service dogs which they grouped into a category labelled constraints. This category was further broken down into four themes: change factors; relationship factors; limiting factors and no constraints (Burgoyne et al., 2014). The theme labelled change factors referred to the lifestyle challenges which caregivers experienced, or expected to experience for those on a waiting list for an autism service dog (Burgoyne et al., 2014). This theme was further divided into three sub-themes: dedication; attention and walks (Burgoyne et al., 2014).

All of these sub-themes refer to the amount of additional time which the autism service dog will require from the caregivers and it is worth noting that caregivers who have received an autism service dog responded in a very similar way to those on the waiting list, highlighting that those on the waiting list are possibly prepared for the additional requirements of the autism service dog (Burgoyne et al., 2014). The second theme, relationship factors, refers to the direct relationship between the autism service dog and the child with ASD (Burgoyne et al., 2014). This theme was further divided into two sub-themes the first of which was labelled acceptance, which refers to the concern about how the autism service dog will be accepted by the child with ASD and was mentioned far more by those on the waiting list than those already placed with an autism service dog, and the second sub-theme labelled dog's life, which refers to concerns such as retirement and connection to their child (Burgoyne et al., 2014). The third theme, limiting factors, refers to the concerns about how the autism service dog will fit in with day-to-day life and the constraints which the autism service dog may place on everyday activities (Burgoyne et al., 2014). This theme was divided into four sub-themes: cost, which refers to the expense of maintain an autism service dog; holidays, which refers to the possible restrictions which may be faced for travelling with an autism service dog; clean, which refers to hygiene in the house such as smell, hair and toileting and then the final sub-theme being restrictions, which refers to restrictions which may be faced during day-to-day activities such as shopping trips (Burgoyne et al., 2014). This sub-theme was dominated by views of the caregivers who had already been placed with an autism service dog rather than those on the waiting list, which brings up the question of whether those on the waiting list were actually that well prepared for the lifestyle changes which are required when owning an autism service dog (Burgoyne et al., 2014). The final theme, no constraints, was not broken down further as it is for the caregivers who did not experience, or those who did not expect to experience any difficulties (Burgoyne et al., 2014). The results of this category were fairly evenly distributed between those on the waiting list and those who had been placed with an autism service dog (Burgoyne et al., 2014). These results are beneficial in highlighting some of the constraints which may accompany owning an autism service dog and are therefore important for prospective owners to be made aware of prior to being placed with an autism service dog (Burgoyne et al., 2014).

#### **2.6.4) Welfare of the Autism Service Dog**

The use of dogs as autism service dogs understandably carries some concerns relating to the welfare of the dogs due to the environment in which they are expected to work and the duty which they are expected to perform (Burrows et al., 2008a). Due to autism service dogs being a fairly new concept, it is important to identify possible welfare concerns for these dogs and to check in on them frequently to ensure that their welfare is not being compromised (Burrows et al., 2008a). In a research paper published by Burrows et al. (2008a) a number of possible welfare concerns are mentioned. The first concern relates to the behaviours frequently expressed by

children with ASD which, even when not intentionally directed towards the autism service dog, could be a cause of distress for the dog (Burrows et al., 2008a). These behaviours become even more of a concern when taken into account that they may in fact be directed towards the autism service dog since, during a tantrum or meltdown, children with ASD will be likely to lash out at anything that is nearest to them and, should that be the autism service dog, it could cause a great deal of both physical and emotional harm to the dog (Burrows et al., 2008a). This is a concern for the dog but also for the child since, if the dog perceives the behaviour to be an attack towards itself, the dog may retaliate violently (Burrows et al., 2008a). This must be taken into consideration since, regardless of the amount of training which the autism service dog receives, it is still a dog and still has the self-preservation instincts of any regular dog (Burrows et al., 2008a). In order to avoid such behaviours, the autism service dogs would need to learn how to predict the child's behaviours in advance in order to know when to move away from the child which, although is a possibility, may take a fair amount of time for the autism service dog to learn (Burrows et al., 2008a). A second concern relates to the amount of work which the autism service dogs may be required to perform (Burrows et al., 2008a). This work may include attending school all day, therefore being 'in-harness' all day and then being expected to accompany the family on shopping trips after school and over weekends as well as being on call at all hours when at home and, technically 'out of harness' should they be required to attend to the child for any reason (Burrows et al., 2008a). In addition to this, many of the autism service dogs are expected to sleep on the child's bed at night which means that they are frequently woken during the night should the child become restless (Burrows et al., 2008a). Should this amount of work be expected from the autism service dogs it will result in them becoming exhausted and stressed which may then lead to the dogs becoming unwilling to perform tasks and resisting their harness (Burrows et al., 2008a). In order to alleviate some of this stress and exhaustion it is important that adequate 'time-off' is allowed for the autism service dog which would include a significant amount of rest time when they will not be disturbed as well as frequent recreational activities where the autism service dogs will be allowed to simply relax and behave like normal dogs (Burrows et al., 2008a). An additional concern relates to the family's expectation of the autism service dog and their misunderstanding that these dogs will be, in a sense, void of any behavioural problems (Burrows et al., 2008a). Despite being extremely well trained, autism service dogs are, as mentioned above, still inherently dogs and so will still maintain some typically 'doglike' behaviours (Burrows et al., 2008a). These may include occasional soiling of carpets, barking on occasion or begging for example (Burrows et al., 2008a). These behaviours can be reduced with positive behavioural correction from the owners, however, it is something which may occur from time to time which means that new owners must be made aware of such matters and understand how to respond to them (Burrows et al., 2008a). Final concerns mentioned include general care such as grooming, diet and vet visits, all of which must be explained fully to the family prior to being placed with the autism service dog

(Burrows et al., 2008a). These welfare concerns highlight the need for research on the use of autism service dogs for children with ASD to take into consideration not only the benefits and constraints of the dogs for the children with ASD, their caregivers and families supplied with them but to also acknowledge the impact of the duties expected to be performed by the autism service dogs on their own wellbeing (Burrows et al., 2008a).

## **2.7) The South African Guide Dog Association**

As previously mentioned, there is no published information currently available which outline the procedures followed for training and placing autism service dogs in South Africa. Due to this void of information, the researcher conducted interviews with the South African Guide Dog Association (SAGDA) as well as with two puppy raisers, who raise puppies for the SAGDA, to uncover the exact procedures followed in South Africa. The information below has been extracted from those interviews to provide an understanding on the similarities and differences between the SAGDA and international autism service dog training providers. All of the information is from the researcher's personal correspondence with the SAGDA.

In South Africa, the only organization that trained and provided autism service dogs at the time of this research was the South African Guide Dog Association (SAGDA). The SAGDA initially started training dogs for people with problems such as learning disabilities or psychiatric problems in the 1990's when they were faced with having dogs that did not quite meet the criteria for guide dogs but were still suitable for use as service dogs. These dogs were called social dogs. This, unfortunately, cost more than the SAGDA could afford and required a great deal of time from the limited number of trainers who needed to rather be focusing on training the guide dogs due to these dogs being in very high demand. Because of this, training of these social dogs halted for some time. After a number of years the SAGDA began training dogs for a greater variety of uses once again, however, it was only in 2015 that they decided to focus on training dogs for children with ASD due to the ever increasing number of requests for such dogs which they received. The number of requests for these autism service dogs has remained very high, so high in fact that applications for autism service dogs were closed at the time of this research in order for the SAGDA to work through the backlog of applications which they had received. At the time of this research, the SAGDA trained dogs for three different purposes: guide dogs for people with visual impairments, service dogs for people with physical disabilities and then autism service dogs for children diagnosed with ASD.

The training which autism service dogs undergo at the SAGDA is very similar to that of international organizations with the main purpose of these service dogs being exactly the same as international organizations, namely, child safety through the prevention of bolting.

The SAGDA breeds their own puppy stock which are sent to puppy raisers from approximately seven weeks old. Each puppy raiser cares for only one puppy at a time to ensure



that they receive a high level of care and attention. During their time with the puppy raisers the dogs are taught basic obedience skills as well as how to interact socially with other dogs and people. The puppies return to the SAGDA when they are approximately 16 months of age where they undergo intensive training in order to become autism service dogs. During their time with the puppy raisers the SAGDA check in on them and their raisers in order to learn each dog's unique temperament. The dogs are mainly selected by temperament to determine which ones will become guide dogs for visually impaired people, which will become service dogs for physically disabled people and which will become autism service dogs. Dogs that are likely to be selected to become autism service dogs are dogs who are calmer yet still will be eager to play, are easy to control, are comfortable with all surroundings, are comfortable with slightly rougher treatment and are perfectly physically sound. The service dogs are also paired carefully with children with ASD depending on the personality of both the child and the dog to allow for the best possible bond to be formed between the pair. During their training at the SAGDA, the dogs are trained in advanced obedience as well as how to walk in their harness as this will be expected of them when paired with a child with ASD. The South African autism service dogs are trained to walk in a harness set up similar to that of the autism service dogs trained internationally, however, the child is not always attached to the harness via a belt but rather the harness has a leash which the child is taught to hold on to as well as an additional leash which the caregiver will hold. The caregiver will be the one to give instructions to the autism service dog. In addition to the basic training which all the autism service dogs receive, the SAGDA discusses with the prospective owners what other skills the dogs can be trained to do, depending on the needs and desires of the children. For example, some children with ASD may love jumping on a trampoline. Should this be the case, the SAGDA will attempt to train the service dog to jump on the trampoline in order to spend more time with the child in an attempt to facilitate a greater bond. If a child requires assistance with walking then the SAGDA may be able to train the service dog in skills which may help in facilitating this.

In South Africa, service dogs of any kind are legally allowed access to all public spaces and institutions as is the case internationally. Because of this the dogs are provided with a high standard of behavioural training to ensure that they know how to behave when in situations such as restaurants, shopping centers or school classrooms.

Once the autism service dog is fully trained, which takes approximately five to six months, the main caregiver of the chosen ASD child (the caregiver who will take responsibility of being the authority figure when out with the autism service dog) is provided with training at the SAGDA on how to handle the autism service dog, basic care instructions and continued training instructions. Following this, the trainer from the SAGDA who trained the autism service dog will travel to the home of the new owner to provide additional training to the caregiver and ASD child as well as the rest of the family. During this time the trainer will assist the family in incorporating the new

autism service dog into their daily lives as well as assisting with introducing the new dog to existing pets in the family, introducing the dog to the ASD child's school, should the family wish for the service dog to attend school with the child, as well as assisting the family with any initial problems which may arise.

Following this in house training, weekly phone calls or emails are exchanged between the caregiver and the SAGDA for a while and then monthly reports are required by the SAGDA for the first year to ensure that all is going well with the service dog. The SAGDA also ensures that they visit every family who they have provided with a service dog on a yearly basis to check up on the family and the service dog. In addition to this, the SAGDA encourages all owners to contact them via phone call or email should they be experiencing any problems and they will assist them either via distance or will make a plan to visit the family in person should the problem be significant enough to require such intervention.

With regard to applying for an autism service dog through the SAGDA, the process is described by the SAGDA as fairly simple. A form is completed by the family and then reviewed by the SAGDA. Following this the SAGDA will travel to the family to visit and interview them in their home. During this interview a wide variety of information is gathered by the SAGDA to ensure that the family will be suitable for a service dog to be placed within their care. Criteria which are required include: being a family that goes out regularly and will make use of the autism service dog; the ASD child must be between the ages of five and 12; the ASD child must not be aggressive; the house must be suitable for the service dog and the family must be able to afford the upkeep of a dog. The SAGDA does not require the child to be either high or low functioning on the autism scale as they believe that, provided the family can justify their reasons for wanting the autism service dog and the service dog will be used adequately, then the level of diagnosed ASD is of little importance.

Once the interview has been completed and the family has been approved they would then be placed on a waiting list. Unfortunately, as mentioned above, the SAGDA has closed applications for autism service dogs at present due to the backlog of applications which they have received. Unfortunately the SAGDA are only able to train approximately 10 to 12 service dogs for either autism or physical disability per year at present. They are however hoping to increase this number in the near future. At present, families who are on the waiting list can expect to wait approximately two years to receive their autism service dog.

The training and placing of autism service dogs is still a very new project of the SAGDA and they acknowledge the fact that they still have a great deal to learn about the process. At present they have yet to deal with the situation of retirement and they are unsure about how exactly they will work through such a situation. With guide dogs, or service dogs for physical disabilities, the owners will automatically be supplied with a new dog once their service dog reaches retirement,

however, it is uncertain whether this will be a suitable solution for ASD sufferers due to autism service dogs being primarily trained for preventing children from bolting which is a behaviour often grown out of by people with ASD. It is also worth considering that, should the person have not grown out of such a behaviour, as they become older they will become far stronger which may then mean that an autism service dog would not be able to prevent them from bolting due to their level of strength being less than that of the person with ASD. The SAGDA acknowledge that autism service dogs do contribute far more to the lives of people with ASD than just prevention from bolting, however, the retirement of an autism service dog is a topic which they plan to educate themselves on in the near future.

## **2.8) South African Specific Considerations**

While the information gathered from the SAGDA provides for an understanding of how autism service dogs are trained and supplied in South Africa, it is important to take into consideration that the research studies on the use of autism service dogs mentioned previously provide information only for international populations. South Africa, as a developing country, is vastly different to the first world countries where the previously mentioned studies have been conducted. The lives of the majority of South Africans differ so greatly to the participants from international studies, making it difficult to relate the findings from such studies to a South African population. With that being said, there is one important, South African specific, consideration which the researcher believed to be of particular importance in this research study, namely the general population's historical and current view and beliefs surrounding dogs and their expected place within society.

An important starting point when taking these views and general beliefs into account is the history of dogs within South Africa. While domesticated dogs date back to the Iron Age in South Africa, these dogs were not generally viewed as companions but were rather used as hunting dogs or for guarding stock (McCrindle, Gallant, Cornelius, & Schoeman, 1999). These dogs were not fed by their owners but were rather expected to scrounge for food and there were no methods of reproduction control in place (McCrindle et al., 1999). Moving forward in history to the apartheid years, stories of the use of dogs by state police as a means of torment for apartheid activists are gruesome (Mjamba, 2015). These stories tell of how, during the apartheid years, large dogs, often German Shepherds, were trained to be highly aggressive and were set upon activists to attack them for minor indiscretions or even no indiscretions at all (Mjamba, 2015). This understandably led to the development of a terror towards dogs by a large percentage of the population of South Africa (Mjamba, 2015). Although this was many years ago, the emotional scars proved worse than any physical scars for many individuals, resulting in stories of such horrors being passed down through the generations leading to a lasting fear of dogs for many South Africans through the ages (Mjamba, 2015). In 2012, the then president of South Africa, Jacob Zuma, expressed his strong belief in a public speech where he stated that buying

and providing care for dogs, such as feeding, housing, exercising and the provision of medical care, belonged to “white culture” and was not the “African” way (Baderoon, 2017). In his speech, Jacob Zuma expressed his belief that a focus on family was the “African” way and that anyone who appeared to love dogs more than humans was lacking in humanity (Sapa, 2012). This speech understandably led many South Africans to believe that having a dog as a companion is something to feel guilty about and should not be done if one wants to be classed as a true “African” (Baderoon, 2017).

The above mentioned fear, stemming from Apartheid days, and the presidential speech could lead one to believe that South Africans in general would not be overly inclined to care for a dog in the way in which would be expected of a service dog. That being said, there is no empirical evidence available to confirm such an assumption. On the contrary, a South African political analyst and commentator, Professor Tinyiko Maluleke, wrote an article in 2015 where he expresses the grief he felt when his dog, Bruno, had to be euthanized (Maluleke, 2015). In his article he mentions how he cried for the loss of his dog, his companion which, although making him question his “Africaness”, was impossible to suppress due to his love of his dog (Maluleke, 2015).

In a research study conducted in 2015 by McCrindle et al. in Soweto, a densely populated urban area of Gauteng, it was found that the average dog to human ratio was 1 : 12.4 or 0.42 dogs per household which, at the time, was not greatly different from the average found in urban areas around the world. While the reasons for owning dogs mentioned by the respondents were predominantly for security purposes, companionship was mentioned (McCrindle et al., 2015). With regard to care of the dogs, it was found that 98.5% of respondents knew the names of commercial dog foods and 83.5% knew about sterilization of dogs and 81.7% believed that sterilization was a good thing to be done, however, there was no mention of the number of respondents who had sterilized their dogs (McCrindle et al., 2015). These results are all positive, however, some more dismal results were that only 13.1% of respondents’ dogs were up to date with their vaccinations, only 1.2% were able to estimate the costs of a veterinary procedure accurately and only 0.5% of respondents made use of private veterinary care facilities with 87.3% making use of animal welfare clinics (McCrindle et al., 2015). While this shows that respondents did care for their dogs, the standard of care is perhaps not as high as that seen in urban areas in other parts of the world (McCrindle et al., 2015). These results lead one to consider whether the standards of care provided by the respondents would be adequate for a service dog provided by the SAGDA.

## Chapter 3

### Methodology

#### 3.1) Introduction

This chapter provides an overview of the theoretical framework and methodological processes followed by the researcher of this study. Information on participant selection methods, data gathering and analysing methods, reliability and validity as well as ethical considerations relating to this research study are further discussed.

#### 3.2) Theoretical Framework

Within psychological research, there are three main methods in which to gather data: quantitative research methods, qualitative research methods and mixed methods research which incorporates both quantitative and qualitative data gathering techniques (Bryman, 2012). The nature of this research was qualitative, due to the aim of qualitative research being to gain an in-depth understanding of experiences of participants as well as to further uncover how participants make sense of their lived experiences (Bryman, 2012). This theoretical foundation compliments the aims determined by the researcher for this study.

##### 3.2.1) Qualitative Research

Qualitative research in psychology dates back to the late nineteenth century and the beginning of what we now know as ‘modern psychology’ (Howitt, 2010). Inquiries of a qualitative nature within psychological research were pioneered by Sigmund Freud, Wilhelm Wundt and William James, however, although these individuals assumed its scientific status, it was not integrated into the scientific establishment of psychological research just yet (Wertz, 2014). A loss of confidence in qualitative research followed its initial usage and it was only between the late 1960’s and 1990 that the scientific value, methodologies and tools of inquiry were articulated and asserted by the likes of phenomenologists, grounded theorists, narrative researchers and discourse analysts for qualitative research (Wertz, 2014). Since the 1990’s, a marked increase in the usage of qualitative research has been noted with a far greater amount of education on the subject being provided in educational curricula as well as a drastic increase in the number of published articles using this method of inquiry (Wertz, 2014).

Qualitative research has numerous differences to quantitative research with the most prominent distinction between the two being that quantitative research focuses on gathering data from very large samples which can then be quantified into numeric representation whereas qualitative research rather focuses on collecting data from a smaller sample which is represented in a descriptive manner using words rather than numbers (Bryman, 2012). Thus, quantitative research can be

described as research which emphasizes quantification in both the collection and analysis of data whereas qualitative research can be described as research which, generally, emphasizes words rather than numbers in the collection and analysis of data (Bryman, 2012). This is a fairly simplistic description of the differences between qualitative and quantitative research as they are far more differences than just in the way in which data is collected and represented (Bryman, 2012). A more thorough look into the differences between these two research strategies shows that, with regard to views on the role of theory in relation to research, qualitative research uses a more inductive approach with a focus on the generation of theories in comparison to quantitative research which takes a more deductive approach with a focus on the testing of already known theories (Bryman, 2012). With regard to epistemological orientation, qualitative research focuses on interpretivism which places an emphasis on the ways in which people interpret and make sense of their world compared to quantitative research which rather utilises the natural science model with a focus on positivism (Bryman, 2012). Lastly, with regard to ontological orientation, qualitative research is orientated towards constructionism with the belief that social realities are constantly shifting and are the result of people's creation rather than quantitative research which is orientated towards objectivism, which holds that social reality is an external and objective reality (Bryman, 2012). Qualitative research can be fully explained as a research method with a focus on words, the point of view of the participants is the most important and not the point of view of the researcher, the researcher is close to the participants due to the more personal methods employed for data collection, theory and concepts are emergent from the data collected, research is defined as a process rather than static, is more unstructured in nature, aims for contextual understanding rather than generalization of results, strives to gather rich and deep data, concerned with more small-scale aspects of social situations so can be termed as more 'micro' rather than 'macro', is concerned with the meaning of actions rather than the actions themselves and lastly is a method where data is collected in natural settings (Howitt, 2010). Qualitative research takes a critical stance towards knowledge whilst holding the belief that knowledge is inter-subjectively constructed and influenced by unique historical and cultural differences between people (Davidsen, 2013).

From the above information on the key features of qualitative research, it was decided that this method was the most suited to gathering and analysing data for the previously mentioned research aims and questions of this study. In addition to the above mentioned features of qualitative research, it is important to note that qualitative research can be guided by a number of different methodological approaches or frameworks (Davidsen, 2013). One such framework is hermeneutic phenomenology which was utilized as the guiding approach for this research (Davidsen, 2013).

### **3.3) Phenomenology**

Phenomenology is a philosophical movement concerned with the way in which individuals make sense of their life-world or the world around them (Bryman, 2012). Phenomenology falls into

the category of interpretivism and is one of the main intellectual traditions responsible for the anti-positivist movement (Bryman, 2012). Whilst positivists aim to gather information in a quantitative, highly scientific manner with the goal of uncovering laws which govern human behaviour which can subsequently be applied to all human beings, interpretivists rather aim to gather in-depth insights into the lives of individuals with the goal of gaining an understanding of why it is that specific people act in the way they do, whilst upholding the belief that individuals are complex beings who all experience the same objective reality, yet these experiences differ in numerous ways due to the differing meanings which each individual ascribes to it (Davidsen, 2013).

The German philosopher Edmund Husserl is long said to have been the founding father of the philosophical movement known as phenomenology which originated in the early 20<sup>th</sup> century (Giorgi & Giorgi, 2003). Phenomenology is essentially concerned with the study of consciousness and, taking into consideration that psychology was also being founded during this time in the early 20<sup>th</sup> century and it too began with a focus on the study of human consciousness, it is not surprising that these two disciplines began to interact with one another (Giorgi & Giorgi, 2003). In the mid-1950's, a group of non-philosophers including physicians, pedagogues, psychiatrists and psychologists from Netherlands adopted the phenomenological method as a means of understanding human existence rather than as a philosophical methodology (Goble & Yin, 2014). This group of professionals made up what was known as the 'Utrecht School' and were the first to make use of phenomenology as a distinct research methodology (Goble & Yin, 2014). Although the initial documented interactions between phenomenology and psychology are fraught with misunderstandings and various challenges, the use of phenomenological methods for psychological research has gained in popularity greatly over the years that followed (Davidsen, 2013).

Phenomenological researchers aim to gather the richest possible account of the subjective experience of a phenomenon from individuals and then studying and describing, in fine detail, the essence of this experience of the phenomenon in question, as stated and understood by the individuals being researched (Banister et al., 2011). Essentially, phenomenological research strives to understand a phenomenon according to the lived experiences of the participants (Willig, 2013). In order for a researcher to be able to gather such data, an attitude of openness and flexibility must be taken by the researcher throughout the data collection period (Banister et al., 2011).

An additional aspect of phenomenological research, as defined by Husserl, is "bracketing" or "*epoché*" (Willig, 2013). "*Epoche*" is a Greek word which, when translated into English means "suspension" or, as typically translated, "suspension of judgement" (Willig, 2013). This "bracketing" in phenomenology can be defined as the requirement of the researcher to bracket out their own assumptions and preconceived ideas regarding the phenomenon being researched in order to ensure that the data gathered is accurately described using the perspectives of the participants without any

preconceived ideas or biases of the researcher tainting the results (Willig, 2013). This bracketing is, according to Husserl, essential for the phenomenon being researched to be successfully described from the perspectives of the participants which will, in turn, bring to light the lived experiences of the participants (Willig, 2013).

There are many different variations to phenomenology which are generally grouped into two categories based on the perspective taken, namely descriptive phenomenology and interpretive phenomenology (Sloan & Bowe, 2014). One variation which fits into the category of interpretive phenomenology is hermeneutic phenomenology (Sloan & Bowe, 2014). This school of phenomenology is rooted in the writings of Martin Heidegger (Kafle, 2011).

### **3.4) Hermeneutics**

Hermeneutics is concerned with the interpretation of phenomena with the use of previously established theory to guide the interpretation whilst acknowledging the virtual impossibility of bracketing out all preconceptions and assumptions by the researcher (Bryman, 2012).

Hermeneutics was originally the methodological framework most favoured for the interpretation of biblical and philosophical texts, however, it has since been expanded for use in numerous academic interpretations, predominantly within the field of the humanities, including psychological research (Martin & Sugarman, 2001). In addition to this, hermeneutics originated as a method of interpretation for written texts, however, it is now used for both verbal and non-verbal communication interpretations (Martin & Sugarman, 2001).

### **3.5) Hermeneutic Phenomenology**

In essence, phenomenology aims to provide a detailed description of a phenomena as expressed by those who experienced it whilst holding the belief that the researcher must bracket out and withhold all of their own preconceived ideas and beliefs (Willig, 2013). Hermeneutics also aims to provide detailed descriptions of phenomena from the point of view of those who have experienced it, however, with the addition of the interpretation of these descriptions with the aid of the researchers own opinions as well as pre-existing theories available on the topic (Martin & Sugarman, 2001). The opinion that phenomena are best understood through the stories told by those who directly experienced them gave rise to the hermeneutic turn of phenomenology (Kafle, 2011). From this shift came the view that, in order to fully grasp and illuminate the life world of participants in order to gain a clear picture of a phenomena in question, one must delve deep within the stories told by such participants with the assistance of some form of hermeneutic interpretation (Kafle, 2011).

It is clear that phenomenology and hermeneutics are closely related and, when used together, can complement one another rather well (Kafle, 2011). It is due to this that hermeneutic



phenomenology has become a popular methodological framework for those conducting qualitative research within the field of humanities (Kafle, 2011).

Hermeneutic phenomenology focuses on describing and interpreting subjective experiences while rejecting the concept of ‘bracketing’ personal opinions by the researcher (Kafle, 2011). The aim is to unveil the essence of a phenomena through gathering personal experiences of participants and then reflecting upon these lived experiences (Goble & Yin, 2014). By reflecting upon the lived experiences of participants, the researcher will then provide an interpretive description of the phenomena in question whilst drawing upon their own inherent perceptions and ideas as well as theories and current research available which relates to the phenomena in question (Goble & Yin, 2014). The school of hermeneutic phenomenology holds the understanding that interpretations are of vital importance for research and that description is, essentially, a form of interpretation, so one is always providing interpretation, even when only claiming to be describing, thus, rejecting the purely descriptive philosophy of phenomenology (Kafle, 2011).

The use of hermeneutic phenomenology for this research project was decided upon due to the way in which the central aims of such a research framework compliments the desired outcomes as proposed by the researcher. With the aims of this research project being to firstly identify and provide rich descriptions of participants’ experiences of owning an autism service dog and then to interpret these experiences by relating them to the limited research available on the topic of autism service dogs from international studies, it is clear that a hermeneutic phenomenological framework fits this research project adequately.

### **3.6) Participant Selection**

The inclusion criteria for participation in this research project was that participants had to be parents or caregivers of children who have been diagnosed with ASD and who own an autism service dog trained by the SAGDA. It was further decided that the children of all participants would need to be under the age of 18 and therefore be considered minors. Each child was required to have been given an official diagnosis of ASD by a qualified medical professional. Co-morbid diagnoses given to the children were not taken into consideration in this research study.

Participants were selected using purposive sampling. Purposive sampling is the most frequently used method of sampling in qualitative research and is a form of non-probability sampling (Bryman, 2012). The aim of purposive sampling is to select participants in a strategic manner so as to ensure that those selected are relevant to the proposed research by fitting into a set of criteria, pre-determined by the researcher, based on the questions developed for the research of the phenomena in question (Bryman, 2012). Purposive sampling is used when the researcher has a clear idea of a particular subset within the population who they want to use as participants due to them all having in common the phenomena in question (Bryman, 2012). For this form of sampling, the researcher is

required to develop clear research questions and then thoroughly think through the specific criteria required by the participants to ensure that they will be suitable for answering these research questions prior to selecting the participants (Bryman, 2012). It must be noted that, when using a sample population selected in this manner, results obtained may not be statistically representative to the wider population in general, however, they will, generally, be qualitatively generalizable to the population of interest (Bryman, 2012).

Considering that the criteria for participation in this research was highly specific and clearly developed and defined by the researcher prior to the selection of participants, purposive sampling was the method decided upon as it best fitted the process which would be required for the selecting of participants for this research study.

In order to make contact with prospective participants, the researcher initially sent a letter of request to the South African Guide Dog Association (SAGDA) asking if they would be willing to send out an email to all those who they have supplied with autism service dogs to inform them of the research and provide them with the opportunity to participate should they be interested. The letter which the SAGDA was sent is attached as Appendix A. The SAGDA was kind enough to be willing to do so which resulted in the researcher drafting an advertisement, outlining the planned research, and then sending this to the SAGDA for their approval. The SAGDA approved of the advertisement and sent it, via email, to an undisclosed number of people who they had supplied with autism service dogs. On the advertisement were contact details for the researcher and instructions to contact the researcher via email should they be interested in being provided with additional information on the research or should they wish to participate. The advertisement is attached as Appendix B.

Participation in this research was entirely voluntary and no coercion of any sort was used in the recruitment of participants. Interested individuals were able to make unlimited inquiries about the research and the requirements of participation prior to agreeing to take part. The participants were further informed that they were allowed to withdraw their participation at any time during the research process should they wish to do so with no negative repercussions of any kind.

Considering the relatively small number of people in South Africa who have been supplied with autism service dogs trained by the SAGDA, the researcher did not expect to obtain a large amount of participants, however, this is in line with the guidelines of qualitative research where a large sample size is not required (Bryman, 2012). The sample size for a qualitative research study should be only large enough to obtain sufficient data to describe and interpret the phenomena of interest and to address the research questions adequately (Guest, Namey, & Mitchell, 2013). The goal of qualitative sampling is to attain what is known as saturation (Guest et al., 2013). Saturation occurs when the addition of more participants does not add any further information or perspectives to those which has already been obtained (Guest et al., 2013).

The researcher initially aimed to obtain between five and 25 participants based on the recommendation of Creswell (1998) who believed that a sample size between these numbers would be suitable for saturation to be achieved for a phenomenological research study. Considering that this research made use of a hermeneutic phenomenological framework which is essentially a branch of phenomenological research, it was decided that these guidelines would be suitable to follow for the obtainment of participants.

As mentioned above, the SAGDA did not disclose with the researcher the exact number of people who were sent the email containing the provided information on this research, however, the researcher did receive a fairly large number of responses from potential participants who requested further information on the proposed research. The number of participants who agreed to take part in the research once they had been supplied with all necessary details was eight. This, although at the lesser end of the recommended amount, did fit into the guidelines and so was deemed adequate by the researcher. A brief description of each participant will be provided in a section to follow.

In addition to the eight participants mentioned above, the researcher decided that an interview with a member of the SAGDA may be useful to outline the procedures followed for the selection, training and supplying of autism service dogs. This was decided upon due to the importance of such information for this research project, however, such information was not documented or available to the public of South Africa at the time. It was decided that the information should be collected from the SAGDA directly rather than from the participants who would be secondary sources of information and who may, therefore, not provide accurate information on the subject. Should the researcher publish information gathered from the participants it would be unfair to the SAGDA if the information was inaccurate. The researcher contacted the SAGDA to discuss this which resulted in the SAGDA being willing to participate in an interview with the researcher to discuss the matter. Two members of the SAGDA who are most involved in the autism service dog process at the SAGDA were contacted and agreed to participate in an interview with the researcher at their premises in Gauteng.

### **3.7) Data Gathering Method**

The most popular method of data collection for qualitative research is interviewing, with the most popular method for phenomenological analysis being in depth, individual interviews with open ended questions, also known as semi-structured interviews (Banister et al., 2011).

For a semi-structured interview, the interviewer (in this case the researcher), makes use of an interview guide which has been carefully developed by the researcher prior to the interview taking place (Fylan, 2005). This interview guide will contain a range of open ended questions and will serve as a basic guideline for what needs to be discussed in the interview (Fylan, 2005). It is not required of the interviewer to follow the interview guide precisely but to rather use the interview guide as a means

to remind oneself of the general topics to be discussed (Fylan, 2005). Semi-structured interviews are fairly informal with the aim being to create a sense of relaxed conversation between the interviewer and the interviewee rather than a sense of interrogation (Galletta, 2013). The interviewer is required to ask all of the questions in the guide, however, is free to ask the questions in any order to facilitate a flowing conversation (Fylan, 2005). Additional questions may be asked by the interviewer when appropriate to encourage the interviewee to discuss topics of value in greater detail (Fylan, 2005). This is to be done at the interviewer's own discretion (Fylan, 2005). This flexibility allows for a great deal of data to be gathered as the interviewer is able to prompt the interviewee to delve deep within topics which may be of use to the researcher (Fylan, 2005).

Although semi-structured interviews are a highly valuable method for data collection, they do have some flaws (Galletta, 2013). Due to there being no structured interview guide to follow in a rigid manner, no two interviews will be the same, leading to possible difficulties when analysing and comparing collected data (Galletta, 2013). The relaxed, flexible, conversational style of interview generally also results in interviews varying greatly in length with very large amounts of data being gathered from each interview, a great deal of which will likely be of no value to the researcher (Galletta, 2013).

With these flaws taken into consideration, semi-structured interviews, where participants are allowed to engage in seemingly relaxed conversation with the researcher, was still the most suitable data collection method for this research project as they allow for in-depth, personal accounts of phenomena to be expressed and documented from the participants' own perspectives (Banister et al., 2011). This will result in data which captures the unique lived experiences of each participant being gathered (Banister et al., 2011). This type of data is precisely what is required for a hermeneutic phenomenological research study (Banister et al., 2011).

The process of data collection for this research project required each participant to take part in one semi-structured interview with the researcher. The researcher developed an interview guide (see Appendix C) which was used for each interview to ensure that all the necessary topics relating to the research questions were discussed in each interview, however, the researcher did encourage the participants to discuss topics or personal experiences which were unique to each individual in detail through the use of additional prompting questions. This was done at the researcher's discretion. When a participant mentioned a specific experience or notion which the researcher deemed valuable to the research project, the researcher would prompt the participant to discuss the matter in greater depth. This allowed for in-depth information to be gathered, suitable for a hermeneutic phenomenological research framework.

The researcher liaised with each participant to organize a suitable time for the interview to take place. The interviews were conducted at each individual participant's house to ensure maximum

privacy and confidentiality. It also ensured that participation in this research project resulted in the least possible amount of inconvenience for the participants.

When conducting semi-structured interviews, the most common method of data capturing is voice recording with the use of an electronic voice recording device (Galletta, 2013). This allows for the interviewer to be fully present during the interview and aids in the building of rapport with the participant which is vitally important when attempting to create an informal, conversational atmosphere which is the aim of semi-structured interviews (Galletta, 2013). The recording of interviews further removes the need for note taking which can be extremely distracting for both the interviewer and the participant, as well as often leading to the participant feeling remarkably self-conscious (Galletta, 2013). In addition to this, it allows the researcher to retain all of the information provided by the participant during the interview which would be impossible from note taking alone (Galletta, 2013). Interviews recorded are then retained by the researcher and transcribed at a later date (Galletta, 2013). Although this method of data capturing can be problematic at times, for example if the recorder malfunctions, the participant speaks softly or there are additional background noises during the interview, as well as time consuming due to the large volume of data required for transcription, it is still the most widely used method of data capturing for semi-structured interviews.

For the semi-structured interviews conducted for this research project, voice recording was used to ensure that the fullest amount of data was retained to capture the most in-depth data possible for analysis. The recordings were transferred to the researcher's private computer immediately after the interviews took place and were kept in a password secured file to ensure confidentiality. They were later transcribed verbatim and the transcript for each participant was sent back to them for reading to ensure that they were content with what would later be used as data for analysis by the researcher. Participants were informed that, should they feel uncomfortable about any information which they divulged during the interview, they were welcome to inform the researcher and the information would be deleted. This process was followed for all participants as well as for the interview conducted with the members of the SAGDA.

### **3.8) Data Analysis**

There are a number of data analysis methods which can be followed under the framework of hermeneutic phenomenology, one of which is thematic analysis which is the approach followed for this research project (Sundler, Lindberg, Nilsson, & Palmér, 2019). The process of thematizing meaning from data is a data analysis approach seemingly of frequent use for various forms of qualitative data analysis (Sundler et al., 2019). While there are a number of approaches utilized for thematizing meaning, the approach formulated by Braun and Clarke (2006) was followed for this research project.

Thematic analysis is a data analysis method used to organize data through the identification of themes and then to describe the data through the analysis of the identified themes and, finally, to report on this analysis of themes in a detailed report (Braun & Clarke, 2006). A thematic analysis can be taken even further than this by being used to interpret themes identified within collected data (Braun & Clarke, 2006). Thematic analysis is a highly flexible analysis method which is regularly the analysis method of choice for phenomenological research, however, it is suitable for various other forms of qualitative research (Braun & Clarke, 2006). Due to the flexibility of this analysis method, it can be used for various forms of data, including interview transcriptions, as well as with either large or small sample sizes (Braun & Clarke, 2006). This flexibility as well as the frequent use of thematic analysis in phenomenological studies and its ability to be expanded to include interpretation of data, makes it a suitable data analysis method for this research project.

There are many approaches which have been formulated by different researchers providing guidelines as to what they believe to be the best way of conducting a thematic analysis (Sundler et al., 2019). As mentioned above, the approach utilized for this research was that of Braun and Clarke. Braun and Clarke (2006) developed a highly comprehensive, six phase approach to conducting thematic analysis. These six phases will be outlined below.

#### **Phase 1: Familiarising oneself with the data (Braun & Clarke, 2006).**

This phase requires the researcher to fully immerse oneself in the data by reading and re-reading transcriptions of interviews and making rough notes to ensure that a thorough knowledge of the data is obtained (Braun & Clarke, 2006).

#### **Phase 2: Generating initial codes (Braun & Clarke, 2006).**

This phase requires the researcher to begin the coding process by noting preliminary codes of data which appear to be of use to the research questions (Braun & Clarke, 2006). These codes will be numerous and far broader than the final themes (Braun & Clarke, 2006).

#### **Phase 3: Searching for themes (Braun & Clarke, 2006).**

This phase requires the researcher to start analysing the codes identified by splitting and grouping them together into possible themes and sub-themes (Braun & Clarke, 2006).

#### **Phase 4: Reviewing themes (Braun & Clarke, 2006).**

This phase requires the researcher to review and refine the themes identified in the previous step (Braun & Clarke, 2006). This is done to ensure that the data within themes is cohesive and that themes are distinct from one another (Braun & Clarke, 2006). This phase is usually divided into two parts, firstly checking themes with coded extracts and then with the overall data set (Braun & Clarke, 2006).

### **Phase 5: Defining and naming themes (Braun & Clarke, 2006).**

This phase requires the researcher to further refine the identified themes and to provide names and working definitions for each theme (Braun & Clarke, 2006). This phase should result in coherent, distinct and finalized themes which represent the data set accurately (Braun & Clarke, 2006).

### **Phase 6: Producing the report (Braun & Clarke, 2006).**

This is the final phase and requires the researcher to produce a written report which transforms the analysis into a comprehensible, convincing report on the analysis through the inclusion of vivid extracts from the data as well as through the linking of data with pre-existing theory or research on the topic (Braun & Clarke, 2006). The report needs to provide empirical evidence which supports the themes links with the research questions and pre-existing research on the topic of the research study (Braun & Clarke, 2006).

It is important to note that these phases are not rules to be followed exactly and that analysis is not a linear process but is rather a recursive process where the researcher can go back and forth between the steps to ensure a full and thorough analysis of the data collected (Braun & Clarke, 2006).

These six phases were followed by the researcher for the analysis of the data collected via semi-structured interviews and transcribed verbatim for this research project. The steps were followed in a recursive manner by moving back and forth between the phases, as necessary, to ensure a thorough analysis of the data, enabling the researcher to formulate a richly detailed final report.

## **3.9) Reliability and Validity in Qualitative Research**

Reliability and validity are two vitally important criteria for assessing the quality of quantitative research, however, there has been a great deal of discussion around the use of such criteria for evaluating qualitative research due to the vastly different aims of these two research approaches (Bryman, 2012). From these discussions, a number of varying conclusions have been drawn, however, it is generally accepted that qualitative research requires the criteria of evaluation to be re-thought to accommodate for the differences in desired outcomes of qualitative research compared to quantitative research (Bryman, 2012). One such conclusion is that, for qualitative research, validity and reliability should rather be referred to as credibility, transferability, dependability and confirmability (Bryman, 2012). These are the criteria which have been adopted for this research project.

### **3.9.1) Credibility**

Credibility refers to the believability of the research and depends strongly on the richness or quality of the data gathered for the research (Korstjens & Moser, 2018). This is a prime example of how qualitative research strives for quality over quantity (Bryman, 2012). One strategy used to ensure credibility is known as ‘member checks’ which is when participants are requested to provide feedback

on the data collected from their participation (Korstjens & Moser, 2018). Member checks were applied to this research project as the researcher supplied each participant with the transcription of their interview to allow them to check through and confirm their satisfaction or provide feedback on the information which they supplied during their interview as well as on the interpretations, made by the researcher, of their interviews.

### **3.9.2) Transferability**

Transferability refers to the extent to which the research findings can be applied to other contexts or populations (Korstjens & Moser, 2018). As there is no way to prove with any definite certainty that qualitative research results will be able to be applied to populations other than those who participated in the research, the researcher must rather supply adequate, in depth information to the reader with the aim of asserting the possibility of the research being applicable to a greater population (Byrne, 2001). A strategy used to achieve transferability is known as ‘thick description’ which requires the researcher to provide a detailed report of the data gathered in the research report (Korstjens & Moser, 2018). This was the strategy used in this research project.

### **3.9.3) Dependability**

Dependability refers to the consistency and repeatability of a research study (Korstjens & Moser, 2018). For this, researchers need to be certain that the reported results are consistent with the data collected to ensure that, should another researcher analyse the raw data, they would arrive at a similar conclusion (Byrne, 2001). Researchers must also ensure that they provide detailed descriptions of the research process followed to allow for future researchers to repeat the study (Korstjens & Moser, 2018). The method followed to achieve dependability in this research project was to document, in a detailed manner, the steps followed by the researcher in conducting the research as well as the steps followed for data analysis to allow for future researchers to be able to repeat the inquiry and achieve similar results.

### **3.9.4) Confirmability**

Confirmability refers to the level of confidence that the results of a research inquiry are based on the participants’ own experiences and rather than being biased by the researcher (Korstjens & Moser, 2018). Confirmability is essential to verify that the results provided in the research report have been shaped by the data provided by the participants, with little to no interference from the researcher (Byrne, 2001). Two common methods used to attain confirmability are audit trails and reflexivity (Byrne, 2001). An audit trail is a set of notes, kept by the researcher throughout the research process, detailing the steps taken for data collection, analysis and interpretation, to document the process and the reasons behind choosing such processes (Byrne, 2001). Reflexivity is when the researcher reflects upon his/her own background and opinions to ascertain how these may have affected the analysis of



the data (Byrne, 2001). A reflexive journal can be kept for this process where the researcher can document and reflect upon what is happening throughout the data analysis process to ensure that his/her own biases are not affecting the analysis in a detrimental way. Both of these methods were used during this research project as the researcher documented the processes followed for data gathering, analysis and interpretation and then used this to reflect upon possible biases to ensure that the final report was based on the experiences of the participants with minimal interference from experiences and biases of the researcher.

In addition to the above mentioned methods which were used to ensure a high quality of research, the use of a well-documented data analysis method, namely Braun and Clarke's (2006) method of thematic analysis, further aided in ensuring quality of research. Lastly, iterative questioning was used through the rephrasing of questions during interviews to ensure consistent answers were provided by participants. The combination of methods described above are all recommended means of ensuring credibility, transferability, dependability and confirmability in qualitative research which collaboratively aim to ensure a high quality of research is achieved (Korstjens & Moser, 2018).

### **3.10) Ethical Considerations**

The application of appropriate and strict ethical principles is essential to protect the participants of a research study (Bryman, 2012). The following steps were taken for this research study to ensure that all participants were protected as far as possible.

Prior to the inception of this research study, ethical clearance was sought and obtained firstly from the Research Proposals and Ethics Review Committee of Rhodes University and then from the Humanities Higher Degrees Committee of Rhodes University.

Participation in this research study was entirely voluntary and no coercion of any sort was used to obtain participants. Informed consent was explained and sought from all participants prior to the commencement of their participation. Each participant was provided with a detailed description of the requirements for participation and were then requested to read and sign an informed consent form (see Appendix D) to ensure that they fully understood what was required of them for participation. The completion of a second consent form, regarding the use of a voice recorder, was also required from the participants. This consent form explained the decision of the researcher to utilize a voice recording device as well as the processes which were to be followed with regard to saving the recordings in password secured files and transcribing the voice recordings, which was to be completed by the researcher to ensure confidentiality and anonymity. Following a verbal explanation of the tape recording consent form, the participants were asked to read through the form themselves, complete the sections which required the documentation of their preferences and then sign the form to capture their agreement (see Appendix E). No deception of any sort was used during this research study. In

addition to this, participants were informed that should they wish to withdraw their participation at any time they would be able to do so without any negative repercussions.

The anonymity of participants was preserved through the use of pseudo names and no information was documented in this research report to enable the identification of any participants. In addition to this, proper safeguards were in place to ensure participant confidentiality and included the safekeeping of interview recordings and transcriptions within password secured files, no information pertaining to the participants was divulged to fellow participants and recordings and transcriptions of interviews were only viewed and dealt with by the researcher with no third party intervention.

This research was highly positive in nature with the researcher not wishing to cause any harm, both physical and psychological, to participants. Due to this, all questions were framed in a positive way to promote an atmosphere of optimism during the interviews. The researcher chose to interview only the caregivers of the children diagnosed with autism spectrum disorder who had been supplied with an autism service dog to ensure that adequate answers would be provided for the questions developed for this research without causing any distress for the children. In addition to this, although the research was positive in nature and was not expected to cause any psychological distress to the participants in any way, the participants were provided with contact details for their nearest professional psychological support facility as a precautionary measure in case their participation resulted in distress of any sort. Use of such facilities was not required by any of the participants.

## Chapter 4

### Results and Discussion

#### 4.1) Introduction

This chapter begins with a brief description of each of the participants who took part in this research study in order to provide an overview of the unique circumstances of each participant. Thereafter, a presentation and in-depth discussion of the major emerging themes identified from the analysis of the semi-structured interviews conducted for this research study is provided. The experiences of the participants were collated into eight super-ordinate themes, each with a varying number of sub-ordinate themes. The eight super-ordinate themes identified have been titled as follows:

- (I) Accessibility of autism service dogs in South Africa
- (II) Adjusting to the autism service dog
- (III) Participants' use of their autism service dogs
- (IV) Perceived effects of the autism service dog for the child
- (V) Perceived effects of the autism service dog for the caregiver
- (VI) Public response to autism service dogs in South Africa
- (VII) The welfare of autism service dogs in South Africa
- (VIII) Ideas for the improvement of autism service dogs in South Africa.

In this chapter, each super-ordinate theme, along with its sub-ordinate themes, will be presented and discussed in detail where the experiences of the participants will be related to one another, interpreted by the researcher and discussed in relation to previously mentioned literature available from international research studies. The researcher has strived to ensure that the perspectives of the participants have been provided without alteration or misinterpretation by the perspectives of the researcher. The use of direct verbal extracts from the interviews have been utilized in this section in an attempt to make this evident to the reader.

#### 4.2) Introduction to Participants

The information below provides a basic introduction to each participant interviewed for this research. Details provided outline the relationship of the participant to the child diagnosed with ASD, the current status of employment of the participant, the age of the child, the gender of the child, the number of siblings of the child, educational arrangements for the child, the diagnoses of the child and the approximate age at which the diagnosis was made as well as the length of time since being placed with an autism service dog prior to the interview. Interviews have been labelled in numerical order. To ensure confidentiality for all participants, a letter of the alphabet has been assigned to each

participant which will be utilized for the remainder of this thesis. Where two participants took part in an interview, the letter of the alphabet designated to the interview in question will be used along with numerical identification for each participant, for example, participant A1 or participant A2 etc., as a means of distinguishing between participants.

### **Interview 1**

Only one participant took part in interview 1. This participant was the biological mother of the ASD child supplied with an autism service dog and will be known as participant A (P:A) for the remainder of this thesis. Participant A was a stay at home mother to three children. The participant was married to the ASD child's father who worked full-time at the time of the interview. The ASD child was male, nine years of age and attended a special needs school. He was diagnosed as being low functioning autistic at approximately three years of age. The family had been placed with their autism service dog approximately two years prior to the interview.

### **Interview 2**

Two participants took part in interview 2. The participants were the biological mother and father of the ASD child supplied with an autism service dog. The mother will be known as participant B1 (P:B1) and the father as participant B2 (P:B2) for the remainder of this thesis. The participants were parents to three children and were both in full-time employment at the time of the interview. The ASD child was female and 10 years of age. She was home educated with a private Montessori tutor and attended classes once a week at a Montessori school with her tutor. She was diagnosed at approximately two years of age, however, she had numerous comorbid conditions. Low functioning autism was one of her diagnosed conditions. The family had been placed with their autism service dog approximately four years prior to the interview.

### **Interview 3**

Two participants took part in interview 3. The participants were the biological mother and father of the ASD child supplied with an autism service dog. The mother will be known as participant C1 (P:C1) and the father as participant C2 (P:C2) for the remainder of this thesis. The participants were parents to two children and both were in full-time employment at the time of the interview. The ASD child was male, 14 years of age and was home-educated using guidelines set out by an educational institution for children with ASD. The ASD child had a full-time private tutor who accompanied him on regular visits to the educational institution for assessments and extra therapy classes. The ASD child was diagnosed with low functioning autism at approximately two and a half years of age. The family had been placed with their autism service dog approximately 10 months prior to the interview.

#### **Interview 4**

Only one participant took part in interview 4. The participant was the biological mother of the ASD child supplied with an autism service dog and will be known as participant D (P:D) for the remainder of this thesis. The participant was married to the stepfather of the ASD child and had an additional three children with the stepfather. Participant D worked at the special needs school which her child was attending. The stepfather was also in full-time employment. The ASD child was male, 15 years of age and attended a special needs school. The ASD child was diagnosed with low functioning autism only a year prior to the interview, (when he was 14 years of age), due to having numerous comorbid conditions which were diagnosed prior to the ASD diagnosis. The family had been placed with their autism service dog approximately 10 months prior to the interview.

#### **Interview 5**

Only one participant took part in interview 5. The participant was the biological mother of the ASD child supplied with an autism service dog and will be known as participant E (P:E) for the remainder of this thesis. The participant was married to the stepfather of the ASD child and had an additional biological child as well as a stepchild. Both participant E and the stepfather were in full-time employment, however, participant E worked from home. The ASD child was male, 11 years of age and attended a special needs school. The child was diagnosed with low functioning autism at an early age, however, he had numerous additional comorbidities. The family had been placed with their autism service dog approximately three years prior to the interview.

#### **Interview 6**

Only one participant took part in interview 6. The participant was the biological mother of the ASD child supplied with an autism service dog and will be known as participant F (P:F) for the remainder of this thesis. The participant was currently unemployed and lived in her parents' home with her two children, including the child diagnosed with ASD. The biological father lived in a different town and was in full-time employment. The ASD child was male, nine years of age and did not attend school. The child was diagnosed at approximately four years of age with moderate to high functioning autism. The family had been placed with their autism service dog approximately one year prior to the interview.

#### **Interview 7**

Only one participant took part in interview 7. The participant was the biological mother of the ASD child supplied with the autism service dog and will be known as participant G (P:G) for the remainder of this thesis. The participant was a stay at home mother and was married to the biological father who worked and lived internationally for the majority of the year. The ASD child was male, an only child, 12 years of age and home-educated. The child was diagnosed with high functioning autism

at approximately four years of age. The family had been placed with their autism service dog approximately two and a half years prior to the interview.

### **Interview 8**

Only one participant took part in interview 8. The participant was the biological mother of the ASD child supplied with the autism service dog and will be known as participant H (P:H) for the remainder of this thesis. The participant was a stay at home mother and was married to the biological father who worked internationally for the majority of the year. The ASD child was male, an only child, 10 years of age and did not attend school. The child was diagnosed with moderate ASD at approximately three and a half years of age, however, he was non-verbal. The family had been placed with their autism service dog approximately three years prior to the interview.

## **4.3) Results and Discussion**

Following a thorough thematic analysis of the transcriptions of the interviews conducted for this research project, a total of eight super-ordinate themes were identified. Each super-ordinate theme was subjected to further analysis resulting in the identification of increasingly refined sub-ordinate themes within. This resulted in each of the super-ordinate themes being divided into varying numbers of such sub-ordinate themes, with each containing between two and six sub-ordinate themes. Each super-ordinate theme and its sub-ordinate themes will be presented and discussed in detail below where the researcher will attempt to interpret the data gathered from the participants using their personal perspectives as far as possible, including direct quotes from the participants as a means of transparency. In addition to this, the results will be discussed in relation to those of international studies mentioned previously in this thesis.

### **4.3.1) Super-ordinate Theme I: Accessibility of Autism Service Dogs in South Africa**

This super-ordinate theme captures the ease of access to autism service dogs for South Africans with regard to the application process, support received from the SAGDA, training received, length of time spent on the waiting list as well as the relevant costs of both receiving and maintaining an autism service dog. This super-ordinate theme was divided into four sub-ordinate themes:

- 1) Application: “so easy”
- 2) Waiting Time: “long time coming”
- 3) Finances: “not exactly cheap”
- 4) Support from the SAGDA: “always there to help”.

#### 4.3.1.a) Sub-ordinate theme 1) Application: “so easy”

This sub-ordinate theme captures the experiences of the participants in applying for and being trained to receive their autism service dogs. This topic was mentioned by participants from all of the interviews with seven out of the eight interviews indicating high levels of satisfaction with the application process required by the SAGDA. Participants’ remarks strongly indicated simplicity and ease of application:

“It was easy, they even flew out to our house to interview us.” (P:A)

“It was an easy enough process, I applied, they came and interviewed us then we went on the waiting list.” (P:B1)

“Applying was very easy and simple.” (P:G)

“It was very easy, you just fill out the form and then they come and interview you and let you know yes or no.” (P:H)

All of the above quotes highlight a general consensus on the simplicity of applying for an autism service dog through the SAGDA. Application required the completion of a form followed by a physical interview with a member of the SAGDA who would travel to the prospective owner’s place of residence to conduct the interview. Questions on the application form were mentioned to have been simple and understandable, making the form easy to complete.

While it is clear that most participants found the application process to be simple, one participant did not agree with this sentiment, rather mentioning that they had found it to be quite an intense process:

“It was quite intense. They come into your house and interview yourself and your child which was difficult for him. They then do a home check and a background check. It’s very efficient but very intense.” (P:E)

Participant E noted, with concern, the effect which the process was found to have had on her child, mentioning that her child experienced the interview process as rather challenging. This is understandable when one takes into consideration the difficulties often experienced by children diagnosed with ASD, such as challenges with a change of routine, difficulties with social interactions and communication, especially with strangers, as well as frequent intolerance for unknown individuals in the house (Trevvarthen et al., 1998). All of these challenges could have resulted in distress to the ASD child from the home visit conducted by the SAGDA for the application interview. The SAGDA did, however, confirm that the interview step of the application process was directed towards the caregivers only and not the ASD children. The SAGDA noted that they simply observed the ASD child during the interview but did not interact or question them in any way. Although one of

the ASD children was identified to have been concerned by the process, the SAGDA strived to cause as little stress to the ASD children as possible which was encouraging to have found. Although this one participant did voice her concern, she persevered with the application due to a strong desire to receive an autism service dog for her child and did confirm that no long lasting emotional distress was caused to her ASD child from the process.

With regard to the training received by the participants, once again, participants from seven out of the eight interviews noted a high level of satisfaction and enjoyment. These sentiments can be seen in the following quotes:

“They were really wonderful, they taught me like everything, how to look after her, how to put on and use the harness, how to give commands and they stayed for like two weeks to do all this and checked to make sure that we were all okay.” (P:A)

“The process of training with the guide dogs was awesome.” (P:D)

“They taught us everything, they did a very thorough job, they were with us for two whole weeks which is a very long time.” (P:H)

Interestingly, participant E, who mentioned a level of concern over the application process, expressed her enjoyment in taking part in the training process as seen below:

“The training was a pleasure, the whole experience was just really enjoyable.” (P: E)

From these quotes it can be seen that the training provided by the SAGDA was found to be efficient and enjoyable by the majority of the participants. The SAGDA provided, what was expressed to have been, in depth training over a two week period in the new owner’s place of residence. This training covered, what participants believed to have been, all the necessary skills required for life with an autism service dog. The training supplied by the SAGDA to the new owners was found to have been similar to that of international organizations as mentioned in the research conducted by Burrows et al. (2008a). The main difference found was that the SAGDA provided two weeks of training whereas the international organizations appear to have only provided one week of training (Burrows et.al., 2008, A). This is likely to have been a positive difference as a lengthier training process would possibly have resulted in a calmer and more thorough process for the participants. The participants expressed a sense of amazement in how the trainers were willing to travel to their private houses for a whole two weeks to provide them with individualized training. This can be seen in the quote below:

“I was just in awe of how they could come out to me in another province for two weeks just to train me even though I was the only one here getting a dog.” (P:B1)

One participant did mention that the training was experienced as quite a tiring two week process:



“It was a lot more intense than I imagined. It was quite tiring. For me it was quite a bit more than I thought it would be.” (P:G).

While this is not necessarily a negative remark, it is important to note as the level of commitment required when applying to receive an autism service dog must be understood. The training supplied by the SAGDA is indeed very intense, however, it is essential that the new owners understand all that is required in maintaining and making use of an autism service dog. Participant G notes this clearly when she describes her experience of the realization of the amount of training required.

#### **4.3.1.b) Sub-ordinate Theme 2) Waiting Time: “long time coming”**

All of the participants who took part in this research study made frequent remarks with regard to the length of time which they were required to spend on the SAGDA’s autism service dog waiting list. The waiting time varied from 10 months to five years with the majority of participants mentioning a wait of approximately four years. This lengthy waiting time was notably unexpected by the participants and can be seen from comments such as:

“There is a long waiting list but I didn’t realize just how long the waiting list actually was.”  
(P:A)

“It was such a long wait, I had no idea that it would take that long. I don’t know what I would have done if I had known that.” (P:D)

Participant D made clear her unhappiness with the waiting time and noted that she would possibly have reconsidered applying if she had known the length of the wait required.

“I felt so bad because I told him about the dog and he was part of the whole process and was really excited about it but then as time went by he kept asking why he didn’t have a dog yet. He just didn’t understand and started to think that it was because he was bad and so they wouldn’t give him one. I just felt so bad about it all.” (P:D)

In her comment above, it can be seen that she felt especially concerned for her ASD child as she had included the ASD child in the application process which resulted in the ASD child expecting to have received a service dog fairly quickly. The ASD child did not understand the reason for the long wait and became distressed due to this, resulting in the participant feeling guilty as she had encouraged her ASD child’s excitement around receiving a service dog, which had diminished and led to feelings of unworthiness in the child as the wait became increasingly longer. This is naturally a concern as caregivers apply for an autism service dog with the hope that the dog will be able to enhance the ASD child’s life, however, in the instance experienced by participant D, the waiting time clearly resulted in increased distress for both ASD child and caregiver.

In another instance, participant G noted her dissatisfaction with the lengthy wait:

“I was just so frustrated by it. I honestly never thought it would take so long and they never mentioned it at the interview. I really started to become quite annoyed as the years went by.” (P:G)

This is an understandable reaction and concerning to hear that the SAGDA did not mention the possible extensive wait required prior to being paired with an autism service dog. Perhaps if the participants had been prepared for the lengthy wait they would have been more accepting, however, participants were of the opinion that the wait would not be nearly as long as what they had experienced. The dissatisfaction with the wait was a sentiment shared by all participants and a topic which resurfaced throughout the interviews. Unfortunately, no information from international research was available at the time of this research project with regard to waiting times from international organizations with which to compare findings on the topic.

#### **4.3.1.c) Sub-ordinate Theme 3) Costs: “not exactly cheap”**

This sub-ordinate theme discusses the participants’ experiences with the costs involved in owning an autism service dog and includes the experiences of receiving the autism service dog as well as maintaining their autism service dog.

With regard to receiving the autism service dog, all participants noted having been required to pay only a very small fee. Unfortunately, most participants could not remember the exact amount required. Two participants recalled paying approximately five rand as seen below:

“The fee was really small, I think it was like five rand.” (P:A)

“We only paid five rand ‘cause it’s all paid for by charity. The only reason they make it five rand is because they want to make it a transaction so that there’s terms and conditions, like a contract, just in case they have to take it back. If I didn’t pay anything then it would be like a gift and they couldn’t take back a gift.” (P:B2)

As participant B2 noted, the SAGDA is a charity organization which enables them to, in essence, sponsor the dogs for those who need them. However, the SAGDA does charge a very small fee, attached to a contract, making the transaction a legally binding one. This functions as a security mechanism for the SAGDA by legally granting them the right to withdraw the service dog should they feel that it would be in the best interest of either the dog or the new owner.

The requirement to pay such a small amount to receive the dog was something that all of the participants were amazed by as seen in this quote from participant C1:

“It was such a minimal amount, I couldn’t really believe it, after all the work that they do to only charge such a little, I was shocked.” (P:C1)

The SAGDA did not charge for any additional services which they provided, including traveling to the applicant's home to interview them and again at a later date to provide them with training and to hand over the dog. This was noted by participant A:

“Everything they do, they do at their cost. They fly to you, pay for their own accommodation and car rental. Everything was at their own expense.” (P:A)

From the above information it is evident that the process of applying for and receiving an autism service dog through the SAGDA would be affordable for the majority of South African citizens due to the minimal costs involved, however, maintaining the autism service dog may not be quite as accessible.

With regard to the costs involved in maintaining an autism service dog, no participants complained or noted struggling with the expense, however, it was mentioned in six out of the eight interviews that the costs involved were rather high. This is seen in the extracts below:

“It can be quite costly with the food and the vet bills. She has to be on special food now as well which costs more but we get by. The guide dog association has quite high care guidelines but nothing too much.” (P:E)

“The cost is a little bit higher but we manage, we have to.” (P:F)

“It's expensive but I feel blessed to be able to afford it.” (P:H)

Costs mentioned by participants included food, vaccinations, additional medications and vet visits as well as flea, tick and worm treatments. The participants of this research mentioned that the SAGDA had provide guidelines for correct care and noted that the costs of such care were not unusual for them but rather expected as they would have treated any dog in the same way.

“The costs are nothing more than any other dog you know, the normal vaccines, food, all that stuff. Guide dogs did give us information on how to care for them but it's just like normal.” (P:B1)

“It's expected though. Growing up with animals I knew what things were involved and that it would be expensive.” (P:G)

While this may have been true for the participants who took part in this research study, it may not be the case for all South Africans. As identified in research conducted by McCrindle et al. (2015), not all South Africans consider such high care standards to be normal for the maintenance of a pet dog.

Participant C2 noted that the costs were quite high and there was always the chance that the dog may become ill as this family experienced when their dog developed a skin condition. One needs

to be prepared for such an event as vet bills can be expensive. Participant C2 made a recommendation to consider having insurance for an autism service dog.

“It’s very expensive and if they get sick like ours with the skin thing. It’s something we didn’t plan for. I would actually recommend that even before you get the dog that you get insurance for it. The association should maybe even recommend it when they interview you.” (P:C2)

From these extracts it can be seen that maintenance costs of an autism service dog can be compared to those of any other large breed dog, however, only if high standards of pet care are considered normal. The SAGDA requires that their dogs are vaccinated yearly, fed good quality food, de-wormed and treated with tick and flea treatments regularly and taken to the vet in the case of illness. These are understandable requirements which ensure that all service dogs are cared for adequately, however, the costs involved in such care could be quite high. Challenges with maintenance costs were identified by participants from an international research study conducted by Burgoyne et al. (2014). Although none of the participants who took part in this research identified struggling with the maintenance costs, this is something which may make autism service dogs inaccessible for those from low income households within South Africa.

#### **4.3.1.d) Sub-ordinate Theme 4) Support from the SAGDA: “always there to help”**

All of the participants who took part in this research mentioned the high level of support which they had received from the SAGDA. A lack of support is a challenge frequently faced by caregivers of ASD children (Ludlow et al., 2012). Due to this, the high level of support provided by the SADA is especially positive to have identified. This support was noted to have begun at the onset of the application process and still continued at the time of the interviews. Participants noted being required to complete monthly reports which were to be sent to the SAGDA for approximately the first year following the reception of their autism service dogs.

“Initially there was a monthly report which I had to fill out. If there was any problem I would put it in there and they would call me and help.” (P:A)

“I have to write a monthly report and they ask you a lot of questions on it. At the end there’s a general section and you can put anything in there that you are struggling with or want to tell them.” (P:C1)

The reports requested information regarding matters of care, adjustment and behavioural information as well as provided the new owners with a space to document any problems which may have been occurring. The SAGDA would be in contact with the owner should any problems have been noted and provided assistance to them as far as possible.

Following the initial monthly reports, five of the participants noted sending yearly reports to the SAGDA and four of the participants mentioned the SAGDA having visited them in person to check up on the dog. The personal check-ups appear to only have occurred due to someone from the SAGDA having been in the area:

“They came out to check on us last December. They checked that she’s in good health and they made me go for a walk with her in the shopping mall.” (P:B1)

“They came out to us a few times to check in when they were handing over another dog. They just checked that we were all doing okay.” (P:E)

All participants noted being able to contact the SAGDA with ease at any time should they require assistance with any matter including behavioural problems, denial of premises access and training. Forms of contact utilized included telephone calls, emails and even Whatsapp messaging:

“The guide dog association has got a special person that if you have trouble like with a shop or a cinema you just call her and she will liaise with them. They are really professional with that.” (P:C2)

“If I ever have a question I just Whatsapp them and they’re always there to help me.” (P:D)

“They’re just a phone call away if ever you need them. They’re always there if I call.” (P:E)

“We had a problem with her not getting along with our other dog so we emailed the association and they actually sent a trainer out to help us.” (P:H)

It appears that all of the participants were extremely impressed by the amount of support which they had received from the SAGDA. Participants were very pleased with the individualized attention which they received and were comforted by the knowledge that, should they have a problem, the SAGDA would be available and willing to assist them.

“They are doing just an amazing, fantastic job. I am so relieved knowing that they are there for you and don’t mind being bothered with anything. They know me by name and still remember our dog’s personality so they can help us with anything.” (P:B)

It was highly positive to have identified such satisfaction with the ongoing support provided by the SAGDA. Knowing that they had professional support available at all times was likely to have been of great comfort to the caregivers, especially should they have faced challenges such as when on outings with the autism service dogs or with adjusting to life with the service dogs, as such challenges were noted internationally in the research conducted by Burgoyne et al. in 2014. Through the provision of such a high standard of personalized, ongoing support, the SAGDA portrayed a sense of

great care for their service dogs as well as the owners. This provision of support was not documented in international research.

#### **4.3.1.e) Super-ordinate Theme I: Conclusion**

In conclusion, this super-ordinate theme documented the experiences and views of the participants who took part in this research study with regard to the accessibility of autism service dogs for South African citizens. Results indicated that the participants perceived the application process to be simple and accessible, however, the waiting period was longer than predicted and far lengthier than was hoped for. In addition to this, participants did describe the maintenance requirements for their autism service dogs to have been quite costly, possibly reducing the accessibility of such dogs for families of lower income. Lastly, participants indicated great satisfaction with the support received from the SAGDA which was notable from the inception of the application process and continued still at the time of the interviews. Little information was available from international studies pertaining to matters around accessibility of autism service dogs for international populations. Due to this, comparisons were not frequently possible, however, it appears that autism service dogs are fairly easily accessible in South Africa, provided that the prospective owner is prepared for a lengthy waiting period and has sufficient funds available to maintain a large breed dog. It is evident that the SAGDA are highly efficient in their services and aim to make autism service dogs available to as many ASD children in South Africa as they are capable of. Their simple and cost free application process highlights their desire to make autism service dogs as accessible as possible. In addition to this, the ongoing support which they provide shows a high standard of commitment and care for both their service dogs which they train and the owners of these dogs.

#### **4.3.2) Super-ordinate Theme II: Adjustment to Autism Service Dogs**

This super-ordinate theme captures the participants' experiences of adjusting to life with their autism service dogs. The topics covered within this super-ordinate theme include the adjustment experiences of the ASD children as well as those of their siblings and caregivers. This super-ordinate theme is divided into three sub-ordinate themes:

- 1) Child Adjustment: "it took a while"
- 2) Sibling Adjustment: "frustrating"
- 3) Caregiver Adjustment: "big, big adjustment".

##### **4.3.2.a) Sub-ordinate Theme 1) Child Adjustment: "it took a while"**

This sub-ordinate theme captures the participants' perceptions of how the ASD child within their care adjusted to having an autism service dog. In addition to this, this sub-ordinate theme

documents whether the participants believed the ASD children to have formed an emotional bond with their dogs and if so, the length of time taken for such a bond to have formed.

The majority of participants from this research believed that their ASD children had formed an emotional bond with their autism service dogs. To be precise, participants from seven out of the eight interviews noted an emotional bond, however, the perceived strength of the bond varied. Three interviews noted a strong bond between child and dog as seen below:

“They definitely have a close connection now.” (P:D)

“He loves him, he really does.” (P:G)

“They have a good bond now.” (P:H)

These comments are not of great enthusiasm, however, they do give the impression of a close emotional bond between the ASD child and the autism service dog. Following on from these, four participants noted that their ASD children did have an emotional bond with their dogs, however, the strength of the bond was not very intense.

“They do have a bond but it seems that when he’s going through a good patch then it works and when he’s going through a bad patch he just doesn’t want to be with her.” (P:A)

“She likes having her dog and going everywhere with her but I don’t really know how close they are.” (P:B2)

“They do have a bond, I wouldn’t say extremely strong though.” (P:E)

In addition to the above comments, participants C1 and C2 noted that they did not believe their ASD child to have formed any bond at all with his autism service dog:

“We are still having trouble socializing him with the dog. It’s like she is just a piece of the furniture. We keep hoping a bond will form but I don’t really know.” (P:C1)

International research on the benefits of pet ownership for ASD sufferers, conducted by Carlisle in 2015, showed similar results with regard to bond formation between the individuals with ASD and their dogs, although the dogs in his research were not service dogs but rather pets. In the study by Carlisle (2015), it was found that 92% of participants identified either a strong or fairly strong attachment between the ASD sufferers and their dogs. The results from the presently discussed, South African study found that 87.5% of participants believed their ASD children to have either a strong or fairly strong attachment to their autism service dogs, highlighting how ASD children appear to form attachments to dogs fairly well.

While the majority of participants believed their ASD children to have bonded fairly strongly with the autism service dogs, not all agreed on this, however, the participants who noted only a weak

bond between ASD child and autism service dog did not seem perturbed by this in any way and were still very pleased with their autism service dogs. It was only participants C1 and C2 who voiced their dissatisfaction, noting how they were not very impressed by the lack of connection between their ASD child and his autism service dog.

A possible explanation which was offered by participant C2 as well as by participant E was that children on the Autism spectrum often struggle with emotions and emotional connection:

“With autistic kids, they aren’t always that affectionate.” (P:C2)

“He battles with emotions so I guess it’s understandable that he doesn’t show a very close bond.” (P:E)

This is certainly something which needs to be taken into consideration by prospective applicants. While only the above two participants noted this emotional inadequacy, three additional participants did note their ASD children to have been very slow in forming any sort of bond with their autism service dogs:

“It took a while for them to connect which I didn’t really expect, well, I never really thought about that side of things before.” (P:F)

“It took him time to warm up to her, but it takes him time to warm up to anything really.” (P:H)

The forming of a bond was something that was expected by all of the participants and, although the majority believed that their ASD child had formed some sort of an emotional bond with their dog, the lengthy time taken for such a bond to form was generally not expected. As participants C2 and E mentioned, a possible explanation for this may be the deficits in social communication and interaction which is a common challenge of children with ASD (Barlow & Durand, 2015). Deficits in social communication and interaction, which includes deficits in ability to form emotional attachments, is classed as one of the two main symptom categories for diagnosis of ASD according to the DSM-5 (American Psychiatric Association, 2013). This deficit is known to result in ASD children being slow to form bonds with other individuals (Barlow & Durand, 2015). It is possible that this may be carried over to bond formation with animals which would explain the slow bond formation between the ASD children and their autism service dogs as identified in this research study. It is important, however, to note that the participants from seven out of the eight interviews did seem understanding and accepting towards this matter, acknowledging that their ASD children are generally slow to warm up to anything new. As mentioned in a research study conducted by Martin and Farnum (2002), forming an emotional attachment with an animal, regardless of the amount of time which this may take, would likely be extremely useful for ASD children as it may assist them in learning how to form emotional attachments.



#### 4.3.2.b) Sub-ordinate Theme 2) Sibling Adjustment: “frustrating”

Six out of the eight ASD children whose caregivers took part in this study had siblings, all of whom were born prior to them receiving the autism service dogs. The caregivers of these six ASD children all made remarks towards difficulties which they experienced with the siblings of the ASD children after receiving the autism service dogs. The difficulties mentioned pertained to the siblings having desired to interact with the new autism service dog which the SAGDA had strongly recommended against due to concern that such interactions could have resulted in the autism service dogs forming a closer bond with the siblings rather than the ASD children. The act of repeatedly having to stop the siblings from interacting with the new dog resulted in a great deal of unhappiness and frustration experienced by the siblings:

“The older two kids were pretty grumpy because they had to stay away from her.” (P:A)

“My eldest son is a big dog lover and to try to stop the kids from being with her was really hard. They just want to play with her all the time but the guide dogs said that we couldn’t allow that so they were very upset.” (P:B)

“It was quite difficult at the beginning because the other kids couldn’t have much interaction with her because she mustn’t form a bond with them so that was a bit difficult at the beginning for them. They were quite unhappy about it.” (P:E)

From these quotes it is clear that the siblings struggled with the restrictions dictated by the SAGDA. Caution against sibling interaction was not unique to the SAGDA as international organizations were found to have also recommended such due to the same concerns as those of the SAGDA (Burrows et al., 2008a). A general sense of disappointment and frustration from the siblings was conveyed by the participants which raised concern over jealousy which may result between the siblings and the ASD children. Jealousy from siblings was a problem which caregivers were found to have mentioned in international research conducted by Ludlow et al. (2012). This raises the question of whether being denied interactions with the new autism service dog would perhaps result in an increased probability of jealous behaviours from the siblings.

Although this frustration could result in problems, it is understandable that the SAGDA did not recommend extensive sibling contact due to the possibility of the dogs being more inclined to form a bond with the siblings as they would be capable of showing greater affection. This was understood by the participants as can be seen in participant C1’s comment:

“We had to keep his sister away because the dog bonds much easier with her because she’s more normal.” (P:C1)

While the use of the term ‘normal’ may not be the most appropriate, this does convey a sense of understanding for the restriction of interaction, however, siblings may not be as inclined to understand the reasoning behind such restrictions.

Frequently having to reprimand the siblings was identified as challenging for the caregivers which is concerning as such actions may result in family tension. According to Ludlow et al. (2012) and Nealy et al. (2012), family arguments and tension is something which is already fairly common amongst families with ASD children. While it is uncertain whether the participants who took part in this study felt that their familial relationships were already strained, it would be greatly undesirable should the arrival of an autism service dog result in tension within the family.

In two interviews, the participants noted that, after a while, they were unable to restrain the siblings from interacting with the dog and decided it best to just leave them to interact at their will:

“We tried to stop them. We kept on telling them that they couldn’t pat her and all that but at the end of the day we just couldn’t anymore so she did bond with them as well.” (P:B1)

“It was so frustrating for her because she really wanted a dog but now she couldn’t play with it because she can’t be the one to bond with it. I really tried but it just wasn’t fair to her so I just left it.” (P:F)

It is interesting to mention that both of these participants noted either a strong or fair bond between their autism service dogs and the ASD children, even though they allowed the siblings to interact with the dog without restriction. This makes one question whether such restrictions on sibling interaction are in fact of any use or benefit to the bond formed between the ASD child and his/her autism service dog or whether such restrictions result rather in unnecessary tension between the siblings, caregivers and ASD child.

Unfortunately, unlike the international study conducted by Burrows et al. (2008b) where it was found that siblings became less embarrassed by their ASD sibling and gained a sense of pride from the autism service dogs, viewing them as a special and unique addition to their family and something worth discussing with peers, this was not identified by any of the participants from the current research.

#### **4.3.2.c) Sub-ordinate Theme 3) Caregiver Adjustment: “big, big adjustment”**

From the interviews it was clear that the majority of participants found it a little challenging to adjust their lives to incorporate the new autism service dogs. Participants from six out of the eight interviews made comments pertaining to such difficulties. One of the most frequently mentioned challenges was difficulties in carrying out daily tasks such as shopping:

“It was hard at the beginning. We had to learn to take her with us and we were rejected from shops which we had to deal with, it was quite an adjustment.” (P:B2)

“For me it wasn’t very practical taking him everywhere. Having a difficult child who hates the shops, a dog and a trolley to deal with, it was just too much. I didn’t expect that.” (P:F)

The act of shopping was noted as particularly difficult for these participants prior to owning an autism service dog and they mentioned experiencing challenges getting used to taking their dogs with them. This was a challenge also identified by participants from the international research done by Burgoyne et al. in 2014. Participant F even mentioned that she gave up trying as it was just too difficult and mentioned resorting to only taking the autism service dog with when they went to a very quiet place. This is a rather negative finding as autism service dogs are intended to make outings simpler for caregivers, however, this does not seem to have been the result for some of the participants of this study. International research, as mentioned above, did make note of similar challenges, however, the participants did not resort to restricting their outings but rather learned to adjust to taking the autism service dogs with them (Burgoyne et al., 2014). It appears that some of the participants from the current study were unable to adjust fully to taking their autism service dogs with on all outings.

The only additional negative adjustment commented upon by one participant was the adjustment to having pet hair in the house:

“I had trouble in the beginning with the pet hair which I really didn’t like.” (P:C2)

Labradors are fairly heavy shedders which would be an understandable adjustment should one not be educated on, or used to such. This was a challenge also mentioned by some of the participants from the study conducted by Burgoyne et al. (2014). It must be noted however that participants C1 and C2 were found to never have had indoor dogs prior to receiving their autism service dog and it appeared that they were not informed of the fur shedding during their application process. Participant C2 did later note that this was no longer a problem as they had adjusted to the fur shedding after a while and no longer are concerned by it. It is interesting to have found that the SAGDA did not mention shedding to the participants during the application interview as this is a feature of the dogs which should certainly be discussed with the prospective owners.

In addition to the challenges mentioned above, all of the participants indicated having themselves formed a very strong emotional bond with their autism service dogs. This was viewed as a highly positive adjustment and the connection which they felt with their dogs was cherished:

“You just can’t help it, they are such lovable creatures. We bonded very quickly.” (P:A)

“It’s just such a pleasure. I love dogs so to have such a special one and such a connection with her, it’s just such a pleasure.” (P:B1)

“Because I’m the main handler it’s only natural that we would have a good bond because I do all the feeding and that. But I love it, it’s so wonderful for me.” (P:D)

International research conducted by Burrows et al. (2008b), identified similar results with the caregivers noting having formed strong attachments to the autism service dogs, confirming that this caregiver dog bond is common. The close bonds formed between the caregivers and their autism service dogs is understandable as they are trained as the dog’s instructor and main caregiver due to the ASD child most often being unable to perform such care tasks. Due to the inherent nature of a dog to bond with its main handler, this is something which is likely unavoidable, however, it appears to have been a positive contribution for the caregivers. Research conducted by Burrows et al. (2008b) identified how the close bond formed between caregiver and autism service dog acted as a perceived support system for the caregivers, assisting in alleviating some of the stress which they experienced. In addition to this, caregivers often experience a sense of loss and grief due to the deficit in positive emotional interactions between their ASD children and themselves (Burrows et al., 2008b). Due to this, it is understandable that the caregivers would view the emotional bond between themselves and the autism service dogs to be highly positive as this bond may act as a substitute for the positive emotional interactions which they may lack with their ASD children. These results from international research may provide an explanation for the reactions from the participants of this research with regard to their joy at the bond which they had formed with the autism service dogs.

The adjustments required by the caregivers to incorporate an autism service dog were noted as both challenging and rewarding. While there were initial difficulties, the participants adjusted fairly well and noted having fallen into a system which works for their own unique needs:

“It took a while but we figured it out. We now know what to do and how to do it so it’s all good.” (P:B2)

“I did find it hard at times but now I can’t ever understand why. It’s just like second nature now.” (P:G)

It is unfortunate that the caregivers were perhaps ill informed of the lifestyle adjustments which would be required of them. As mentioned by Burgoyne et al. (2014), perhaps the prospective owners should have been better informed of the lifestyle adjustments required prior to applying for the autism service dogs as this would likely reduce the distress experienced by some of the participants when faced with such lifestyle adjustments. Fortunately, it appears that the challenges experienced by the participants in the early days with their autism service dogs had mostly been overcome by the time of the interviews through the development of strategies for the inclusion of the dog to suit their and

their ASD child's needs and capabilities. These lifestyle adjustments do not appear to be viewed in a negative way with some even being viewed rather as highly positive.

#### **4.3.2.d) Super-ordinate Theme II: Conclusion**

In conclusion, this super-ordinate theme documented the experiences of the participants who took part in this research study with regard to adjusting life to incorporate an autism service dog. Included was adjustment experiences of the ASD children, their siblings and their caregivers as perceived by the participants. It was identified that the ASD children were not greatly affected by the arrival of the autism service dogs, however, they did appear to have taken a fair amount of time to adjust to and form a bond with their autism service dog. Only three of the ASD children were perceived to have formed a close bond with their autism service dog while the remaining appeared to have formed a fair bond, with one perceived to have not formed any bond with his autism service dog. Challenges were noted to have occurred with the siblings of the ASD children due to them desiring to interact with the autism service dogs against the SAGDA's recommendations. This led to a great deal of frustration for both the siblings and the caregivers. Lastly, the participants noted some challenges with regard to adjusting their lives to now include a large dog on outings in particular, however, they appeared to have found solutions for these challenges and to have formed a close bond with their autism service dogs which was greatly cherished. A number of these findings were similar to those of international studies including the ASD children being slow to bond with their autism service dogs, challenges with sibling interactions, difficulties with adjusting to outings with the autism service dogs as well as the caregivers forming close bonds with the autism service dogs.

#### **4.3.3) Super-ordinate Theme III: Participant's Use of Their Autism Service Dog**

This super-ordinate theme captures the ways in which participants made use of their autism service dogs. Participants noted a number of ways in which they utilized their autism service dogs for their ASD children, perceiving the service dogs to have been of great value to both their ASD children's lives and their own lives. This super-ordinate theme has been divided into five sub-ordinate themes:

- 1) School: "benefit to all the kids"
- 2) Outings: "comes with us everywhere"
- 3) Therapy: "an extra tool"
- 4) Emotional Support: "a constant companion"
- 5) Educational Tool: "learned a lot".

#### 4.3.3.a) Sub-ordinate Theme 1) School: “benefit to all the kids”

From the eight interviews conducted for this research, only three of the ASD children attended school. The remaining five children were home educated using a variety of different methods. Two of the home educated children followed a curriculum provided by a school and these children attended the school in person for brief periods, approximately once a week, for assessments by educators at the school. The remaining three children were fully home educated. Of the three children who attended school, two were noted by their caregivers as having attended with their autism service dogs while the caregiver of the third child noted that she used to send their autism service dog to school with the ASD child, however, it became unsafe to do so due to there being additional, untrained dogs at the school who were kept as protection for the school property and were not always restrained. This resulted in the participant fearing for the safety of her child’s autism service dog which made her decide to cease sending the service dog to school.

Participant A and participant D were the two participants who sent their ASD children to school accompanied by their autism service dogs on a full time basis:

“She goes to school with him every day and even knows the school routine now. She knows all the things that he has to do before he will get into the car and after he’s in then she will jump in after, almost like she is making sure that he is safe and ready.” (P:A)

“She goes everywhere with him so naturally she would go to school as well.” (P:D)

Participant A mentioned how her child’s autism service dog was well in tune with her son and had quickly learned the routine which her child insisted upon performing prior to travelling to school. This was of comfort to her and, in her opinion, also of comfort to her child.

Participant D noted that when she had approached the principal of her ASD child’s school to request permission for the autism service dog to attend with her child, she encountered no problems with the principal who was willing to allow the dog to attend even though she was the first service dog to attend the school:

“The principal was quite open to the idea actually. Obviously she was the first service dog that they had ever encountered in school but they were still very willing for her to join.” (P:D)

Participant A however experienced some hesitation from her ASD child’s school. The principal at this school was not willing to allow the service dog to attend at first, however, with a great deal of persuasion and assistance from the SAGDA, the school reluctantly allowed it:

“They were not keen at all to start with. In fact they said no but I kept on trying and eventually they agreed but it took them time to come around to her. The guide dogs really helped though.” (P:A)

Participant A did not divulge the reasons for why the principal was reluctant to allow the autism service dog to attend school, stating that she could not remember the exact reasons provided by the principal. Apprehension towards the inclusion of a service dog into a classroom is understandable as there is a great deal to consider prior to agreeing to such (Harris & Sholtis, 2016). It was surprising to have found that participant D encountered no hesitation at all when requesting for her ASD child's autism service dog to accompany him to school. This is slightly concerning as incorporating a service dog into a classroom is no easy feat (Harris & Sholtis, 2016). Consideration should have been given to the maintenance of the dog while in the classroom, the teacher's perspective on having the service dog in the class as well as the possible reactions of the remaining children from the class (Harris & Sholtis, 2016). These are possible reasons for the reluctance experienced by participant A as it would be hoped that the principal would have taken into account the seriousness of incorporating the autism service dog into the school environment, however, it is concerning that the principal from the school of participant D's ASD child did not give consideration to this.

Both participants noted that the SAGDA had assisted them in incorporating their autism service dogs into the school environment and provided guidelines to the teachers as well as training to the dog on the school premises:

"Guide dogs went with her to school and trained her in the classroom. They also helped with the teachers and the rest of the staff." (P:A)

"The association, the guide dog association, were involved and they told all the kids at the school about her and what she is there for and that she is just like another child at the school." (P:D)

This was an encouraging finding as teachers should be knowledgeable on how to manage the autism service dogs in the classroom (Harris & Sholtis, 2016). Additionally, training the autism service dogs while at the school is certainly a sensible idea as the service dogs should be trained to know how to manage the school environment as it will be drastically different from their usual home environment.

Both participants noted that after a while of the autism service dogs attending school, the teachers became very fond of the dogs and encouraged their attendance, even remarking that the service dogs were of benefit to more than just their own ASD children:

"They love her now. They always tell me that she is a benefit to all the kids in the class now. The teacher even asks that I please bring her to school because she helps to calm the other kids down." (P:A)

"The teacher thinks she's just great. It's so new to the school but such an exciting thing for them. I just know that everyone loves her." (P:D)

The identification of teacher satisfaction after a length of time with the autism service dogs attending school is promising as it would infer that negative challenges were either not encountered or were very few and manageable.

According to these participants, having the autism service dog at school had been beneficial to their children with participant A noting improvements in her child's emotional state and concentration while at school and participant D noting improvements in her child's confidence while at school:

"He doesn't mind going to school now that his dog goes with him and he doesn't perform at school anymore. I think that having his dog with him has really calmed his fear around school. There are no more tantrums or anything like that, he's just much calmer." (P:A)

"His teacher says that he is concentrating and co-operating a lot better in class now that he has his dog with him." (P:A)

"His self-confidence at school has definitely improved. You can actually see such a big difference." (P:D)

Internationally, a far greater number of benefits have been identified, however, improved emotional well-being and anxiety reduction are among the results from international research (Harris & Sholtis, 2016). Interestingly, improvements in confidence were not mentioned explicitly in international research, however, this is certainly a positive finding. Unfortunately with only two autism service dogs attending school on a full-time basis, improvements in confidence could not be further researched in this study.

Participant D also mentioned an experience which occurred at school that she found to be extremely special:

"When they introduced his dog to everyone at school in hall one day he was standing with her and just started to whisper her name over and over again. It was just so sweet because he never spoke at school before that." (P:D)

This experience was mentioned with great emotion which conveyed a sense intense happiness resulting from the occurrence. According to participant D, her child seldom spoke at school prior to the arrival of his autism service dog but now was far more vocal in his classes. Increased speech while at school was a benefit found internationally as well (Harris & Sholtis, 2016).

Unfortunately, the participants from this research study could not provide details on the ways in which the autism service dogs were utilized in the classroom so no comparisons could be made with international research. This is a pity as it would have been interesting to identify whether the autism service dogs are being utilized to the same extent as those internationally or if they are not as



involved in classroom activities. This would have been interesting to identify as the benefits noted by the participants from this study were far fewer than those of international studies, perhaps due to less involvement of the autism service dogs by the teachers. It was also unclear as to whether the teachers in South Africa were knowledgeable of the vast possible uses for the autism service dogs within the class.

While both participants were pleased with the service dogs attending school with their ASD children, both noted that they had encountered some difficulties with a few of the other children in the school being afraid of dogs:

“A lot of the other kids are still a bit scared of her.” (P:A)

“There is one girl in his class that is just so, so scared of dogs but she just keeps away.” (P:D)

This is of concern as it would likely be highly distressing to a child who is afraid of dogs to have to be in close proximity to such a large dog while at school. Fear of dogs is a challenge often encountered within South Africa, likely due to the past uses of dogs most especially during the apartheid years where dogs were used in cruel methods of torment towards apartheid activists (Mjamba, 2015). Stories of such horrific events have been passed down through generations, resulting in many South Africans still fearing dogs, most especially large breed dogs, due to the vicious nature of such dogs as depicted in the historical stories (Mjamba, 2015). Unfortunately, the dogs described in these stories are similar in appearance to the dogs used for autism service dogs and, while the dogs used by police during the apartheid years were trained to be vicious compared to the autism service dogs who are trained to be the exact opposite of such, appearances are likely to be challenging.

Understandably the participants did not see any problem with the few children who were afraid of the autism service dogs as they were so pleased to have their ASD children happier at school, however, it would perhaps be rather difficult for the parents of children who were afraid of the dogs. This is something which the teachers should have taken into consideration prior to allowing the autism service dog to attend school with its ASD child (Harris & Sholtis, 2016). It is fortunate that no additional challenges were noted, however, careful consideration should be given to possible obstacles such as allergies and fear as well as how the autism service dogs will be managed in the classroom and at break time (Harris & Sholtis, 2016).

Participants B1, B2 and C1 and C2 noted that their ASD children were home educated with the aid of a curriculum provided by a school. The ASD children of these participants both attended the school on occasion to undergo assessments and were accompanied by their autism service dogs. Participants B1 and B2 did not provide extensive detail on the topic, only mentioning that the autism service dog was well received by the teacher at the school:

“She goes once a week and the teacher just loves her.” (P:B1)

Participants B1 and B2 were uncertain of the procedures followed at the school as they did not attend with their child.

Participants C1 and C2 noted a great amount of enthusiasm from their child's school who were very pleased to incorporate the service dog into the child's lessons:

"They're now very excited because they are now trying to use her in his training program. They are using her to help teach instructions and that sort of thing. The teachers just love her." (P:C2)

According to these participants, the teachers at their ASD child's school were making an effort to incorporate their service dog as far as possible. Unfortunately, no exact details were provided with which to compare to international uses for autism service dogs in the classroom.

Unfortunately it was found that participants C1 and C2 did not believe there to have been any benefits for their ASD child from the incorporation of their autism service dog into his school attendance as it was believed that their ASD child had not formed a bond of any sort with the autism service dog:

"They are using her a lot but I don't think it has made any difference. He hasn't really connected with her so I suppose it's not really a big thing for him." (P:C1)

Both of these ASD children attended special, individual classes at their schools and had no further interaction with the other children at the school. Due to this, the autism service dogs were not involved in the activities of the other children so there were no reports of further benefits or consequences of their attendance for the other children at the schools. It appears as though the teachers from these schools were very eager to allow the autism service dogs to attend with the ASD children, making one wonder whether they had given due consideration to any possible obstacles which may occur or what would be required for them to attend the school. While careful consideration should be given to this, the teachers at these schools perhaps believed that since the ASD children only attend the schools for very short periods of time and do not interact very much with the other children at the school, managing the autism service dogs during short visits with the aid of the ASD children's tutors would likely not have been too challenging.

From the above mentioned information, no clear conclusions can be drawn with regard to the use, value or suitability of autism service dogs in schools within South Africa. Both participants who sent their ASD children to school on a permanent basis believed that the attendance of their service dogs was of value to their ASD children, however, possible consequences for other children in the class should perhaps be considered. The participants who sent their ASD children to private sessions at a school on an occasional basis did not comment on any clear benefits, only being able to note teacher enthusiasm and excitement. While such enthusiasm is positive, it is the wellbeing and benefit to the ASD child which should be the main priority. In addition to this, possible negative

consequences which may result from the school attendance of the autism service dogs should certainly be taken into consideration by both the caregivers of the ASD children and the employees of the schools.

#### **4.3.3.b) Sub-ordinate Theme 2) Outings: “comes with us everywhere”**

The topic of outings was mentioned in all of the interviews conducted for this research. It was noted in five out of the eight interviews that the autism service dogs accompanied the ASD children on all outings. From the remaining three interviews it was found that the participants only went out with their ASD children and autism service dogs very rarely due to difficulties in managing both their ASD children and the autism service dogs.

Of the five interviews where it was noted that the ASD child and autism service dog always travelled together, participants expressed general pleasure from such outings. Places regularly mentioned for outings with both ASD child and autism service dog included shopping trips, beach visits, restaurants, therapy sessions, doctor or specialist visits, church and holidays:

“She goes with everywhere we go. She comes with on holiday, goes with for meals out, to shops, everything.” (P:B1)

“She goes everywhere with him. They are never out and apart.” (P:E)

“We go to the shops and the beach where they love to throw a ball around. She also comes with to the doctor and to the dentist.” (P:G)

Internationally, autism service dogs are legally allowed access to all premises (Burrows et al., 2008a). In South Africa, according to the SAGDA, the same applies as their autism service dogs are trained to accompany their owners anywhere they may go. It was positive to have found that a number of the participants did make use of their right to take the autism service dogs with them on outings to a variety of premises.

The participants mentioned above noted some very positive benefits to having their autism service dog accompany their ASD child:

“In a way it makes it easier for him. I mean, for the first time he tolerated going to Spec Savers to have his eyes tested because the dog went with.” (P:A)

“For the first time we can actually walk around town, we don’t run everywhere now and I don’t have to worry about him running off all the time because he wants to stay with his dog.” (P:A)

“She’s a bit happier when we go shopping all together now, probably because she’s got something to distract her and she loves the attention from other people.” (P:B2)

“Going to the doctor, he had to have blood drawn and having his dog there really helped.”  
(P:G)

Improvements such as those mentioned above are highly positive and participants discussed these improvements with great enthusiasm and satisfaction. Research conducted internationally did not provide explicit details regarding benefits experienced while on outings with the ASD children and their autism service dogs. Due to this, comparisons are not possible, however, research conducted by Burrows et al. (2008b) did identify how autism service dogs appear to assist with gait regulation which could be a possible explanation for the quote extracted from participant A’s interview. In addition to this, participant A and participant G identified how their ASD children were more comfortable with necessary medically related experiences when accompanied by their autism service dogs. This may be due to the service dogs acting as familiar support systems for the ASD children or by assisting in reducing anxiety felt by the children. Both positive effects have been identified internationally (Davis et al., 2004; Burrows et al. 2008b; Viau et al., 2010; Burgoyne et al., 2014), therefore, it is possible that similar effects may have occurred for the ASD children within South Africa. Lastly, all of the participants quoted above appear to infer a sense of improved compliance from their ASD children with regard to outings. Similar results were identified in research conducted internationally by Burrows et al. (2008b). This is highly positive as greater compliance with outings was found to have been extremely beneficial to the wellbeing of the caregivers researched internationally (Burrows et al., 2008b). It is hoped that such benefits would also have been experienced by the South African caregivers.

While the benefits mentioned above are highly positive to have identified, it must be noted that some problems were also uncovered. Two main challenges were identified, namely: additional time and patience required when taking both the ASD child and autism service dog with on outings and being turned away from some businesses on a regular basis. These problems were also identified in the remaining three interviews and were the reasons for these participants choosing to not include their ASD children’s autism service dogs in every outing.

From the analysis of the interview transcriptions, it was identified that five out of the eight interviews noted problems with regard to the need for additional time and patience when taking both child and dog on outings. This was mentioned to have been a problem predominantly in the first few months after receiving the autism service dog:

“It took so much effort and time to get them all ready and in the car and then out the car and then to have to still trek around the shop, it was just too much at the beginning. We are a bit better at it now though, but it took time.” (P:D)

Other participants noted that they still found outings to be far more time consuming and, on occasion, a greater challenge than before:

“It does take a lot longer to get shopping done which can be difficult if you have a child that doesn’t like shopping.” (P:G)

“If we go out together then we have to have plenty of time and our other daughter has to come with as well because it is too much for us to handle on our own.” (P:C1)

This would, understandably, have been difficult for caregivers, especially if they were in a hurry. The additional time and effort required could result in a great deal of frustration for the caregivers which stands the risk of, in turn, affecting the ASD children negatively should they be receptive towards such tension, resulting in the possibility of negative behavioural problems from the ASD children. Caregivers of ASD children have been found to frequently struggle with behavioural challenges when on outings with their ASD children (Burrows et al., 2008b; Ludlow et al., 2012; Nealy et al., 2012). As this is a problem already prominent with ASD children, it would be hoped that the autism service dogs would assist with behavioural problems while on outings, however, this appears to not have been the result. International research conducted by Burgoyne et al. (2014) also identified challenges with including the autism service dogs in outings. Should one’s ASD child find shopping challenging, this would likely be difficult enough for the caregiver, however, the task of having to manage such an ASD child as well as a large dog while also attempting to, for example, conduct shopping, would be, understandably, exceedingly difficult, provided that the autism service dog did not assist in making the ASD child more accepting of outings. Due to this possibility, caregiver complaints on the topic are perfectly comprehensible.

With regard to the problem of being denied access to businesses when accompanied by their autism service dogs, all participants were found to have mentioned this. These experiences were noted as frustrating and disheartening for the caregivers, especially in the early days of owning their autism service dogs:

“We got turned away all the time at the beginning which was so annoying. I really got angry at first.” (P:A)

“You’d be surprised how many times we have been turned away from places. It took some thick skinning at the beginning.” (P:B2)

Interestingly, this appears to be a problem experienced only in South Africa as no international studies mentioned challenges with denial of access. This is certainly a problem which needs to be rectified as, just as is the case internationally, autism service dogs in South Africa are legally allowed access to all premises with their owners. It appears that businesses in South Africa need to be made aware of this.

Although this was found to be highly frustrating, participants seem to have become used to this problem, dealing with it by only going to businesses where they knew they would be permitted access:

“We just stick to the same places now so we never have any problems. We just can’t deal with being turned away all the time.” (P:D)

“We only ever go to our local shop because they are used to us there now. It’s just easier that way.” (P:E)

While it is good that these caregivers had found a way to cope with the situation of being denied access to businesses, it is unacceptable that they were, essentially, forced to resort to only visiting a small number of businesses where they were known by the employees. This is unfairly restrictive of their lifestyles and these participants should not have felt the need to resort to such measures as they are legally allowed access to any premises within South Africa accompanied by their SAGDA trained service dog.

As frustrating as this was to the caregivers, the ASD children were mentioned to also have suffered from such events which are said to have caused a level of distress for the children:

“Being stopped by the guards or shop owners and having to explain the whole thing about how she is a guide dog and often having to go to centre management takes time and causes anxiety for him which often can bring on a meltdown.” (P:G)

“He gets really anxious when they stop us and thinks that they are going to take his dog away which is really stressful for him, so I don’t like to take them out in case this happens and he gets really upset.” (P:H)

The distress caused to the ASD children from being denied access to premises because of their autism service dogs is of great concern for the wellbeing of both the child and his/her caregiver. From the quotes above, it is clear that the ASD children experienced increased stress and anxiety due to being denied access to various premises. ASD children are known to often experience greater anxiety than typically developing peers (van Steensel et al., 2011). Due to this, the result of increased anxiety provoked by the denial of access to a premises is likely to be extremely challenging for the ASD child as well as their caregiver and is certainly an undesirable finding.

Being denied access is a violation of their rights, with participants clearly stating the result is undue psychological distress for the ASD children. Watching their child suffer in such a way would likely have resulted in caregiver distress as well. As participant H noted, she very seldom ventured out with her child and autism service dog due to the distress which frequently resulted. This is highly

unfortunate as owning an autism service dog should result in greater freedom of movement rather than greater restrictions.

While many participants noted that they enjoyed taking their ASD children out with their autism service dogs and having experienced some highly positive benefits from doing so, many participants also noted some challenges which have resulted in them resorting to restrictions in outings and activities. These challenges have resulted in the participants from three interviews having chosen to rather refrain from taking their ASD children out with their autism service dogs as the challenges outweigh the benefits in their opinions. This is a concern as, according to the SAGDA, it is hoped that autism service dogs would provide greater ease and possibilities for outings for caregivers of ASD children, however, this may not be the actual result.

Lastly, it was surprising to have found that none of the participants mentioned using their autism service dogs as a means to prevent their child from bolting or to ensure greater safety of their ASD children. Autism service dogs supplied internationally are trained primarily as safety devices for their ASD children by assisting in the prevention of bolting behaviour (Burrows et al., 2008a). According to the SAGDA, the same applies for the dogs which they train as they noted the primary purpose of their autism service dogs is to enhance safety through the prevention of bolting behaviour while out. This was further verified by participant A:

“They said to me that the only purpose of a support dog for autistic children is that the child can learn to walk holding on to the dog and not the mother and that the child then cannot run away. That was their pure and only intention for the dogs. The rest is just a bonus basically.” (P:A)

While this may have been the intention of the SAGDA, none of the participants appeared to have made use of their autism service dogs for this task. A possible explanation for this is the design of the service jacket which the South African autism service dogs wear. Internationally, autism service dogs are attached to their ASD children via a leash which is attached to the child and the autism service dog’s service jacket (Burgoyne et al., 2014). In addition to this, the caregiver will hold a second leash which is also attached to the autism service dog’s service jacket (Burgoyne et al., 2014). In South Africa, the autism service dogs are not attached to the ASD child, instead, the autism service dog’s service vest has two leashes, one for the ASD child to hold and the other for the caregiver to hold. As mentioned by the participants, this is perhaps not the most suitable arrangement as the ASD children were in control of whether they held on to the leash or not. Some of the participants also mentioned that their ASD children simply did not want to hold on to the harness or frequently dropped the harness:

“We try to get her to hold on but she doesn’t always want to or she will drop it sometimes.” (P:B2)

“He can’t really hold on to the harness because he just drops it.” (P:C1)

“He does hold on sometimes but I have to keep trying to remind him and he does drop it a lot.” (P:E)

Due to this, the autism service dogs were not actually able to be used as security devices as it was the decision of the ASD child to remain holding on to the lead. This would not prevent the ASD child from bolting should they wish to do so. This is unfortunate and makes one wonder whether the harness worn by the autism service dogs in South Africa is suitable for the planned purpose of the dogs or whether the SAGDA should consider adjusting their harness design to rather match those of international autism service dogs.

#### **4.3.3.c) Sub-ordinate Theme 3) Therapy: “like an extra tool”**

Participants from five out of the eight interviews conducted for this research noted that they sent their ASD children for regular therapy sessions. Forms of therapy included occupational therapy and speech therapy in particular with one participant noting that her ASD child also attended social skills classes. The remaining participants chose to rather not send their ASD children to such sessions due to various personal reasons. Of the participants who did send their ASD children to therapy, all of them noted that their ASD child’s autism service dog accompanied them to the therapy sessions.

Of the participants who did send their ASD children and autism service dogs to therapy sessions, two participants were unable to comment on the use of the autism service dogs during therapy as they did not attend with their ASD child:

“She always goes with to OT and to speech therapy but I don’t go with so I am not sure what actually happens there.” (P:A)

“He has therapy at school so his dog is always with and I think they use her in therapy but I can’t really say how.” (P:D)

Of the remaining three, all sent their ASD children to occupational therapy sessions and noted that the autism service dogs were used by the occupational therapists for sensory, fine motor and gross motor skill education:

“The OT used her for learning about sensory things through touch and then also like throwing the ball and that sort of thing. She’s actually been a big help and his therapist loves her.” (P:E)

“They throw the ball and then groom her and pat her and then like tie ribbons on her. She’s like an extra tool in therapy that is familiar and safe so it’s really nice for him.” (P:H)

The incorporation of an animal into therapy sessions is referred to as an Animal Assisted Intervention (AAI) (Jorgenson, 2006). AAI’s conducted internationally have been found to result in a



variety of positive outcomes for children with ASD (O’ Haire, 2012). Ways in which occupational therapist may make use of animals in their sessions include in interactive games, in soft-touch activities, in sensory-motor activities and to assist in fine and gross motor skill enhancement (O’Haire et al., 2015a). It is encouraging to have found that, as seen in the quotes above, the occupational therapists who assisted the ASD children from this study appear to have made use of the autism service dogs in the same ways as international therapists do.

The participants noted that the occupational therapists were extremely willing to incorporate the autism service dogs within therapy sessions and were very fond of the dogs. As was found internationally, benefits for the ASD children were noted by the participants. Unfortunately, upon querying this further participants were unable to identify exactly how the autism service dogs had benefitted their ASD children in their occupational therapy sessions, however, it was believed that because their dogs were familiar to the ASD children, it made them more willing to participate in activities as they were perceived to have felt more confident around their dog which, in turn, may have resulted in the ASD children benefitting to a greater extent from the occupational therapy sessions than prior to the attendance of the dogs, as they would perhaps have participated more in the activities. While this would not be the case with most AAI’s noted internationally, as in these situations the animals used are not always familiar to the ASD children, it is a highly promising finding. The familiarity of the autism service dogs to the ASD children may have also assisted in building rapport between the ASD child and therapist as the incorporation of animals into therapy sessions for ASD children is known to assist with rapport building between ASD child and therapist internationally (O’Haire et al., 2015a). As the autism service dogs were so familiar to the ASD children and made them appear to be more confident in the sessions, this may have been even more likely to assist in rapport formation than the unfamiliar animals used in AAI’s internationally. A strong rapport between ASD child and therapist would be a highly beneficial outcome as this would likely result in greater benefit from the therapy sessions for the ASD children.

With regard to speech therapy, participants B1 and B2 noted that their autism service dog had been of particular use for their ASD child in her speech therapy sessions:

“What we’ve done is in speech therapy, in speaking she often finds it difficult initiating a sound and turn taking so what we do is with her dog there we ask her to speak to the dog and then the dog to speak so they take turns and she has to make proper sounds then we have taught the dog to respond. It’s really helped with her speaking and turn taking skills and she loves hearing her dog talk back to her.” (P:B1)

This innovative use of the autism service dog was said to have been initiated by both the caregivers and the speech therapist. The results had been highly satisfactory with the ASD child being

more willing to attempt to form new sounds which had, in turn, lead to great improvements in her speech abilities:

“She loves to interact with her dog so is far keener to actually try to make sounds just to hear her talk back. She’s come a long way with her speech since we started with that.” (P:B2)

Internationally, research has indicated that the use of AAI’s for ASD children has been highly beneficial for speech improvements with benefits seen in communication ability and desire as well as improved vocabulary and frequency of language use (O’Haire, 2012; Fung & Leung, 2014; O’Haire et al., 2015a). While participants from only one interview mentioned improved speech through the use of the autism service dog in therapy, this is still a promising result which should perhaps be considered by a greater number of autism service dog owners in South Africa.

Participant H noted that her ASD child attended social skills educational sessions with his autism service dog. The autism service dog was found to have been a great asset to the therapist of these sessions who made use of the dog as a tool to initiate socialization between the children:

“At therapy we use her as the tool to help a group of kids to socialize and that really helps because they all like the dog so they have something that is like the centre of attention that they all want to be involved with so they have something that they can communicate about. The therapist loves it because they all want to talk about the dog so she gets them to try to each talk and, ja, it’s really fun for them all.” (P:H)

By incorporating the autism service dog into the socialization classes, the children all had something in common which would likely have made communication far more probable and easier for the children. International research conducted by Davis et al. in 2004 confirmed this as their study identified how autism service dogs acted as a bridge between ASD children and their typically developing peers by providing a common topic of interest which resulted in greater communication and desire for conversation. In addition to this, international research conducted by Burgoyne et al. in 2014 found very similar results where the autism service dogs from their study were perceived to have assisted in the facilitation of social communication for the ASD children. It is encouraging to have found that the results regarding the matter of communication improvements from international studies have also been identified in the present study. It is understandable that the therapist identified in this study was mentioned to have enjoyed having the autism service dog attend sessions as it would likely have made the class far easier to facilitate due to the increased desire of the ASD children to communicate and interact when around the dog, as found internationally and locally. Such improvements in social communication are encouraging to have identified due to this being one of the core challenges faced by ASD sufferers (Carlisle, 2015).

The ways in which autism service dogs were found to have been utilized in therapy sessions for ASD children in South Africa are highly impressive. It is encouraging to have found that therapists were so willing to incorporate the autism service dogs into their sessions and that they made use of the dogs in largely the same ways as by therapists internationally. It was just as encouraging to have found that the positive results identified internationally from such incorporation had also been identified for the ASD children from this study. No negative experiences or challenges were noted by participants from the incorporation of their autism service dogs within therapy sessions with only positive experiences mentioned. These participants all felt that the autism service dogs were an asset to therapy sessions and noted that all therapists were believed to have felt the same way.

#### **4.3.3.d) Sub-ordinate Theme 4) Emotional Support: “a constant companion”**

The participants from seven out of the eight interviews indicated that the autism service dogs acted as companions for their ASD children. This was noted with great pleasure by all participants who mentioned having hoped for such an outcome prior to receiving the autism service dog:

“They really just hang out together, they are companions. She follows him around and they sit outside together. I so badly hoped that they would be like that so I am very pleased.” (P:A)

“They are just like friends who are always together. I love that because he can’t make friends like normal kids so now I feel better that he has a friend and I think he does as well.” (P:F)

This companionship was understandably a very positive outcome for the caregivers due to the difficulties they mentioned their ASD children having had with regard to making friends. Knowing that their children had a companion by their side that would be loyal to their ASD children must have been of great comfort to them. Although not much has been said on this topic in international research, one study did note caregivers’ perceptions of the autism service dog acting as a friend for the ASD children (Burgoyne et al., 2014). What was interesting here is that the participants who believed the autism service dogs to act as companions for their ASD children did not link this companionship to their perception of the strength of the bond formed between the dogs and their ASD children. Although this was not given consideration by the participants, it was found that participants C1 and C2 who did not believe their ASD child to have formed a bond with his autism service dog were the only participants who did not believe that their autism service dog acted as a companion for their ASD child. This appears to imply, and understandably so, that a bond between autism service dog and ASD child is required in order for a sense of companionship to be seen, however, the strength of the bond may be not overly important.

In addition to this, all of the participants who noted such companionship further noted that the autism service dogs acted as emotional supports for the ASD children:

“She checks in on him regularly and just seems to know when he’s feeling down. She will sit with him and he will stroke her and that always seems to make him feel better and calm him down.” (P:D)

“They work together emotionally so much. She always there like a constant companion and helps if she ever has a wobble. She’s really more of an emotional support than a service dog because it’s not like she turns on light or anything like that, it’s more of a relationship and support that she gives.” (P:B1)

This is a very interesting comment from participant B1 who mentioned that it would perhaps be more appropriate to think of an autism service dog as an emotional support dog rather than a service dog due to the acts which they perform. Service dogs generally perform tasks such as turning on lights or notifying their owners of obstacles in the individual’s path, however, these are not acts which an autism service dog performs. Participant E agreed with this when she made the comment:

“She really is an emotional support animal. Ultimately she isn’t trained like a service dog would be trained so I would say she is more of an emotional support dog than anything else.” (P:E)

Unfortunately, in South Africa, there was no official recognition for emotional support animals at the time of this research which means that such animals would not be granted admittance to all businesses as service dogs would be. This is perhaps the reason why the SAGDA had chosen to list them as service dogs, however, it is important that prospective owners understand the exact duties which they are trained to perform as it may be misunderstood that autism service dogs are not trained to perform the acts which other service dogs are capable of. That being said, these participants were not at all dissatisfied by this but were rather pleased for their children to have had an emotional support other than themselves.

Three participants further noted that their autism service dogs assisted their ASD children when having a meltdown. Participant G noted that her child’s autism service dog would go to her child when he was having a meltdown and start to lick the child which rapidly calmed him down:

“If he starts to get upset or crying, like the start of a meltdown, then he will come over and start licking him which really calms him down. His mood will go from like 100 to nothing in a few minutes which is fantastic for me. Naturally if he is screaming though then he will just run away.” (P:G)

Participants F and H both noted that their autism service dogs assisted their children during mild meltdowns, however, they fetched their dog and encouraged it to stay with the child rather than the dog willingly going to the child:

“When I see that he’s starting to have a meltdown then I try to get her to go over and be with him but if he’s really lashing out then I couldn’t make her stay with him in that state, but it does help if he’s just having a mild meltdown.” (P:F)

“If he’s upset then I will fetch her and put them together and he will pat her or she will do deep pressure for him which does help him.” (P:H)

It is positive to have found that the autism service dogs appear to have been able to help with meltdowns. International research has confirmed this ability of autism service dogs, noting increased calmness, lower frequency of meltdowns as well as assisting in rapidly calming meltdowns should they occur (Burrows et al., 2008b; Viau et al., 2010). Research conducted by Burrows et al. (2008b) identified a similar response from the autism service dogs as participant G mentioned where the autism service dogs would attempt to interrupt the ASD child during a meltdown in order to shorten its duration. This was documented as beneficial by Burrows et al. (2008b) as was the case with the participant from this study.

Interestingly, it appears that the autism service dogs did not regularly appear to voluntarily go to their ASD child when having a meltdown. This is understandable, in a way, as it would likely not be a natural response for a dog to go to a child who would be lashing out or screaming, however, it would be expected that these dogs would be trained to tolerate such behaviour. Autism service dogs supplied internationally are trained to know how to respond to the behaviours often exhibited by ASD children when having a meltdown, however, it is not clear as to whether they are trained to go to and stay by the ASD child in such situations or if they are rather trained to retreat under such conditions (Burrows et al., 2008a). The SAGDA did note that they train the autism service dogs to tolerate fairly harsh behaviour often expected from an ASD child, however, they did not mention training the dogs to stay by the side of the ASD child should he/she become violent during a meltdown. This is understandable as such training would perhaps be unethical due to the harm which may result to the autism service dog from violent acts performed during a meltdown. In addition to this, it must be remembered that an autism service dog is still a dog and therefore may retaliate against the ASD child should he/she hurt the dog and no amount of training provided to the autism service dogs is likely to change this. This would perhaps also place the ASD child in danger which would not be acceptable.

Participants C1 and C2 did not believe that their autism service dog acted as an emotional support for their ASD child, however, as mentioned previously, they did note that their ASD child had yet to form a bond with his autism service dog. Without having formed an emotional bond it is understandable that the autism service dog would not have been perceived to have functioned as an emotional support for the ASD child.

It was encouraging to find that the majority of participants believed that their autism service dogs were a valuable emotional support for their ASD children and, in some cases, a useful tool to

assist the calming of mild meltdowns. This was a valuable use of the autism service dogs which had resulted in benefits for the ASD children as well as leading to the caregivers feeling a sense of happiness from knowing that they were no longer the only form of emotional support for their ASD children.

#### **4.3.3.e) Sub-ordinate Theme 5) Educational Tool: “learned a lot”**

The use of autism service dogs by the participants as educational tools for their ASD children was identified in five of the eight interviews. These participants had taken the initiative to develop strategies for the incorporation of their autism service dogs into their attempts at teaching their ASD children a variety of skills. The mentioned skills included teaching the ASD children to be gentle, to follow instructions, as well as teaching the ASD children responsibility.

With regard to teaching the ASD children to be gentler in their actions, participants noted that they would encourage their children to stroke and pat their autism service dogs gently and with care which had resulted in positive outcomes:

“He was always so rough with everything so when we got his dog I thought that I had to make him be gentler with her so I started to show him gentle strokes and now he is much softer with her and everything really.” (P:A)

“We’ve taught her to be gentle through the dog and I’ve seen her with other people where she used to be a lot rougher she’s much gentler now with them so I think that’s helped her.” (P:B2)

By teaching and encouraging the ASD children to stroke their autism service dogs gently, it was found that the ASD children gained greater motor control and function which they then transferred to other areas of their lives. Internationally, autism service dogs have been used in a similar way to encourage the improvement of motor function through teaching gentle stroking motions (Burrows et al., 2008b). It is encouraging to have found that the South African caregivers also made use of the autism service dogs in this manner.

With regard to following instructions, participants from all five interviews mentioned utilizing their autism service dogs for teaching this skill. This was done mainly through providing the ASD children with a list of instructions for feeding, grooming or fetching something for the autism service dogs and then encouraging them to follow the instructions in the order given. The autism service dogs provided the children with motivation to follow the instructions given. Results from this were also positive:

“I ask him to fetch her brush and then to sit on the pillow and gently brush her. He was never able to follow more than one instruction at a time but he is definitely improving now. I think that it has given him more motivation to try.” (P:A)

“He was terrible at following instructions. I thought why not try so I have been asking him to help with the feeding where he has to get the food, put it in the bowl and then feed her. It is helping. It’s a slow process but we are getting there.” (P:F)

Difficulty or inability to follow instructions is a well-known and highly frustrating symptom of ASD, especially for the caregivers of these children (Schreibman, 2005). Internationally, no mention was made by caregivers with regard to the use of autism service dogs to assist with this challenge, however, it was noted that teachers attempted to utilize the autism service dogs in the classroom to assist with the teaching of listening skills (Harris & Sholtis, 2016). This is a remarkable and highly valuable use for the autism service dogs. It is encouraging to have found that some of the caregivers who took part in this research had taken the initiative to utilize their autism service dogs for this purpose whereas it appears that international caregivers had failed to do so.

With regard to teaching responsibility, participants noted that by including their ASD children in the care of their autism service dogs, they believed that the children had started to become more responsible. Being involved in the care was perceived to have been beneficial to the ASD children as it provided them with important duties which were required of them to perform. The participants informed their ASD children of the importance of the duties given to them and expressed their beliefs that the children were showing greater responsibility when completing these tasks which was found to extend to other areas of their lives as well:

“I get him to help me with cleaning the food and water bowls and feeding and grooming and I always tell him that it is important and that he must be a responsible boy and do these things. It took a little while for him to learn but now he is far more responsible in all places of his life.” (P:F)

“He knows that he has to care for this other being now so I definitely think that he feels greater responsibility which is wonderful. He definitely acts more responsibly than before.” (P:G)

This is yet another highly positive use for the autism service dogs which appears to be unique to South African autism service dogs. Internationally, no mention was made to such a use as it appears that the caregivers were fully responsible for the care requirements of the autism service dogs ((Burrows et al., 2008b). It is unclear whether the international autism service dogs were only supplied to ASD children who were fairly high on the spectrum or whether they were supplied to any ASD children, regardless of the severity of the ASD diagnosis. This would determine whether the ASD children would have had the capability to perform some of the care tasks as those with more severe ASD may not have the capability to care for the autism service dogs in any way, resulting in the caregivers having to perform all care tasks and being unable to make use of the autism service dog in the way mentioned by the participants of this study. In South Africa, the SAGDA were found to not have discriminated based on the severity of the ASD diagnosis, therefore, some of the ASD children supplied with an autism service dog would have been capable of performing some of the care tasks.

Encouraging the ASD children to maintain some of the care requirements of their autism service dogs granted the ASD children the opportunity to gain a sense of responsibility which was found to have been transferred to other areas of the ASD children's lives. This is certainly a positive use for the autism service dogs, however, it is dependent on the severity of the ASD diagnosis.

One last educational use worth mentioning comes from the interview transcript of participants C1 and C2. These participants mentioned using their autism service dog to teach their ASD child how to crawl. The SAGDA allegedly taught the autism service dog how to crawl and the caregivers then utilized this for teaching their ASD child how to crawl by encouraging him to mirror the crawling movements of their autism service dog:

“We made him watch how she would crawl and then got him to copy her. He learned how to crawl just from that.”

While this use was only mentioned by participants C1 and C2, it is valuable to note as the results were highly positive in nature. Internationally, mention has been made to improvements in walking ability of ASD children as a result of walking next to the autism service dog (Burrows et al., 2008, B). However, no mention has been made to the use of autism service dogs to assist with crawling. It was interesting to have found that the SAGDA were willing to provide extra, specialized training to the autism service dog in order for it to have the ability to perform such a task. Internationally, autism service dog training appears to be standardized with no special requests of training generally accepted (Burrows et al., 2008a). This highlights the special care and commitment provided by the SAGDA to each of their individual applicants.

The use of autism service dogs as educational tools was found to be of positive value for the ASD children whose caregivers had taken the initiative to try and incorporate the dogs in such ways. Participants noted, with great pleasure, a variety of positive results from using their autism service dogs as educational tools for their ASD children including learning gentle touch, how to follow instructions, responsibility as well as increased mobility. It was interesting to have found a number of these uses to have appeared to have been unique to a South Africa population.

#### **4.3.3.f) Super-ordinate Theme III: Conclusion**

In conclusion, this super-ordinate theme highlighted the various uses of autism service dogs by the caregivers, teachers and therapists of the ASD children supplied with such dogs by the SAGDA. Uses included school attendance, outings, therapy sessions, emotional support and as educational tools. Participants conveyed a sense of great pride in the ways in which they made use of their ASD children's autism service dogs while noting, with pleasure, the improvements which they had seen from such uses. While a few difficulties were noted, particularly in sub-ordinate theme 2, a general sense of value was identified from the uses found by participants for the autism service dogs.



It was interesting to find, however, that none of the participants mentioned using their autism service dogs for their planned purpose which is to prevent bolting and ensure safety of the ASD children while out.

#### **4.3.4) Super-ordinate Theme IV: Perceived Effects of the Autism Service Dog for the ASD Child**

This super-ordinate theme captures the participants' insights into the effects of the autism service dogs for their ASD children. The effects identified were based on the beliefs and experiences of the participants who took part in this research study. The effects noted in this super-ordinate theme refer only to those identified by the participants as having stemmed directly from owning the autism service dogs and do not refer to any effects which came about due to the direct involvement of the participants, teachers or therapists with the autism service dogs and ASD children. The effects of such interventions are mentioned in the relevant additional super-ordinate themes of this thesis. This super-ordinate theme has been divided into six sub-ordinate themes:

- 1) Fondness for Dogs: "loves dogs now"
- 2) Self-Confidence: "self-confidence has just grown so much"
- 3) Calmer: "far less aggressive"
- 4) Verbal Communication: "we have seen a big difference in speech"
- 5) Happier: "just so much happier now"
- 6) Social Skills: "makes an effort to interact"

##### **4.3.4.a) Sub-ordinate Theme 1) Fondness for Dogs: "loves dogs now"**

Participants from four of the eight interviews conducted for this research study identified that their ASD children showed far greater interest in and fondness for all dogs since receiving their autism service dogs:

"I think she's transferred her love for her dog to other dogs because she now likes other dogs and plays with other dogs." (P:B2)

"He's obviously much more interested in other dogs now." (P:E)

Participants who had noticed this believed that the love their ASD children felt for their autism service dogs was extended to other dogs and were, in general, very pleased by this result. This was not a benefit explicitly mentioned in international studies, therefore, no comparisons are able to be made with regard to this matter.

Participant G noted that she had hoped the autism service dog would teach her ASD child how to love animals as she believed that the ability to love an animal is invaluable. This participant

was especially pleased by how her ASD child had become fond of other dogs since receiving his own autism service dog:

“To love an animal is the most important thing and I so wanted him to experience that. I am just thankful every day that he now knows what that’s like and now loves his dog and all dogs really.” (P:G)

While the participants who had noticed their ASD children to have become more interested in and fond of dogs were generally pleased by the result, participant E did note that, although she was very happy for her ASD child to have become so affectionate towards dogs, it was also a concern for her. She noted that her ASD child showed such great interest and love for dogs that he would approach them without any fear or apprehension. This was a concern for the caregiver as she feared that not all dogs would be as friendly towards her ASD child as his autism service dog was. This, she feared, would result in either physical injury or psychological distress should another dog show aggression towards him:

“I am a little nervous and have to be very careful with him with other dogs because he’ll just go up to them and doesn’t realise that not all dogs are like his. What happens if they don’t respond well? What would that do to him and his relationship with his dog. It is a worry for me.” (P:E)

This is an understandable concern as autism service dogs are exceptionally well trained to ensure that they are accepting of most behaviours while many other dogs may not be as tolerant or friendly. Physical injury is a serious concern here as is the psychological impact which a negative experience with a dog may have for the ASD children and their relationship with their autism service dogs. Should an ASD child experience a negative interaction with a dog there is the possibility of them becoming apprehensive or scared of their own autism service dog. This would have disastrous effects for both the ASD child and their caregivers as the positive effects of the autism service dog would likely be completely lost.

Interestingly, only one of the participants who noted their ASD child to have begun showing far greater interest towards other dogs mentioned that this interest extended to other animals. The remaining participants, however, noted that their ASD children had exhibited greater affection only for dogs with no changes in their interest or affection towards other animals being seen. Participant A was the only one to have found her ASD child to show greater interest towards all animals:

“He definitely pays a lot more attention to all the animals in the house now” (P:A)

From the above it was found that only half of the ASD children whose caregivers took part in this research study were said to have become more interested and fond of dogs since receiving their autism service dogs. This is interesting as an international research study conducted by Prothmann et al. (2009) found that, given the opportunity, ASD children tend to prefer to interact with animals, in

particular dogs, rather than other humans or inanimate objects. Due to this, it would have been expected that a greater interest in dogs would have been prevalent amongst a larger proportion of the ASD children from this study, however, this was clearly not the result within South Africa as the participants did not believe their ASD children to have preferred interacting with animals rather than humans and were, in general, more interested in humans than in animals. Nevertheless, this increased interest and love of dogs was an effect experienced as positive by all those who had noted it, however, as documented above, one participant did note concern over this newfound interest due to the possibility of negative consequences resulting from interactions with untrained dogs.

#### **4.3.4.b) Sub-ordinate Theme 2) Self-Confidence: “self-confidence has just grown so much”**

Participants from three out of the eight interviews conducted for this research commented upon noticeable improvements which they had observed in their ASD children’s self-confidence following the reception of their autism service dogs. This was noted with great positivity by the participants who were visibly pleased by the effect on their ASD children:

“His self-confidence was always really low but you can actually see just such a big difference since he got his dog. His self-confidence is definitely improved and I am just so happy about it.”  
(P:D)

Participant G mentioned that her ASD child was previously very shy and suffered from poor self-confidence, especially when around strangers. Following the reception of his autism service dog, he was found to have far greater confidence within himself and showed this when out by being more assertive and willing to speak to others whereas previously he would have been too shy and self-conscious to do so:

“Before he was always too shy and self-conscious to even be able to look at another person let alone speak. Now he is far more confident and assertive and even speaks to people when we are out with his dog. It has definitely improved his self-confidence.” (P:G)

Participant D mentioned her happiness at the improvements she had observed in her ASD child’s self-confidence when at school. Participant D noted that her ASD child was always very shy at school, however, since attending school with his autism service dog, noticeable improvements in self-confidence had been observed:

“He is so much more confident at school now. He was always so quiet but now you can just see how much more self-confidence he has, he even walks with greater confidence than before.” (P:D)

Both of these participants made note of apparent shyness resulting in social isolation of the ASD children. This could be a result of increased anxious arousal which is common amongst ASD

children and is often confused with shyness due to similarities in the way these challenges are expressed by the ASD children (O'Haire et al., 2015b). Animal interactions have been found to assist with reducing anxious arousal of ASD children, resulting in less social isolation (O'Haire et al., 2015b). In addition to this, international research by Carlisle (2015) identified that caregivers of ASD children who owned pet dogs rather than autism service dogs noticed greater assertive behaviour from their ASD children, as was noted by the above participants, highlighting how interactions with animals, in particular dogs, may assist with improving what could be perceived as shyness.

The participants attributed these improvements in self-confidence to the ASD children having had their autism service dogs with them when out in public, resulting in them feeling special and important, in a positive way:

“When we go out he is now special because he has a dog that can go anywhere. I think that helps him to feel important and that helps his confidence within himself” (P:H)

“I think that having his service dog with him has made him feel different to the others but in a good way. I think he believes he is important now.” (P:D)

The caregivers who observed improvements in their ASD children's self-confidence were all notably pleased by the effect, however, it is unfortunate that such improvements were only identified from three of the eight interviews. Interestingly, all of the caregivers who noted improvements in the self-confidence of their ASD children also believed that their ASD children and autism service dogs had a strong bond. This leads one to wonder if there a connection exists between the strength of the bond between the ASD children and their autism service dogs and the improvements in self-confidence observed by the caregivers.

#### **4.3.4.c) Sub-ordinate Theme 3) Calmer: “far less aggressive”**

Participants from four out of the eight interviews conducted for this research perceived their ASD children to have become calmer since the arrival of their autism service dogs. These caregivers had noticed that, in general, their ASD children appeared to have become more relaxed and at ease compared with prior to the arrival of the autism service dogs:

“He is so much calmer now than before like, in general he is just calmer.” (P:D)

These participants also noted that their ASD children were less aggressive and experienced fewer meltdowns and tantrums than prior to the arrival of the autism service dogs:

“He has been far less aggressive like, in the past we would never have been able to talk like this whereas now it's okay, we can talk and he's okay with it so he's a lot more calm now.” (P:F)

“We have a lot less tantrums than before. In general he is just far more at ease so less likely to go into a rage or something like that.” (P:H)

As identified by Ludlow et al. (2012), challenging behaviours such as aggression and meltdowns, are some of the main problems faced by caregivers of ASD children with such behaviours resulting in a great deal of strain for the caregivers. Due to this, improvements in such behaviours would be a greatly positive effect.

Improvements in aggressive behaviours, meltdowns and increased calmness were all common findings documented in international research (Davis et al., 2004; Burrows et al., 2008b; Viau et al., 2010; Burgoyne et al., 2014; Harris & Sholtis, 2016). As found internationally, these improvements were perceived by the caregivers to have been a highly favourable outcome. A reduction in aggression and emotional outbursts or meltdowns is certainly a very valuable result for both the ASD children and their caregivers. Burgoyne et al. (2014) identified the greatly positive benefits of such improvements to the wellbeing of ASD children and their caregivers. Due to the enhanced calmness and manageability of the ASD children, the caregivers experienced a reduction in tension and stress as well as an increased sense of competence in caring for the ASD children (Burgoyne et al., 2014). These benefits were also identified by the South African participants who took part in the present research study.

It is unfortunate that these positive effects were identified in only half of the interviews, however, participants from three of the remaining four interviews did note that their ASD children were never prone to aggression or meltdowns. This means that from the interviews conducted for this research, only five out of the eight ASD children were prone to aggression and meltdowns. Therefore, the caregivers of four out of the five ASD children who were prone to negative behaviours noted improvements in such behaviours which is a largely positive result.

The caregivers who had observed their ASD children showing a calmer disposition following the arrival of their autism service dogs were of the opinion that this effect was possibly due to the calm nature of the autism service dogs which had been transferred to the ASD children due to the large amount of time they spent together:

“I think that because she’s so calm and they are always together it’s sort of rubbed off on him.” (P:H)

“She’s so placid and he’s very impressionable so I think her calmness has just spread to him as well.” (P:E)

This is an interesting perception of the participants and one that was not noted in international research, however, there is a strong possibility that the calm nature of the autism service dogs was observed by the ASD children and then re-enacted by the children in their daily lives. Should this

have been true, it would be a greatly positive effect of autism service dogs which would make them valuable additions to families with ASD children especially prone to challenging behaviours.

When considering that four out of the five ASD children who took part in this study and who were identified as being prone to negative behaviours were found to have decreased aggression, meltdowns and emotional outbursts and increased calmness, as perceived by the caregivers, this can be said to be a rather frequently documented effect of autism service dogs for the ASD children of this study. The calming influence which the autism service dogs appear to have had for their ASD children is certainly a very positive effect which was notably beneficial for both the ASD children and their caregivers.

#### **4.3.4.d) Sub-ordinate Theme 4) Verbal Communication: “we have seen a big difference in speech”**

The mention of improvements in speech was identified in four of the eight interviews conducted for this research study. The caregivers who mentioned having noticed improvements in their ASD children’s speech noted both an increase in the size of the ASD children’s vocabulary as well as an increase in the frequency of speech. The participants were very pleased by this effect, noting that speech was of particular concern for them:

“Since we got her we’ve heard a lot more speech from him and seen a big difference in his speech.” (P:A)

“He’s definitely now saying a few more words. I have always been sad about his lack of speech so it’s awesome that he is trying to speak more.” (P:D)

Speech difficulties are known to be a common symptom of ASD (Trevvarthen et al., 1998). International research has shown that the use of animals in therapy sessions for ASD have had highly positive effects on speech with the outcome of increased vocabulary size as well as increased amount of vocalizations (O’Haire, 2012; Fung & Leung, 2014; O’Haire et al., 2015a). With regard to autism service dogs in particular, caregivers who took part in research conducted by Burrows et al. (2008b) also identified improvements in the speech of the ASD children following the arrival of their autism service dogs. Harris & Sholtis (2016), also documented improvements in speech of ASD children following the reception of an autism service dog, however, this identification was made by teachers through their observations in the classroom.

All of the participants who perceived their ASD children to be using a larger vocabulary and/or speaking with greater frequency believed this improvement to be the result of the ASD children having the desire to talk to their autism service dogs. The participants believed that the ASD children desired to communicate with their autism service dog more than they desired communicating with humans:

“I think he wants to talk to his dog now. He never wants to talk to people, his dog is just more important to him” (P:A)

“He talks to his dog a lot so I am sure that helps him. He wants to talk to her.” (P:F)

“She wants to respond to him so it has given her the motivation to try and talk more now.”  
(P:B2)

This conclusion is very possible as the increased practice of speech by the ASD children would likely result in improvements in their ability to communicate verbally. Burrows et al. (2008b) found similar results with the participants from the study also commenting upon the ASD children’s greater use of speech due to a desire to communicate with their autism service dogs.

It is important to note that although improvements in speech were only identified in four out of the eight interviews, participants from three of the remaining interviews noted that their ASD children were non-verbal and the participant for the last interview noted that her ASD child had never experienced difficulties with speech. This means that out of the ASD children who were noted as having difficulties with speech, all of them experienced improvements which the caregivers believed to have been contributed to by the presence of the autism service dogs.

#### **4.3.4.e) Sub-ordinate Theme 5) Happier: “just so much happier now”**

Participants from three of the eight interviews conducted for this research noted an increase in the general happiness of their ASD children following the arrival of their autism service dogs. These participants were especially pleased with this effect, noting their displeasure in witnessing the low moods which their ASD children so frequently experienced:

“I hate to see him sad but he’s definitely happier now compared to before.” (P:D)

“He often would suffer from very low moods which was just awful to see but since his dog arrived his mood has definitely improved in general. It’s so nice to just see him happier now.” (P:H)

O’Haire et al. (2015a) highlighted the benefits of AAI for ASD children with regard to improving emotional wellbeing through mood improvement. It would be expected then that owning an autism service dog and having constant interaction with an animal would also result in similar improvements. This was confirmed by international research conducted by Burrows et al. (2008b) where participants noted observing their ASD children to have become far happier in general following them receiving their autism service dogs.

The participants who noted improvements in the general mood of their ASD children believed the cause of such was due to the constant companionship and unconditional love which the autism service dogs showed for their ASD children. The ASD children were believed to have internalized the

love and affection which their autism service dogs showed toward them, resulting in them feeling loved and important to another being, other than their primary caregivers:

“I think that having the constant companionship and the love that is given by his dog has made him realize that he is loved even more which would naturally make him feel happier.” (P:E)

“I think he’s happier because he’s got more things that love him.” (P:H)

International research was not found to have identified any possible causes for the improvements in mood documented by their participants, however, the belief provided by the participants of the current research study stated above are very interesting and provide a highly probable explanation for the mentioned improvements.

It is unfortunate that only three participants believed that there had been an improvement in their ASD children’s mood since the arrival of their autism service dogs, however, the remaining participants did not mention perceiving their ASD children to have suffered from poor moods. This makes it impossible to draw a conclusion on the effectiveness of autism service dogs in elevating the mood of the ASD children from this study as no documented evidence regarding the general moods experienced by the children prior to and following the arrival of their autism service dogs were available. It is still highly positive, however, to have found three participants believing that their ASD children had become happier since receiving their autism service dogs. Interestingly, two out of the three participants who identified this effect also believed their ASD children to have a strong bond with their autism service dogs as well as believing that their ASD children had gained self-confidence from owning an autism service dog. Participant E was the only caregiver to not have mentioned an improvement in her ASD child’s self-confidence, however, she did mention her belief that her ASD child had a fairly close bond with his autism service dog. This makes one wonder if there is a connection between the closeness of the ASD child and their autism service dog and the effect of elevated mood.

#### **4.3.4.f) Sub-ordinate Theme 6) Social Skills: “makes an effort to interact”**

Mention by the participants of improvements in the social skills of the ASD children was identified in four of the eight interviews conducted for this research study. Impairments in social communication/interaction is one of the main diagnostic criteria for autism spectrum disorder according to the DSM-5 (American Psychiatric Association, 2013). It is therefore highly positive to have found that half of the ASD children from this study who were supplied with autism service dogs were perceived to have improved in their social communication ability following the reception of their autism service dogs.



Social communication improvements mentioned by participants focused on an increased desire to interact with other individuals as well as improvements in the behaviour shown when interacting with others.

Participants were visibly pleased when reporting their ASD children's increased desire to interact with others:

"He makes so much more eye contact and is so much more social now. He actually makes the effort to come over and talk to us or others who visit. He will come over and shake hands with guests, give them a hug, sit on their lap, he really makes the effort now whereas before he just wasn't interested." (P:A)

"He is so much more interested in interacting with people now. It's awesome. Compared to before, I just love that he now wants to interact." (P:D)

Participant A was especially excited about this improvement as she noted finding pleasure in entertaining guests, however, her ASD child did not tolerate others in the house prior to receiving his autism service dog. Following the reception of his autism service dog, her ASD child had become far more tolerant of others in his house, especially extended family members who were noted to have also commented upon observing improvements in the ASD child's social skills:

"I always used to have people come over, especially family but after I had him it just all had to stop. Now that he has his dog he doesn't mind so much and actually quite enjoys having his gran come over. She has also noticed how much better he is with his communication and interaction." (P:A)

Although it is not entirely certain whether the social and communication skills of these children have improved due to them owning an autism service dog or due to some other variable, the participants believed that having the companionship of their autism service dogs provided the ASD children with the support and encouragement they required to interact more willingly with others as well as allowing for them to practice their communication skills:

"When he interacts with others now he has his dog by his side so I think that sort of works as an additional support for him." (P:G)

"I think it's because he now communicates with his dog so much it's just rubbed off on people too." (P:H)

Research has found that one of the most common benefits of animal interactions for ASD children, especially in therapy sessions, is improvements in social skills and communication (O'Haire et al., 2013). Due to the ongoing interactions which these ASD children had with their autism service dogs, it is unsurprising that improvements in social skills were identified by the caregivers.

Participants further noted that their ASD children had begun exhibiting more appropriate social skills when interacting with others in public:

“He makes a lot more eye contact now and acts much more appropriately when he interacts now which is just so nice for us.” (P:A)

“He talks much nicer to other children now when he’s talking to them. I think it’s because he talks so kindly to his dog so now he’s learned how to do that so he does it with people as well.” (P:H)

Yet again, it is uncertain whether the autism service dogs were the only factor which had resulted in this improvement or whether some additional variables had contributed. Participants did however believe that the autism service dogs were at least partly the reason for such improvements, possibly due to the ASD children learning to communicate more appropriately with their autism service dogs and then transferring these skills to their human interactions. This is a highly probable explanation, provided that the ASD children did attempt to communicate with their autism service dogs on a regular basis. Internationally, research conducted by Burgoyne et al. (2014) identified some improvements in social skills shown by the ASD children who took part in the study, highlighting how such improvements are not unheard of and may very well be the result of frequent interactions with the autism service dogs. These improvements are certainly positive and, as noted by the caregivers, were a cause of great pleasure for the families of the ASD children.

#### **4.3.4.g) Super-ordinate Theme IV: Conclusion**

In conclusion, this super-ordinate theme documented the perceptions of the participants who took part in this research study with regard to the benefits which they had seen in their ASD children and subsequently attributed to the autism service dogs. It was identified that the autism service dogs appear to have benefitted the ASD children in a number of ways. These benefits included an increased interest and fondness for other dogs, improved self-confidence, less aggressive and destructive behaviour, improved and increased verbal communication, elevated mood and improved social skills. Interestingly, no negative effects for the ASD children were mentioned from owning the autism service dogs. It is important to note that not all of the ASD children were found to have benefitted from all of the above mentioned effects with the average number of ASD children to have benefitted from each effect mentioned above being four out of eight. It is also important to note that the improvements mentioned by participants cannot be said to have been a direct result of owning an autism service dog as numerous additional variables may have contributed to the improvements observed. It is however still highly positive to have identified the effects noted above and to have found that the caregivers did attribute the positive effects at least partly to the autism service dogs.

#### **4.3.5) Super-ordinate Theme V: Perceived Effects of the Autism Service Dog for the Caregiver**

This super-ordinate theme comprises of the perceived effects of the autism service dogs for the caregivers of the ASD children provided with such service dogs by the SAGDA. Both positive and negative effects were mentioned by the participants of this research study which is unlike what was found in the previous super-ordinate theme where only positive effects from owning an autism service dog were noted for the ASD children. This super-ordinate theme is further refined into four sub-ordinate themes:

- 1) Happiness: “just such a positive influence”
- 2) Reduced Burden: “gives me a break”
- 3) Increased Stress: “nerve-racking”
- 4) Increased Workload: “it’s like having another child”

##### **4.3.5.a) Sub-ordinate Theme 1) Happiness: “just such a positive influence”**

Participants from five out of the eight interviews conducted for this research study mentioned improvements in their own happiness since the arrival of their ASD children’s autism service dogs. From the interview transcriptions it was identified that participants mentioned four reasons for their increased happiness. Firstly, participants noted feeling happier from the knowledge that their ASD children had a companion:

“He has a friend now which just makes my heart warm.” (P:D)

“I just feel happier now that I know that he has someone to be there with him. I don’t feel so guilty now that he doesn’t have anything to bond with besides me.” (P:H)

Noting the difficulty experienced by the ASD children in attempting to make friends and the concern which this caused for their caregivers, these participants were very relieved and pleased to now know that their ASD children would have a constant companion.

Secondly, participants noted feeling happier as they now had something which they shared with their ASD child:

“It’s nice for me to have something to really share with her and I enjoy it when we go out together and people see us like a team. It just makes me happier.” (P:B1)

“We are the two most involved with her so we share her in common which has made us a bit closer. I am so pleased to be able to share that with him.” (P:H)

The participants noted that they felt almost as though they were simply the carer of their ASD children rather than their family which was upsetting for the caregivers. With both the caregivers and ASD children having the autism service dog as a large factor in their lives, they had something in common which they shared with each other and the world as a whole. This assisted the caregivers in feeling a greater sense of connection to their child and made them believe that they were more than simply the caregiver.

Thirdly, participants noted how they had formed a very strong bond with the autism service dog who acted as a companion to the caregivers:

“We have a very close connection now. She follows me around as well if he is sleeping or something. She’s just such a companion for me as well.” (P:B)

“She has helped me so much with my anxiety. She is such a huge part of my life now. She is just wonderful to me.” (P:D)

The participants commented upon a very close bond which they had formed with the autism service dogs, noting how this bond had resulted in them feeling as though they had a loyal companion and friend. The formation of a close bond between the caregiver and autism service dog is something which has been frequently documented in international research with similar positive benefits identified by the caregivers as was found in this research study (Davis et al., 2004; Burrows et al., 2008b).

Lastly, the participants mentioned feeling happier simply from seeing or being around their autism service dogs:

“She’s brought me a lot of happiness just by being there.” (P:B1)

“She’s definitely been helpful for me as well. She knows when I am having a bad day and just her presence always makes me feel happier.” (P:E)

“She’s just such a positive influence on our lives. It’s so easy to get depressed when you have an autistic child but it’s impossible to feel depressed when you are around her. She’s just so positive for us all.” (P:C2)

“I just look at her and feel happier. It’s like therapy for me as well.” (P:H)

These participants mentioned how they frequently experienced dips in their emotional wellbeing due to the hardships they were required to face when caring for their ASD children. International research has identified that caregivers of ASD children often suffer from increased stress and worry, resulting in decreased levels of happiness (Nealy et al., 2012). These findings were confirmed by participants from the current research study. The participants, understandably,

expressed a great deal of joy when discussing the pleasure and happiness which they felt from being around the autism service dogs and how these dogs had assisted them in lifting their emotional state in times of hardship.

From the above it is clear that the autism service dogs had assisted a number of caregivers by aiding the improvement of their emotional wellbeing. Research conducted internationally identified similar findings with reduced levels of stress and improved emotional state being noted by a significant percentage of the caregivers ((Davis et al., 2004; Burrows et al., 2008b). Although improvements in perceived happiness was not mentioned explicitly in three of the eight interviews, the participants from all of the interviews did convey a sense of increased happiness from owning the autism service dogs. This is a very positive result considering the challenges which the caregivers of the ASD children mentioned having to face on a daily basis.

#### **4.3.5.b) Sub-ordinate Theme 2) Reduced Burden: “gives me a break”**

Participants from five out of the eight interviews conducted for this research felt that some of the pressures and burdens which they experienced from caring for an ASD child were relieved due to the interactions which the autism service dogs had with the ASD children:

“She’s just made life easier for me most of the time. She gives me a break which I really need sometimes.” (P:A)

As seen in the quote above, participants were rather vague in their comments regarding this matter. A greater explanation and definition of this topic was sought through the use of probing questions which resulted in two main areas of reduced burden being identified by the participants. Firstly, participants mentioned an increased amount personal space:

“He used to be all over me and touching me and that was just too much on my senses but now that we have the dog I don’t have to be touched by him all the time. Instead of him coming and sitting on my lap all the time he now goes and sits with his dog so it’s given me a lot more space which has really helped our relationship.” (P:F)

“He would always have to be with me and holding on to me, especially in town, but now he is happy to hold on to her. It’s nice to just have a bit more personal space.” (P:G)

The caregivers of the ASD children commented upon the need of their ASD children to frequently be in physical contact with them which they experienced to be challenging at times. The participants were often left feeling drained and frustrated by this constant need for contact prior to the arrival of the autism service dogs. Since owning the autism service dogs, the participants noticed their ASD children’s need for physical contact being met through them touching and being with the autism

service dog. This provided the caregivers with a much needed break from the physical contact which they were extremely grateful for.

Secondly, participants mentioned having a greater amount of time for personal activities. This was due to their ASD children being as contented when with their autism service dogs as they were with their caregivers. This allowed the caregivers additional time for personal activities as their ASD children did not require their constant attention:

“He is happy to stay in bed until like nine in the mornings now where previously he would get up so early and wake the whole house up as well. Now he wakes up but is happy on his own because he’s got his dog with him so we can have some time to ourselves.” (P:D)

“He loves her so he constantly wants to be with her so it’s much easier for us when we are out because if we are in a shop looking at something he will often just sit down next to her so we have more time to look.” (P:E)

“He tends to be happy on his own upstairs now. He doesn’t need me near him all the time so it gives me a break.” (P:G)

The participants noted, with great satisfaction, being granted some additional time to spend on matters of their own rather than having to spend all their time caring for their ASD children. This constant need for attention and care resulted in the caregivers feeling exhausted and craving time for themselves. The autism service dogs from this research study had been greatly beneficial to the caregivers by simply granting them some additional time for use as they saw fit. This was a benefit documented by Burrows et al. (2008b) where caregivers were also found to have identified their autism service dogs granting them some much needed time for personal space and relaxation.

From the above it is clear that the autism service dogs had been beneficial for the caregivers by providing them with an occasional break from constant physical contact from their ASD children as well as some additional time for their own personal activities. Although this was only identified in five out of the eight interviews, in two of the remaining interviews the caregivers made no mention of having felt in need of a break from their care duties and were perfectly content with the amount of attention required by their ASD children. Only one interview saw the participants believing that their autism service dog did not provide them with any reduction in the duties required by their ASD child. The results therefore are fairly positive considering that only one set of participants noted no perceived reduction in burden.

#### **4.3.5.c) Sub-ordinate Theme 3) Increased Stress: “nerve-racking”**

Shifting to a more negative view of autism service dogs for the caregivers of the ASD children supplied with such dogs, it was found that participants from three out of the eight interviews

conducted for this research felt that owning an autism service dog resulted in them experiencing a fair amount of additional stress:

“I do have to say that it is quite a lot more stressful owning her now.” (P:A)

Upon querying this further, participants appeared to perceive this added stress to have stemmed from two main areas. Firstly, participants noted that they were exceptionally protective over their autism service dogs which resulted in them being highly concerned for their dogs’ wellbeing and safety:

“She definitely hasn’t made me relax, I have actually become worse because I worry about her so much. I am paranoid when I drop her off at school and when I take her for walks. What if she got attacked by another dog or something like that? I worry about her safety all the time.” (P:A)

“I love her so much and so does my son so naturally I worry about her. I can’t send her to school anymore because I can’t make sure that she is safe there. I do worry about her a lot which is quite stressful.” (P:E)

“She is so important to the both of us so naturally I worry about her safety, what would happen to him if something happened to her? It’s nerve-racking really.” (P:G)

It was clear that the participants cared immensely for their autism service dogs and were greatly concerned for their dogs’ safety, however, this had resulted in the participants feeling a fair amount of additional stress as they felt responsible for ensuring the safety of their autism service dogs. This is certainly an added burden which the participants would not have had to deal with prior to the arrival of their autism service dogs.

Secondly, the participants mentioned feeling pressured to maintain their autism service dogs to very high standards in order to keep up appearances due to them being service dogs. The title of ‘guide dog’ was perceived by the participants to bring with it a number of expectations, especially from the public. The pressure which the participants felt to maintain their dogs to these perceived standards was, understandably, rather anxiety inducing:

“There are all these standards which you have to keep up you know like, she’s not just a dog, she’s a guide dog so I feel that I have to maintain that, especially when out in public, it’s hectic really.” (P:A)

“It’s stressful knowing that she’s a guide dog. I always feel she needs just a little bit extra like, extra care, especially because you are in the public eye so it is more stressful.” (P:G)

While it is important to note that the SAGDA did not specify any stringent care requirements for their dogs, the participants believed that, due to the dogs being classed as ‘guide dogs’, the general

public would expect them to be in exceptional condition. The participants placed a great deal of pressure upon themselves to maintain these perceived expectations which resulted in them feeling an increased level of stress.

An increase in caregiver stress was a challenge not identified in international research papers, however, it is unclear whether this was simply a subject not queried by the researchers or whether international caregivers did not experience any additional stress from owning the autism service dogs.

It is interesting to note that the participants who mentioned an increased level of stress from owning the autism service dogs all additionally mentioned feeling a reduced sense of burden since owning the dogs. This is rather contradictory as it would be likely that the increased stress would have been perceived as an added burden to the caregivers, however, they perceived the benefits of the reduced burden to override the burden of increased stress. It is also important to note that only three of the participants who took part in this study noted a feeling of increased stress. This is a fairly small number, however, it is still relevant to document.

#### **4.3.5.d) Sub-ordinate Theme 4) Increased Workload: “it’s like having another child”**

Participants from five out of the eight interviews conducted for this research study mentioned a fair amount of additional work required of them due to owning the autism service dogs:

“It’s a lot more work.” (P:C1)

“It’s definitely more work now with a dog as well. Sometimes I do feel I need a break because my husband’s not here a lot to help so it’s all on me.” (P:H)

Once again, the participants were quite vague when discussing this topic. Upon further discussion, it appeared that the reason for this perception of an increased workload was due to two main reasons. Firstly, all of the participants who mentioned an increased workload noted that they perceived their autism service dogs to be another child requiring their full-time care rather than simply a dog:

“It’s literally like taking on another child, another autistic, non-verbal child really. For me it’s like now having to care for two autistic, non-verbal kids and just one is a handful.” (P:A)

“It’s like having an extra child now. We have to now take care of him and her so it’s a lot more.” (P:C2)

“I call them my boys now because it really is like I have two kids now that both require as much work.” (P:G)

Although this may appear to be the participants complaining of the added burden of caring for two children instead of just one, the participants did not seem to view this as too much of an added



burden. They were all noticeably happy about having, what they perceived to be, an additional child. For them this was, although certainly additional work and strain, a blessing:

“It’s a lot more work but I love her, she’s my other child and she’s brought so much to the family so I don’t mind.” (P:B2)

This is an interesting result to have found as it would have been expected that this added workload would have been perceived by the participants as a burden, however, this did not seem to be the case. Internationally, caregivers also noted challenges with the amount of additional time and effort required to care for their ASD child’s autism service dog, however, these caregivers identified this as a significant challenge rather than viewing it as pleasurable as was the case with the South African caregivers (Burrows et al., 2008b).

The second reason for the autism service dogs causing a greater workload for the participants was due to the added work required when taking the autism service dogs on outings with the ASD children:

“It’s hard work. You’ve got to get the two of them sorted out together and when you’re out you have to look after the two of them now.” (P:A)

“It’s a lot of extra work having a dog like her when you go out or when you want to go on holiday, it take a lot of patience and organizing. Logistically it’s just a lot harder.” (P:B1)

“It can be too much to take them both out. It’s just a lot to have to handle.” (P:C2)

The participants were extremely honest when stating that traveling with an ASD child and an autism service dog was a challenge. Being required to organize their ASD child and the autism service dog prior to going out and then monitoring both child and dog throughout the outing whilst also being required to organize for the dog to be admitted to shops and allowed into holiday accommodation was noted as a rather heavy workload which made their lives more challenging at times. This was, however, yet again not viewed by all of the participants as a burden. Only participants C1 and C2 perceived this to be a burden, however, the remaining participants felt that the positive effects of the autism service dogs outweighed this negative effects and the love which they felt for their dogs was so great that the added workload was not classed as a burden. Once again, it was interesting to have found this as the caregivers who took part in international research studies were found to also have noted challenges with incorporating the autism service dogs when on outings, however, these caregivers identified this as a highly negative challenge (Burgoyne et al., 2014). It appears that the South African caregivers were more accommodating of the additional effort required when owning an autism service dog, possibly due to these caregivers being more thoroughly informed of the requirements and adjustments necessary when owning an autism service dog than those

internationally. This once again highlights the efficiency and high standard of education provided by the SAGDA.

#### **4.3.5.e) Super-ordinate Theme V: Conclusion**

In conclusion, this super-ordinate theme highlighted the effects of the autism service dogs for the caregivers of the ASD children supplied with such dogs as perceived by the caregivers. It was found that the autism service dogs appear to have both positive and negative effects for the caregivers of the ASD children. The identified positive effects were increased happiness and reduced burden for the caregivers while the negative effects were identified to be increased stress and a greater workload. What was interesting to find was that the majority of the participants did not seem to view the negative effects as added burdens to their lives but rather felt that the positive effects of the autism service dogs for their ASD children, as well as for themselves, outweighed the negative effects. The participants did not mention regretting the decision to own an autism service dog but rather perceived them to be of great value to their lives, despite the added challenges which they may bring.

#### **4.3.6) Super-ordinate Theme VI: Public Response to Autism Service Dogs in South Africa**

This super-ordinate theme provides a description of the participants' experiences of public interactions when out with their ASD children and autism service dogs. This was a topic mentioned regularly throughout the interviews by all of the participants who openly discussed both their positive and negative experiences of public interactions. This super-ordinate theme has been refined into five sub-ordinate themes:

- 1) Attention: "far more interest and questions"
- 2) Business Admittance: "turned away a lot"
- 3) Education Deficit: "people can be really stupid"
- 4) Public Empathy: "much more understanding"
- 5) Public Dissatisfaction: "not everyone likes dogs"

##### **4.3.6.a) Sub-ordinate Theme 1) Attention: "far more interest and questions"**

Participants from seven out of the eight interviews conducted for this research study mentioned having experienced a great deal more attention from the public when out with their ASD children and autism service dogs. These participants noted their experiences of their autism service dogs attracting the attention from the public far more than their ASD children used to prior to receiving the autism service dogs:

"We get a lot of stares now which we weren't so used to before. She's quite an attention grabber." (P:B1)

“People are a lot more interested in us now and curious than before. There’s no going out unnoticed anymore.” (P:D)

“People are always wanting to talk and see the dog.” (P:G)

Increased public attention when out with an autism service dog was also identified by caregivers who took part in international research (Burrows et al., 2008b). It is unsurprising that the autism service dogs attracted greater attention as it is not overly common to see a dog walking around a shopping mall or supermarket.

For most of the participants, this increase in public attention and interest was not considered a problem, however, for some this was a concern due to the effect which it had on both the ASD children and the caregivers. Participants from five out of the seven interviews who mentioned experiencing increased public attention were not displeased by this but rather perceived it to be a positive effect due to the pleasure which either their ASD children or they experienced from the attention:

“She really likes it, especially when other children come over and I like it because it brings more people into her world.” (P:B2)

“People are interested and asking all these questions and I don’t mind sharing because the more people who know the better. That’s how I feel.” (P:D)

“He likes the attention of the people stopping and asking about her.” (P:E)

“I actually encourage it because he is such a loving dog and always wants to greet people and I like to be able to tell them about him and what he does.” (P:G)

These participants were all quite pleased by the additional attention which they received from being out with their autism service dogs. Participants expressed their pleasure in being able to tell the public about autism service dogs and what they do for their ASD children. In addition to this, the participants noted that their ASD children often also enjoyed the attention which brought even more pleasure to the caregivers, who were happy for their ASD children to be able to interact with more people. These findings are similar to those of international research studies as the majority of caregivers from such studies were also found to have perceived the increased attention positively, noting their enjoyment at being able to answer questions from public with regard to the autism service dogs as well as mentioning how the dogs acted as social catalysts for their ASD children, encouraging them to communicate more and with greater ease with typically functioning children (Burrows et al., 2008b; Burgoyne et al., 2014).

Participants from two of the seven interviews who mentioned experiencing an increased amount of public attention mentioned that they were displeased by this. Participants C1 and C2 did not enjoy how their ASD child's autism service dog drew attention towards themselves while out:

“Society always wants to interact although it clearly states on her jacket not to disturb. I really don't encourage it. It just makes going out so much more of a fiasco.” (P:C2)

These participants expressed their general displeasure by the added attention which they received from the public, noting that they found people to disregard the instructions displayed on the harness of their autism service dog as well as mentioning that they discourage any public interactions. This is an unfortunate finding and one which was not identified internationally. It is unnerving to have found that the public regularly did not obey the instructions on the autism service dogs' jackets and understandable that this could result in a great deal of frustration and challenges for the caregivers.

Participant F also expressed her displeasure from the increased attention as her ASD child experienced it to be extremely distressing:

“The attention is just too much for my son. There's all this attention and questions and everyone wanting to touch his dog and that just makes him very anxious.” (P:F)

Participant F experienced the increased attention as extremely difficult due to the response from her ASD child. This ASD child was particularly uncomfortable around other people and very concerned that his autism service dog would be taken away from him. This naturally resulted in him experiencing a great deal of stress from situations of excessive public interaction. Because of this, participant F rarely went out with her ASD child and their autism service dog due to the distress caused to both the caregiver and the ASD child by the situation. This is yet another unfortunate finding which was not noted internationally, however, should certainly be taken into consideration as social anxiety and a dislike of public attention is a common problem for ASD children (van Steensel et al., 2011).

It is clear from the above that the autism service dogs frequently resulted in increased attention from the general public when on outings with the ASD children. This is understandable, however, this increased attention appears to have been experienced differently by each of the participants. The majority of the participants from this research study experienced the increased attention as a positive effect, noting their enjoyment of being able to engage with the general public, answering questions and providing information on the uses of the autism service dogs while their children frequently enjoyed the opportunity for interaction. It is important to note however that participants from one interview experienced the attention as unpleasant for themselves while the participant from another interview mentioned their ASD child finding the attention extremely distressing. This is an important factor to take into consideration as it appears that increased attention

is likely to be inevitable. This increased attention stands the possibility of being deeply upsetting to some ASD children (van Steensel et al., 2011).

#### **4.3.6.b) Sub-ordinate Theme 2) Business Admittance: ‘turned away a lot’**

Participants from seven out of the eight interviews conducted for this research study commented upon their experiences of being denied admittance to a variety of businesses when out with their ASD children and autism service dogs. These participants were denied access even though the autism service dogs were wearing their service dog jackets supplied by the SAGDA:

“We often get stopped and turned away sometimes. It took a lot of thick skinning in the beginning.” (P:B2)

“We have a lot of fights, a lot of fights. Entering shops she is often not allowed, even wearing her little jacket.” (P:D)

“Getting into malls can be hard. We have been stopped a number of times. It’s just beyond frustrating.” (P:G)

This is a concerning finding and one which was not noted in international research studies. Participants were noticeably and understandably frustrated by this situation. Although the participants were pleased to have been able to contact the SAGDA to assist them, as mentioned in super-ordinate theme I, the frequency of this denial of access to various businesses was a cause of great dissatisfaction and anger. In addition to the negative consequences experienced by the caregivers, mention was made of the negative impact which these experiences had on the ASD children:

“It can be very distressing for him when you are stopped at shops.” (P:G)

“When we are stopped he is like terrified that they’re gonna take his dog away and I can see the fear on his face.” (P:H)

This is a highly unfortunate situation considering that the autism service dogs were taken with on outings with the ASD children in the hope that they would be of benefit to the children, however, by being denied access to businesses these children rather experienced increased anxiety. This stands the chance of cancelling out any of the positive effects which the autism service dogs may have.

The caregivers of the ASD children expressed their concern over the matter of access denial on numerous occasions throughout the interviews and mentioned that they had resorted to only visiting businesses where they were certain that they would be allowed entry:

“Now we just go to the same stores because it’s just too difficult to have to deal with that.” (P:B1)

“We go to the same stores now but at the beginning we would have to wait and call the manager and it’s just such a hold up.” (P:H)

This was an interesting finding and the opposite of what was found internationally. Data published from international studies highlight how numerous caregivers whose ASD children had been supplied with autism service dogs now felt that they had greater opportunities for outings as they were able to venture to a far greater number of places with the aid of the autism service dogs (Burrows et al., 2008b; Burgoyne et al., 2014). From the information gathered from the caregivers of the current study, it appears that the opposite is true for South African caregivers. This is highly unfair for the participants and their ASD children as they should be allowed access to any premises with their autism service dogs as, according to the SAGDA, it is law in South Africa for dogs trained by the SAGDA to be permitted access to any and all premises with their owners. Although the SAGDA was available at any time to provide assistance when denied access, this was not satisfactory as the caregivers mentioned not always having the time or the will to contact them when out:

“The association is always there to help us if we need them but it’s not always possible to call them and have them explain to the managers or whatever, it just takes too long.” (P:B1)

“I know that guide dogs will help if I need them but to be honest I just don’t have the energy sometimes.” (P:D)

According to the participants, the security guards at businesses and shopping centres were the most problematic with regard to allowing access with the autism service dogs:

“The most problems is with the security guards. Usually if you get past them then it’s okay.” (P:E)

“It’s mainly the security guards that’s the trouble.” (P:H)

Considering that, in South Africa, security guards are positioned at the entrances to most businesses and shopping centres, it is understandable that they would be the ones to confront the caregivers upon entering shops, however, participants believed that it stems from a lack of education of the security personal with regard to the rights of those with service dogs in South Africa:

“The issues always come from the security guards but they aren’t trained.” (P:D)

“The security guards have no clue what autism dogs ever are so it’s no wonder they don’t want to allow us.” (P:G)

This is a topic which was raised by all of the participants who mentioned being denied access to businesses and will be further addressed in the sub-ordinate theme which follows.

It is evident from the above that denial of access to premises was a problem experienced by the participants when out with their autism service dogs. This appears to be a South African specific problem as there was no mention of this in the published international research. The only participant who did not mention this was one who noted that her ASD child did not enjoy shopping which resulted in them hardly ever going on outings together. All the remaining participants mentioned being subjected to regular confrontations upon attempting to enter businesses which resulted in a great deal of frustration for themselves as well as frequent distress for their ASD children.

#### **4.3.6.c) Sub-ordinate Theme 3) Education Deficit: “people can be really stupid”**

Participants from all eight of the interviews conducted for this research indicated their disappointment with their experiences of the knowledge shown by the general public as well as employers and employees of businesses regarding autism service dogs in South Africa:

“You’d be surprised how unaware people are. I just don’t think anyone knows what it is.”  
(P:B1)

“The public’s knowledge is just terrible. There is still such stigma about autism in South Africa and autism dogs are just completely foreign to most people.” (P:F)

“They don’t know about service dogs, especially autism service dogs.” (P:H)

This lack of knowledge was challenging for the caregivers, especially when attempting to undertake everyday tasks such as shopping, as they expressed their frustration at how, due to a deficit in knowledge, people were extremely interested in the autism service dogs which results in a great deal of attention directed towards the caregiver, ASD child and autism service dog. This was a topic also mentioned by participants from international research (Burrows et al., 2008b). Participants from the research conducted by Burrows et al. (2008b) identified this increased interest and attention as a positive factor, however, this was not always perceived positively by the South African participants from this research study, as mentioned in sub-ordinate theme 1 above.

Upon querying this topic further, it was identified that two major areas of frustration resulted from the deficit in knowledge which the participants believed the general public to have. The first was the lack of knowledge security guards were found to have with regard to not only autism service dogs but all guide dogs. The participants expressed a great deal of frustration from this, noting their knowledge of the laws within South Africa regarding guide dog access to businesses as well as their concern over how security guards appeared to not be provided with any education on the topic:

“They should have been trained. I know the training that security guards should have but they just clearly don’t have it.” (P:C2)

“It’s crazy that security guards have no knowledge of service dogs at all. We legally should have access to anywhere here but they don’t know about it. It’s just no dogs allowed according to them.” (P:F)

“It’s always the security guards who have no clue about autism dogs.” (P:H)

This is understandably frustrating for the caregivers considering the frequency of interactions they would likely have had with security guards when attempting to enter businesses. The SAGDA confirmed that, in South Africa, guide dogs and service dogs trained by the SAGDA are legally allowed access to all businesses. Due to this, it would be expected that security personal would be informed of and provided education on service dogs, however, it appears that this may not have occurred for all security personal. This is certainly a problem for autism service dogs, however, guide dogs for the blind as well as service dogs trained for physical disabilities should also be taken into consideration here due to the negative consequences which this may result in for those requiring the use of such assistance animals.

The second problem noted by the participants which they experienced due to the deficit in knowledge shown by the general public was the way in which the public approached the autism service dogs without consent from the caregiver:

“It says clearly on her jacket not to disturb her because she is a working dog but they just ignore it.” (P:B)

“It’s like we are just invisible. People just go straight over to her and start patting her like we aren’t even there.” (P:C1)

“She has a sign on her jacket that says to not distract and people will still tell their children to go over and pat her without even asking us.” (P:E)

This was an area of great frustration and concern for the participants due to the negative consequences which this may result in. Autism service dogs in South Africa have a jacket with a clearly printed sign on them stating that they must not be disturbed, however, it appears that the general public did not understand the importance of the job being done by the autism service dogs and the fact that they must not be distracted as they have been trained to perform their duty while in their jackets. Participants mentioned how their autism service dogs appeared to change personality, going into working mode as soon as their jackets were put on:

“It’s like she is a different dog when you put her little jacket on. Without it she is this crazy dog but when it goes on she knows and it’s now work time.” (P:A)

“When her harness goes on she just becomes so serious and it’s like a completely different dog.” (P:D)



This change in attitude from regular dog to working dog once dressed in their harnesses is something which the SAGDA trains the dogs to do. Regular distraction from duty whilst in harness stands the risk of this training being lost as they may confuse work with socialization or play. In addition to this, participant E noted a further concern identifying the possibility of the autism service dogs losing focus while on duty due to being distracted by the public. This could result in them no longer acting in manner trained for by the SAGDA which can be especially problematic in situations such as restaurants, as mentioned by participant E:

“It’s especially difficult in restaurants because she can’t be distracted at all there because then she’ll start either sniffing around or begging for food which is not what she is supposed to do but when she gets distracted then she forgets.” (P:E)

This could be, understandably, extremely problematic for the owners and may result in long term behavioural challenges with the autism service dogs. In addition to this, the caregivers were frustrated by the lack of concern which the general public showed towards both them and their ASD children by not asking permission to interact with their autism service dogs. This was a cause of great exasperation for the participants as such interactions were not only time consuming but also not always well tolerated by the ASD children:

“How can they just go up to her without even asking? Do they not think what that might do to my child?” (P:C1)

Participants did express their understanding that it may have been difficult for the general public to understand the use and value of an autism service dog or even be able to identify such dogs as service dogs due to the fact that their ASD children did not always visibly appear to be disabled in any way:

“You can’t see a disability at all like when he is standing and not flapping or anything so it’s hard to see why he needs a service dog” (P:A)

“I guess they don’t understand that he needs a service dog because they can’t see his disability.” (P:G)

This is a valid explanation and may be true for the ASD children who do not appear to be abnormal in their physical appearance or behavioural mannerisms, however, this is an unlikely explanation for the ASD children who do present as abnormal.

It is clear from the above that a general deficit in knowledge regarding autism service dogs by the general public as well as employers and employees of various businesses, security businesses in particular, was an area of great frustration and concern for the caregivers of the ASD children supplied with autism service dogs. This deficit in knowledge was both frustrating and dangerous for

the caregivers, ASD children and autism service dogs and was a topic frequently noted by the participants of this research, highlighting the seriousness of this as experienced by the participants.

#### **4.3.6.d) Sub-ordinate Theme 4) Public Empathy: “much more understanding”**

The participants from all eight of the interviews conducted for this research study indicated having experienced greater empathy towards themselves and their ASD children from the public when out with their autism service dogs:

“People are definitely more understanding towards us now when we are out.” (P:D)

This improved public empathy appears to be a common benefit of owning an autism service dog as participants from various international research studies were also found to have experienced this (Davis et al., 2004; Burrows et al., 2008b; Burgoyne et al., 2014). It was, however, an interesting finding in this research when considering the views of the participants mentioned in the sub-ordinate theme above. Participants had noted previously that they believed the general public to be rather uneducated with regard to autism service dogs. This belief would make one predict that the participants would not feel that they were granted greater empathy by the public due to their beliefs around the public’s knowledge of the autism service dogs.

Upon querying further, participants appeared to all believe that they were treated with greater empathy, most especially in circumstances where their ASD children experienced a meltdown, tantrum, emotional outburst or performed some sort of behaviour not expected from a child of their age:

“When we went out alone before, people would think it’s just a naughty child or a child that’s screaming and doing funny things and they would say really bad things sometimes but if they see us with the dog then they know there’s something more wrong. They don’t treat us so bad anymore.” (P:C1)

“When he does have a meltdown in a mall now people are more understanding whereas in the past I would have people judging us, now people ask if they can help.” (P:G)

This was a benefit identified particularly in the research conducted internationally by Davis et al. (2004) and Burrows et al. (2008b). The greater empathy shown towards the South African caregivers and their ASD children was pleasing to these participants. Expressing their sadness and distress over the negative response they frequently used to receive from the public when their ASD child performed disruptive or unusual behaviours in public, often with the caregivers being blamed and made to feel as though they were simply inadequate parents, the participants were understandably delighted by the increased empathy and acceptance shown towards them by the public.

A possible explanation for this was supplied by the participants of the research conducted by Davis et al. (2004) where they noted how the autism service dogs assisted in making the public aware of there being a problem with the ASD child, even when no problems were physically visible. This resulted in greater understanding and empathy from the public, should the ASD child have performed any negative behaviours in public (Davis et al., 2004). The participants of the presently discussed research agreed with the above explanation, believing that this improved response from the general public was due to them being able to immediately see that there was something wrong with their ASD child as they had a service dog:

“They know that now, okay, there’s something seriously wrong with this child so they aren’t so judging.” (P:D)

“People now know there’s a challenge. They can see the dog so automatically know that something is wrong.” (P:E)

“When we have the dog with us people carry on better because they see we’re with a guide dog so the attention is a bit more positive.” (P:F)

This is a logical interpretation of the improved empathy towards both caregiver and ASD child, however, it does still contradict the previously noted beliefs of the participants with regard to their views on the deficit in knowledge about service dogs which they believed the general public to have.

It is highly positive to have found that all of the participants from this research study believed that the general public treated them and their ASD children with far more empathy and understanding when out with their autism service dogs. It is however interesting to note how this view is rather contradictory when compared to the views that the participants hold towards the knowledge of the general public with regard to service dogs.

#### **4.3.6.e) Sub-ordinate Theme 5) Public Dissatisfaction: “not everyone likes dogs”**

Participants from five out of the eight interviews conducted for this research project noted having had negative experiences with people while out in public due to their dissatisfaction with the autism service dogs being allowed access to various premises. Upon querying this topic further it was identified that the participants had regularly experienced negative reactions from the public stemming from two main reasons: a general dislike of dogs and fear.

With regard to the general dislike of dogs, participants mentioned having frequently experienced negative interactions while in public with people openly and often rudely commenting on their dislike of the autism service dogs being allowed access to various premises:

“Sometimes we have had people getting really angry that we have a dog in the mall. We try to explain that it’s a guide dog but not everyone likes dogs so it can be difficult.” (P:D)

“People often say that dogs are terrible and filthy and should not be allowed into restaurants and supermarkets. They actually get quite rude and you end up feeling really bad from their comments sometimes.” (P:H)

These negative interactions were displeasing for the participants who noted having frequently felt unhappy and distressed by the comments made towards them and the autism service dogs. This is, however, a point worth noting as it is true that not all people view dogs as sentient beings and this will likely never change as there will always be people who are not fond of or who completely dislike dogs.

The second problem experienced by the participants was some people’s fear of dogs:

“A lot of the South African community are very afraid of dogs so it is difficult sometimes when people see you with this big dog. They are afraid.” (P:C2)

“Some people are really scared of her. I think that people are nervous and specifically a black dog makes people more nervous for some reason. I have had people at home affairs not let us in and tell us that they are allergic to dogs so we can’t enter just because they are actually scared of her.” (P:E)

“Sometimes people are scared of the dog which is difficult when you are just trying to get your shopping done and then you have these people freaking out around you. It’s hard to deal with.” (P:G)

These participants noted how public fear was a common problem which they came across which was challenging to have to deal with. Although the participants were understanding of the fear which some people felt towards dogs, it was still frustrating for them. While the majority of the expressions of fear which the participants had experienced were not too disruptive, Participant D mentioned a rather distressing experience which she had endured whilst out in public with her autism service dog:

“One day a lady actually threw a bag in my face and shouted about how society had become disgusting to allow dogs in shops. I tried to explain that she is a guide dog but it turns out she had been bitten by a dog once so she was just terrified by her.” (P:D)

This must have been a particularly difficult situation to manage with an ASD child, however, the participant did appear to be understanding of the situation rather than frustrated by it.

Unfortunately, the history of dogs within South Africa has resulted in a great deal of fear of dogs for a number of individuals due to their use in the apartheid years (Mjamba, 2015). It is a sad reality that this fear still lingers for some individuals and is perhaps the reason for the above mentioned challenges faced by the participants of this research study.

Research conducted internationally did not identify the above stated challenges, meaning that no comparisons were possible here.

It was encouraging to find that the participants, although displeased by the treatment which they have received from the public due to fear or dislike of dogs, were not angry but were rather understanding towards such people's views towards dogs. Some of the experiences noted by the participants were rather unpleasant, however, fear of and dislike towards dogs is a serious problem for some and should be respected. This is a delicate situation which requires careful management by the owners of the autism service dogs.

#### **4.3.6.f) Super-ordinate Theme VI: Conclusion**

In conclusion, the participants of this research study mentioned experiencing a wide variety of responses from the general public when out with their autism service dogs, some positive, others negative. The main points mentioned by the participants were an increase in attention directed towards themselves and their ASD children whilst out in public which was perceived both positively and negatively, difficulties being granted admittance to various premises with the autism service dogs, noticeable deficits in education around autism service dogs in South Africa, improved empathy shown towards themselves and their ASD children as well as challenges with some of the public's dislike or fear of dogs. Public response was a topic mentioned frequently by all of the participants, highlighting the importance of the topic for the participants. It is unfortunate to note that more negative than positive experiences were identified. This is problematic as it shows greater dissatisfaction than satisfaction from the participants with regard to outings with their autism service dogs.

#### **4.3.7) Super-ordinate Theme VII: The Welfare of Autism Service Dogs in South Africa**

This super-ordinate theme provides a description of the welfare of the autism service dogs whose owners took part in this research study. Through the analysis of the transcriptions of the interviews conducted for this research study, two main areas relating to welfare were identified. Due to this, two sub-ordinate themes were developed to refine this super-ordinate theme:

- 1) Well Cared for Dogs: "second child"
- 2) Safety Concerns: "tantrums can be violent"

#### 4.3.7.a) Sub-ordinate Theme 1) Well Cared for Dogs: “second child”

Identified in all eight of the interviews conducted for this research project was a high standard of care provided to the autism service dogs by their owners. A common sentiment expressed throughout the interviews was how the autism service dogs were viewed as an additional child:

“She’s like the daughter I never had” (P:A)

“She’s just another one of the kids” (P:D)

“She’s my second child” (P:F)

Due to the autism service dogs having been perceived as an additional child in the family, it is no wonder that they were provided with a high standard of care. This care included regular vet visits, monthly tick and flea treatments, regular de-worming treatments, high quality food, daily walking, daily grooming, designated rest time and access to a variety of luxury sleeping facilities:

“I walk her every day and she is groomed every day and she eats the fancy pellets. She also has time off every weekend and in the afternoons she knows that she doesn’t have to work.” (P:A)

“We go for check-ups at the vet regularly and if ever we have a problem we are straight to the vet.” (P:D)

“Twice a week we go to the dog park and she is allowed to just run free and socialize with the other dogs there. She also has time off each day, it’s only fair.” (P:E)

“I only feed her the very best food. It is expensive but she’s worth it. Then there’s the grooming every day and the walks and the vet visits plus she has a fancy Rogz bed. She’s definitely not just a dog” (P:F)

“She has a whole bed to herself and a couch for herself on the patio. She’s treated like a human here.” (P:G)

It is evident from the above quotes that the autism service dogs whose owners took part in this research study were provided a very high standard of care. It is positive to have found that not only were the basic care requirements of owning a dog fulfilled to such a high standard but also the participants mentioned being cognisant of the restraint expected of the dogs while on duty. The participants mentioned having provided their autism service dogs with designated time off duty as well as regular walks and play time where they were out of harness and allowed to simply behave as a regular dog would. This is a pleasing finding as concern has been raised internationally with regard to the constant duties expected of the autism service dogs (Burrows et al., 2008a). It is positive to have identified that the South African caregivers appear to have addressed this matter without even realising.

While it is clear that all of the participants from this research study cared deeply for their autism service dogs, viewing them as a member of the family rather than as simply a pet, the SAGDA was noted to have in place measures to ensure the welfare of the autism service dogs:

“There are pretty strict guidelines on how to look after her and what she needs and how often she has to go to the vet and how much she should weigh and all of that.” (P:A)

“If we are not treating her well then there’s a, I signed a terms and conditions so it’s a transaction. As I said before, if she was a gift then they can’t take her away but because of the policy then can take her away if they need to.” (P:B2)

This is an encouraging finding which shows how the SAGDA has the best interests of their service dogs in mind and have in place measures to ensure their welfare requirements are upheld. Research conducted internationally made no mention of care guidelines prescribed by the organizations who supply autism service dogs internationally, meaning that no comparisons can be made here.

It is wonderful to have found that all of the autism service dogs whose owners took part in this research study were cared for very well, however, it is important to note that the participants all mentioned being animal lovers:

“I have always loved animals so it’s fantastic for me. I think it’s quite important that anyone who wants to get an autism dog is an animal lover because if not then I don’t think it would work out” (P:B1)

“We all love animals and always have.” (P:D)

“I have always had animals around me and I don’t know what I would do without them so having her is just so special, but I think it’s important to be an animal lover if you have a service dog.” (P:E)

These comments are interesting as it appears that all of the participants were animal lovers prior to applying for an autism service dog for their ASD children. It is also important to highlight the participants mentioning their belief that anyone who is considering an autism service dog should be an animal lover due to the intense interactions with the dog as well as the requirement for the dog to be in the house at all times and accompanying the ASD child on the majority of outings. This could be challenging for someone who either has little knowledge or experience of dogs or for someone who is not overly fond of dogs. While it is not necessarily of huge concern due to the prospective owner being the one to request an application, making one believe that only animal lovers would do so, it is still important to note as often caregivers of ASD children are desperate for any help available so may apply without fully thinking through the requirements of owning an autism service dog.

#### 4.3.7.b) Sub-ordinate Theme 2) Safety Concerns: “tantrums can be violent”

Participants from four of the eight interviews conducted for this research study mentioned some scenarios which raised concern for the safety of the autism service dogs. These comments were not all considered to have been of concern to the participants, however, they did highlight possible welfare concerns for the autism service dogs.

Participants A and F noted possible areas of concern for the welfare of the autism service dogs attending school with their ASD children:

“In school, some of the kids from the class are like super hyper and they would like charge around her and grab her tail and push her bum down and once they just bombarded her and were making barking noises, well I mean it is a special needs school but, ja, they scared the living daylights out of her and still you cannot touch her tail. She was petrified.” (P:A)

“He went to a school for about a month before and we took his dog with once but the teacher couldn’t keep the dog safe from the other kids and I saw that. I walked him to school and some of the kids were actually throwing stones at the dog.” (P:F)

These comments do raise concerns for the welfare of the autism service dogs accompanying their ASD children to school. It is unfair to expect the teacher in the class to restrain the other children and maintain the welfare needs of the autism service dog while trying to control all the children in the class as well. This is something which must be explained to and discussed with the teachers prior to them agreeing to the attendance of the autism service dog (Harris & Sholtis, 2016). It is also not fair to the autism service dog to subject it to behaviour which may result in physical or psychological harm, or possibly even both.

The participants also raised concern over the violent behaviour of some of the ASD children:

“He went through a phase of bad tantrums where he would lash out and that really scared her. Now she tends to run away if he has a tantrum and it’s hard to get her to trust him again.” (P:A)

“He once had a fit and like fell on top of her and she got such a fright and then you have to re-introduce them again and she was so scared of him but it just took time.” (P:D)

“I have to be careful because he’s really strong and if he does lash out I have to protect her because he hurts me so he would definitely hurt her.” (P:E)

“The principal at the school, her child had already killed three of her dogs just by brute force.” (P:F)

Children with ASD are known to have meltdowns, tantrums and violent outbursts at times (Barlow & Durand, 2015). As noted by the participants, these violent outbursts could be dangerous to



the welfare of the autism service dogs, both physically and psychologically. This is a welfare concern also raised internationally (Burrows et al., 2008a). Due to the behavioural challenges often expressed by ASD children, this is naturally a welfare concern which would be applicable to autism service dogs throughout the world. While only participants E and F showed concern over the possibility of harm coming from such outbursts, participants A and D noted how their autism service dogs had suffered psychologically from such violence. This leaves one to wonder whether autism service dogs are suitable for older ASD children who are prone to violent outbursts or in fact any age ASD child prone to such destructive behavioural challenges. It must be noted here that it was rather surprising to have found this as one of the criteria mentioned by the SAGDA for being placed with an autism service dog was that the ASD children were not prone to violent behaviours. Due to this, it was expected that such welfare concerns may not have been a problem within South Africa. It is concerning that the SAGDA appear to have faltered when screening some of the ASD children.

#### **4.3.7.c) Super-ordinate Theme VII: Conclusion**

In conclusion, this super-ordinate theme provided a description of the findings relating to the welfare of the autism service dogs whose owners took part in this research study. It was highly positive to have found that all of the participants mentioned very high standards of care which they had provided for their autism service dogs, taking into consideration both the physical and psychological needs of the dogs. The SAGDA were also noted to have provided fairly strict guidelines for the care of their service dogs and have measures in place to remove the dogs should they feel the welfare of the dogs is at risk. Unfortunately it was found that violent behaviour from emotional outbursts of the ASD children did raise concerns for the welfare of the autism service dogs, both at school and in the home. This was surprising due to the SAGDA having mentioned that they did not provide ASD children with autism service dogs should they have been prone to violent behaviours. This makes one question the screening processes followed by the SAGDA.

#### **4.3.8) Super-ordinate Theme VIII: Ideas for the Improvement of Autism Service Dogs in South Africa**

This super-ordinate theme provides a description of the ideas, identified by the participants of this research study, for possible methods that could be put in place to enhance the benefits of autism service dogs in South Africa. All of the participants from this research study mentioned ideas which they believed could result in improvements in the benefits of autism service dogs for those supplied with them. This super-ordinate theme has been further refined into three sub-ordinate themes:

- 1) Education: “there needs to be more information available”
- 2) Additional Training for Autism Service Dogs: “expected more”
- 3) Increase Training Centres: “we need more of these dogs”

#### **4.3.8.a) Sub-ordinate Theme 1) Education: “there needs to be more information available”**

Participants from seven out of the eight interviews conducted for this research project indicated their disappointment at the amount of information available to the general public with regard to autism service dogs in South Africa:

“It shocks me how little information is actually available on autism dogs like in the media and stuff like that.” (P:D)

“The information available is really poor, in fact I think it’s basically non-existent.” (P:F)

This lack of available information was highly frustrating to the participants. This is understandable when one takes into consideration the participant’s mention of the deficit in knowledge expressed by the general public towards autism service dogs, as documented in super-ordinate theme VI above. Participants frequently mentioned their beliefs of a need for a far greater amount of information on autism service dogs to be available to the general public of South Africa:

“There needs to be far, far more information available, that’s for sure.” (P:A)

“I think the guide dog association does a lot of work to educate for the guide dogs and service dogs but not necessarily autism support dogs. They need to focus on information about the autism support dogs a lot more.” (P:B1)

“We try to create awareness about the autism dogs but it’s not enough. It’s a major, major issue.” (P:D)

“There definitely needs to be more I mean, there’s obviously a lot of information on the guide dog association but it’s not about the autism service dogs. There definitely needs to be more available on them.” (P:E)

Participants were also keen to offer recommendations for ways to increase the amount of information available to the public. As seen in the quotes above, a greater focus on autism service dog information provided by the SAGDA was encouraged. In addition to this, an increase in information broadcast on social media and print media was recommended:

“You have to start having articles in magazines so people can start reading about it.” (P:B1)

“Maybe on the guide dogs Facebook page they could put more information. It’s always the guide dogs but not the autism dogs.” (P:E)

“There needs to be like more Facebook news and videos on social media. I think that would help a lot.” (P:F)

These are certainly valuable recommendations as a large percentage of the population of South Africa are likely to be regular users of social media as well as print media. This would perhaps address the deficit in knowledge on autism service dogs in South Africa which would be highly beneficial to the caregivers, ASD children and autism service dogs in our country.

In addition to the recommendations above, participants mentioned the need to improve the education provided to shop staff and security guards:

“They need to train the security guards so they know what these dogs are.” (P:C2)

“Staff need to be educated, guards as well. They should understand because they don’t know and that must be difficult for them.” (P:H)

This is an important recommendation which should certainly be considered. The participants were in agreement that, should companies provide adequate training to their staff, there would likely be far less challenges for the caregivers when attempting to gain access to various businesses which was noted to have been a frequently experienced problem.

It is evident that the participants of this research study were of the opinion that an increased amount of information on autism service dogs should be made available to both the general public and business employees and employers. This is a valuable recommendation which, according to the participants, should certainly be put into practice due to the positive outcomes which would likely come about for the caregivers, ASD children and their autism service dogs, who frequently face challenges when out in public due to a lack of knowledge around autism service dogs in South Africa.

#### **4.3.8.b) Sub-ordinate Theme 2) Additional Training for Autism Service Dogs: “expected more”**

Participants from five out of the eight interviews conducted for this research study indicated having had higher expectations with regard to the amount of training provided to the autism service dogs:

“We did expect more. We expected a bit more training and for her to be better socialized.” (P:C2)

“We did expect them to be able to do more but they did say what they could and couldn’t do so we knew but I still did expect a bit, my expectations were higher I guess.” (P:F)

“My expectations were a bit higher. I had seen so many videos from overseas and they just do a lot more there so I did expect more.” (P:G)

The participants expressed a sense of mild disappointment with regard to the training provided to their autism service dogs. Participants C1 and C2 were both noticeably more disappointed

than the other participants, mentioning that they believed the training provided to their autism service dog was not at all adequate or suitable:

“I would say the current training, I wouldn’t say is appropriate for autistic children. Their main focus seems to be relationship wise and that’s not useful for autistic children who aren’t good at relationships.” (P:C1)

This disappointment in the abilities of the autism service dogs is something documented internationally as well (Burrows et al., 2008b). As noted by Burrows et al. (2008b), some caregivers were found to have had unrealistic expectations of the capabilities of the autism service dogs. Although the SAGDA were noted to have explained the capabilities of the South African autism service dogs, the participants had still hoped for more. The participants also mentioned having had higher expectations based on information which they had gathered on the international autism service dogs and their capabilities:

“In Australia they teach the dogs to track and they have special harnesses so the child can’t bolt.” (P:F)

“They do so much overseas. I have seen such amazing videos and I had hoped that maybe we would have similar training here.” (P:H)

This was noticeably disappointing for the participants due to the high expectations which information from international organisations had created. This was likely due to the participants perhaps having consulted only non-scientific international reports of autism service dogs which generally focus on the positive aspects and neglect the negative aspects of autism service dog ownership. It must be noted, however, that autism service dogs appear to be trained slightly differently internationally and are perhaps able to perform additional tasks to those of South African autism service dogs. While this may be true, the SAGDA were found to have explained the ways in which their training differs from those of international organisations. Even with this thorough explanation, participants appear to have still hoped for more. Due to this, participants from four out of the eight interviews conducted for this research recommended that the SAGDA consider altering and increasing the training which they provide to their autism service dogs:

“I think they should maybe train the dogs to be more used to more aggressive behaviour because autistic children are more aggressive but she seems to not understand that and gets scared so maybe to be trained to tolerate more would be very useful.” (P:A)

“They need to teach them not only the social aspects but how to protect the child and to like alert us if the child is in danger.” (P:C2)

“I think just a little bit more training for the dogs because they really are just like well trained dogs rather than service dogs.” (P:F)

“I thought that they would like go to the child when they are having a meltdown to calm them down but they don’t. I have to command him to do that sort of thing so it would be good if they could maybe work on that. Also a way to make the dog bond less with the mother and more with the child would be good.” (P:G)

These recommendations for training are valuable, however, some may be rather challenging or unethical to accomplish. As noted in research conducted internationally by Burrows et al. (2008a), autism service dogs are, essentially, still dogs and not some sort of robot capable of performing any tasks requested of them. While it is understandable that the participants had hoped for the autism service dogs to have greater capabilities, the SAGDA did inform them of their training capabilities prior to providing them with a dog, therefore, the participants should perhaps have been more prepared for what they received.

It is important to mention that the participants, although desiring greater and perhaps different training for the autism service dogs, did note that the dogs were very well trained and well mannered:

“She’s very well trained and can sit and high five and all that.” (P:A)

“She’s very well behaved and well mannered. They did train her well but she’s more of an emotional support dog than an actual service dog.” (P:G)

The participants were pleased with the basic behavioural training which their autism service dogs had been provided, however, they did appear to question why the dogs were termed service dogs as they did not believe that the training provided to the dogs was suitable to result in them being labelled service dogs.

It is clear that a number of the participants from this research study did not have their expectations met with regard to the capabilities of their autism service dogs. While it is positive to have identified that the participants believed their autism service dogs to be well trained in basic behavioural skills, participants did recommend that the SAGDA enhance the training which they provide to these dogs as their current capabilities were not deemed adequate for their intended purpose. While this is a valuable recommendation, the welfare and capabilities of the dogs should be considered prior to any additional training.

#### **4.3.8.c) Sub-ordinate Theme 3) Increase Training Centres: “we need more of these dogs”**

Participants from three out of the eight interviews conducted for this research noted how, in South Africa, more autism service dogs needed to be trained and made available to ASD children.

These participants believed there to be a far greater need for autism service dogs than the SAGDA were able to cater for:

“The association is doing their best but they focus more on guide dogs than autism dogs. There is a need in here and they need to find a way of training more dogs.” (P:A)

“You can’t even apply for one anymore because their waiting list is full. That just shows how in demand these dogs are but there isn’t enough of them being trained.” (P:H)

While it is apparent that the participants understood the limited resources available to the SAGDA to train autism service dogs, due to the greater demand for guide dogs for the blind which is their main focus, participants expressed a sense of urgency towards finding a way to train more dogs for use as autism service dogs. As participant H mentioned, at the time of the interview the SAGDA had closed their applications for autism service dogs as their waiting list was full.

Participants from two of the interviews conducted for this research study voiced some recommendations which they believed to have been possible solutions to the problem of insufficient autism service dogs available in South Africa. Participant F recommended that the SAGDA considered opening another training institute where they could focus only on training autism service dogs:

“Maybe they could open another centre for the autism dogs to be able to train more.” (P:F)

This is a valuable recommendation, however, the participant was aware that the financial situation of the SAGDA may not have been viable for such to occur.

Participant H recommended that other organizations who provide dog training considered training dogs as assistance and companions dogs for ASD children:

“It would be nice if more companies would train dogs just to be companion dogs for autistic children. I mean, I know they wouldn’t be the same and couldn’t go everywhere with you but it would still be helpful for the children.” (P:H)

This is another valuable recommendation, however, dogs trained in this manner would not be granted the same rights of admission as a service dog trained by the SAGDA. This was understood by the participant, however, she still believed that such dogs would be of benefit to ASD children.

The participants of this research study identified that there was a clear need for more autism service dogs to be trained by the SAGDA. As mentioned, the waiting list for an autism service dog was full, with applications closed at the time of the interviews. This highlights the great demand for autism service dogs as well as the SAGDA’s inability to keep up with the demand. Participants voiced their recommendations for possible methods to address this deficit, however, they were cognisant of

restricting factors which may impede the ability of the SAGDA as well as additional organisations to act upon their recommendations.

#### **4.3.8.d) Super-ordinate Theme VIII: Conclusion**

In conclusion, this super-ordinate theme documented areas relating to autism service dogs in South Africa which the participants of this research study deemed in need of improvement as well as their recommendations for addressing such areas. Problems noted were with regard to educating the general public, employers and employees, the training and capabilities of the autism service dogs as well as the need for more autism service dogs to be trained and made available in South Africa. Participants provided some valuable recommendations which they deemed suitable for addressing these perceived deficits.

## Chapter 5

### Conclusion

#### 5.1) Introduction

This chapter will provide a summary of the data gathered from this research study set out in a manner to highlight how the results generated answer each of the research questions which guided this study. In addition to this, limitations of this study will be documented followed by recommendations for future research.

#### 5.2) Considering the Research Questions in Light of Results Obtained

Following a qualitative approach, this research study aimed to provide a baseline for research on autism service dogs within South Africa. The data generated for this study was gathered through the use of semi-structured interviews which were then transcribed verbatim and analysed thematically using a hermeneutic phenomenological framework. The research study was guided by a set of eight questions, the answers to which the researcher of this dissertation aimed to attain. Each question will be discussed separately below with the answers generated from this research provided and related to those of international research where possible.

##### 5.2.1) Question 1: How accessible are autism service dogs for South Africans, based on the experiences of the caregivers of ASD children placed with such service dogs?

Results from this research indicate that autism service dogs are likely to be accessible to a large percentage of the population within South Africa, however, there are a few problems which may result in reduced accessibility for some population groups. While the application process, obtainment costs and training provision were all made highly accessible for the majority of the population due to the excellent services found to have been provided by the SAGDA, the waiting period prior to receiving the autism service dog along with the maintenance costs may result in these dogs being less accessible to some population groups. The waiting period was identified as a problem for many of the participants which they had not been prepared for, however, the maintenance costs were not noted as challenging for the participants. While this may be true for those who took part in this research study, the costs of maintaining a large breed dog is likely to be a strain financially for individuals from lower income households.

Internationally there was little mention of the accessibility of autism service dogs, resulting in few comparisons being possible with regard to this topic, however, it was interesting to have identified that the training provided by the SAGDA was of greater length than that of international organizations. This is a positive finding as greater training would likely result in the new owners being better equipped to handle their new service dogs.



### **5.2.2) Question 2: How did the children with ASD, their siblings and their caregivers experience adjusting to life with the autism service dog?**

With regard to the ASD children, results from this research indicated that the majority of the ASD children whose caregivers participated in this research were perceived to have adjusted fairly well to their autism service dogs and had formed a bond with the dogs, however, the strength of this bond varied with some being perceived to have formed a strong bond while others a fair bond, with one ASD child perceived to have formed no bond at all. Challenges were however noted with regard to the length of time taken for the ASD children to adjust and form a bond with their autism service dog, possibly due to social impairments which the ASD children suffered from. Internationally, similar results have been identified with regard to bond formation between ASD children and animals, however, the length of time taken to form such a bond appears to not have been noted in these international studies. It is clear that social impairments of the ASD children must be taken into consideration when analysing an ASD child's adjustment to their autism service dog as, although the ASD children from this study appear to all have adjusted fairly well to their autism service dogs, adequate time must be allowed for these adjustments.

With regard to siblings, results from this research identified some challenges. It appears that all of the siblings from this research study had difficulties adjusting to the autism service dogs due to the SAGDA recommending that they not interact with the service dogs to minimize the risk of the service dog forming a closer attachment to the siblings than the ASD children. This was a recommendation also noted in international literature. Unfortunately, as was found internationally, this resulted in a great deal of frustration and disappointment from the siblings which stood the risk of resulting in jealousy and family feuds due to the caregivers having to enforce said rule. In addition to this, unlike international findings, siblings did not appear to become less embarrassed or feel a sense of pride towards their ASD siblings as a result of owning an autism service dog. It appears that the siblings of the ASD children from this study had a challenging time adjusting to the autism service dogs.

With regard to the caregivers, results from this study indicated that a fair amount of lifestyle adjusting was required. In particular, adjusting to incorporate the autism service dogs into daily tasks, most especially shopping, was fairly challenging. This was also identified internationally, however, unlike the caregivers internationally who learned to adjust their lifestyles to incorporate the service dogs, some of the caregivers from this study were unable to do this and resorted to either rather leaving the autism service dogs at home or not going out as much. In addition to this, one participant was also found to have had difficulties adjusting to their autism service dog shedding in the house. This was a challenge also noted internationally. On a more positive note, all of the caregivers from this study also noted that they had formed a particularly strong bond with their autism service dogs

which was perceived as highly positive. Caregivers were found to have had challenges in the first while of owning the autism service dogs, however, they had found ways to adjust their lives to work around the service dogs fairly quickly, although, maybe not in the most beneficial ways when considering that many failed to adjust to taking the autism service dogs with on outings, which is a large part of the service dog's job.

### **5.2.3) Question 3: How are autism service dogs being used by their recipients within South Africa?**

Results from this research indicated that autism service dogs are being utilized in five main ways by their owners, namely: school; outings; therapy; emotional support and as educational tools.

With regard to school use, of the ASD children whose caregivers participated in this research, three attended school. Of these three ASD children, two were accompanied by their autism service dogs. The remaining ASD children were home educated, two of which attended a school on a part time basis and both of these ASD children were accompanied by their autism service dogs. The autism service dogs who attended educational facilities with their ASD children appear to have been well received by the educators at the institutions, however, a few challenges were noted with regard to behaviours of the other children within the class, as well as some of the children experiencing fear of the dogs. Details on the ways in which educators made use of the autism service dogs within the classroom were not available, however, caregivers did note some positive benefits for their ASD children due to the attendance of their autism service dogs, although these benefits were far fewer than those identified internationally. Results are inconclusive with regard to the suitability of autism service dogs accompanying their ASD children to educational facilities within South Africa.

With regard to outings, participants from five out of the eight interviews indicated that their autism service dogs accompany them on all outings, while the remaining participants indicated that they seldom go out with their autism service dogs due to intolerable difficulties. Benefits were noted by those who incorporated their autism service dogs on outings, however, additional time and patience was noted as a requirement. Many participants noted challenges with gaining admittance to businesses which was identified as highly frustrating and occasionally resulted in anxiety for the ASD children. This was an exceedingly problematic situation and a challenge not documented internationally. Interestingly, unlike what was found internationally, South African autism service dogs appear to not be suitable as a security device while out, as caregivers identified that the harness set up was unsuitable for restraining an ASD child should they attempt to bolt. Autism service dogs both internationally and locally are, according to the organisations who supply them, trained primarily to maintain the safety of ASD children by preventing them from bolting while out in public. It was highly unfortunate to have found that South African autism service dogs were identified as unsuitable for this as internationally these service dogs are praised for the ability to maintain child safety.

With regard to therapy, it was found that five of the ASD children from this study attended therapy sessions, all of whom were accompanied by their autism service dogs. Therapists were perceived to have been eager to incorporate the autism service dogs into therapy sessions and made use of the dogs in the same ways as international therapists have been found to. As was found internationally, positive results were identified from the incorporation of the autism service dogs into therapy sessions.

With regard to emotional support, participants from seven out of the eight interviews perceived the autism service dogs to act as constant, loyal companions for their ASD children, resulting in improved emotional wellbeing of the ASD children. In addition to this, three participants commented upon their autism service dog's ability to assist with calming the ASD children when they had a meltdown. These are very similar results to those identified internationally. Participants from this study noted their belief that autism service dogs should perhaps rather be called emotional support dogs as the duties which they performed were perceived to be more in line with emotional support rather than physical assistance.

With regard to being used as an educational tool, participants from five out of the eight interviews were found to have taken the initiative to develop ways to make use of their autism service dogs to assist in teaching their ASD children valuable skills including how to follow instructions, gentle touch, responsibility and crawling. It was interesting to have found that international research only noted caregivers making use of the autism service dogs to assist in teaching motor control for gentle touching but not for teaching responsibility, instruction following or crawling. It was also positive to have found that the SAGDA were willing to train their autism service dogs in some additional skills when possible, on request by the caregivers. This was something apparently unique to the SAGDA as no mention of this was made with regard to international organizations. This made utilizing the autism service dogs for a variety of educational purposes more accessible due to the possibility of additional training should such be required.

**5.2.4) Question 4: What are the experienced effects, both positive and negative, of autism service dogs for the ASD children supplied with such service dogs, as described by the caregivers?**

Results from this study identified a number of positive effects for the ASD children perceived to have resulted from the autism service dogs. These included increased fondness of dogs, self-confidence, calmness, verbal communication, happiness and social skills.

With regard to increased fondness of dogs, half of the participants noted this improvement. This was less than expected based on international research. This increased fondness was perceived as a positive outcome by most who had observed it, however, one participant did note concern over possible negative interactions with untrained dogs.

With regard to improved self-confidence, only three participants identified this. International research identified similar improvements from the use of AAI's and from pet ownership, however, no mention of improvements in self-confidence were noted from owning autism service dogs internationally with which to compare these results. Interestingly, all of the participants who identified this improvement in self-confidence also perceived their ASD children to have a strong bond with their autism service dogs.

With regard to increased calmness, participants from four out of the eight interviews perceived their ASD children to be, in general, far calmer than prior to owning the autism service dogs. This was a result also frequently mentioned in international research. While this positive effect was only mentioned in four of the interviews, it was found that only five of the ASD children from this study were prone to disruptive behaviours. This positive effect was perceived to have been due to the calm disposition of the autism service dogs, something which was not considered in international research.

With regard to improvements in verbal communication, participants from four out of the eight interviews identified that their ASD children had experienced difficulties with verbal communication and had noticed increases in both vocabulary size and frequency of speech of their ASD children following the reception of their autism service dogs. This was a benefit noted internationally as well. These improvements were perceived to have been the result of the ASD children desiring to communicate with their autism service dog and therefore providing them with an incentive to attempt communication. Of the remaining ASD children from this study, three were non-verbal and the final ASD child had never experienced difficulties with verbal communication.

With regard to improvements in happiness, participants from three out of the eight interviews perceived their ASD children to have become happier since receiving their autism service dogs. This was a benefit also documented in international research. Of the remaining ASD children, caregivers did not mention perceiving their ASD children to have suffered from low moods prior to receiving their autism service dogs.

With regard to social skills improvements, participants from four out of the eight interviews identified improvements in social skills from their ASD children. International research has confirmed that animal interactions frequently result in improved social skills of ASD children. In addition to this, international research on autism service dogs has further confirmed this positive effect. It is unclear however whether the improvements observed by the participants were solely the result of the autism service dogs or whether additional variables contributed.

It was encouraging to have found that the caregivers made no mention of experiencing any negative effects for their ASD children from owning an autism service dog.

**5.2.5) Question 5: What are the experienced effects, both positive and negative, of autism service dogs for the caregivers of the ASD children supplied with such service dogs?**

Caregivers of the ASD children, who had been supplied with autism service dogs, who took part in this research study identified both positive and negative effects of owning the autism service dogs. The positive effects included increased happiness as well as a sense of reduced burden. Negative effects included increased stress as well as increased workload.

With regard to increased happiness, participants from five out of the eight interviews noted feeling an increased sense of happiness following the reception of the autism service dogs. This increase in happiness was due to the knowledge that their ASD children had a loyal companion and friend, having something in common to share with their ASD children, the strong bond which they had formed with the autism service dogs as well as simply from being around the service dogs. This was a benefit identified for international caregivers as well.

With regard to feeling a sense of reduced burden, participants from five out of the eight interviews made comments towards this. This improvement stemmed from an increase in personal space as well as a greater amount of time available to the caregivers for personal use. These were also benefits noted by caregivers internationally.

With regard to increased feeling of stress, participants from three out of the eight interviews commented upon this. Increased stress was perceived to have been the result of high levels of concern for the welfare of the autism service dogs as well as a sense of pressure to maintain the dogs to very high standards in order to keep up with perceived expectations of a service dog. Increases in stress were not identified by caregivers from international research studies.

With regard to increased workload, participants from five out of the eight interviews made comments towards this. This increased workload was perceived to have resulted from the caregivers viewing the autism service dogs as another child requiring full-time care rather than just a dog and secondly due to the increased effort required when taking the service dogs with on outings. Caregivers from international research studies also noted these challenges, however, the South African caregivers did not perceive the challenges to be a burden but were rather accepting and understanding of them whereas the international caregivers perceived these challenges to be a highly negative burden.

**5.2.6) Question 6: What is the general public's perception towards the use of autism service dogs within South Africa, as experienced by the caregivers of those placed with an autism service dog?**

Results from this research identified both positive and negative experiences from the participants with regard to public responses towards the autism service dogs. It was found that members of the public paid greater attention towards the families when accompanied by their autism

service dogs, there were frequent challenges upon attempting to gain admittance to businesses while accompanied by the autism service dogs, the public were perceived to have been greatly ignorant with regard to knowledge of autism service dogs, greater empathy was shown towards the ASD children and their caregivers while accompanied by the autism service dogs and, lastly, challenges were experienced due to some members of the public being displeased by the autism service dogs.

With regard to increased public attention, participants from seven out of the eight interviews noted having experienced this. Increased public attention shown towards the ASD child and those who accompanied them on outings when with their autism service dogs was also identified internationally. Participants from this research were found to have had mixed reactions to this with participants from five of the interviews viewing the increased attention in a positive way while participants from the remaining two interviews viewed it in a negative way.

With regard to business admittance, participants from seven out of the eight interviews noted having regularly experienced challenges when attempting to enter businesses. This resulted in a number of participants choosing to either not venture out with their autism service dogs or to simply go to only a restricted number of businesses where they knew that they would be permitted entrance. This is opposite to the results found internationally where the autism service dogs were noted as having provided the families with greater freedom for outings, rather than further restrictions as seems to have been the case in South Africa. Participants noted that the main problem was with security guards who were noted as lacking in knowledge of the rights of service animals within South Africa.

With regard to perceived educational deficits of the public towards autism service dogs within South Africa, all of the participants were found to have identified this. Participants were distressed by this due to the unrestrained attention which they often received from the public who were uneducated on the correct ways to approach a service dog. The deficit in education was also noted to have stretched beyond the general public to include business owners and employees. This appears to have been a challenge not experienced internationally and was noted as causing a great deal of frustration and concern for the participants.

With regard to increased empathy shown by the public towards the ASD children and their caregivers while out with their autism service dogs, all of the participants identified this. This was an interesting result due to the previously mentioned belief of the participants regarding a great lack of knowledge of autism service dogs by the public. Participants believed the increased empathy to be the result of the public being able to immediately see that there is something wrong with the ASD child. This was a result also documented internationally. The participants from this research were greatly pleased by the greater empathy shown towards their ASD children and themselves.

With regard to public dissatisfaction towards the autism service dogs, participants from five out of the eight interviews identified this as a challenge. Participants identified both public dislike and

fear of dogs to have been a challenge on occasion which resulted in negative interactions with members of the public. This was problematic for the participants and was noted to have occasionally caused distress for the ASD children. This was a challenge not commented upon in international research. The participants from this research, although concerned over the negative interactions, were remarkably understanding towards this public response.

#### **5.2.7) Question 7: What are the effects of life as a South African autism service dog on the welfare of the service dogs?**

Results from this study identified that the autism service dogs whose owners took part in this research were cared for at very high standards, however, a few concerns regarding the safety of the dogs were also identified.

With regard to being well cared for, it was clear that all of the autism service dogs from this research study were cared for exceptionally well. The participants were found to have viewed their autism service dogs as children rather than pets and all ensured that the dogs were in good health, fed correctly, groomed regularly and allowed plenty of time off from their duties to behave as a regular dog would. It was also found that the SAGDA had measures in place to ensure the welfare of their autism service dogs is maintained. Information on the care provided to autism service dogs internationally was not provided in the literature consulted for this research study so comparisons were not possible here.

With regard to safety concerns, participants from four out of the eight interviews mentioned scenarios which were of concern to the safety of the autism service dogs. These scenarios were the result of violent, rough and uncontrolled behaviours exhibited by the ASD children. This was a concern also documented internationally, highlighting how this would be a problem for autism service dog welfare throughout the world. This was a surprising finding within this research study as the SAGDA were found to have noted that they do not supply autism service dogs to ASD children prone to violent behaviours. This makes one question the processes followed by the SAGDA for screening the ASD children.

#### **5.2.8) Question 8: What could be implemented to enhance the benefits of autism service dogs for South Africans?**

Participants from this research study identified a few ideas regarding ways in which to enhance the benefits of autism service dogs within South Africa. These included improving the education of the general public, increasing the training provided to the autism service dogs as well as increasing the number of autism service dogs trained and supplied to ASD children within South Africa.

With regard to increasing public knowledge, participants from seven out of the eight interviews believed there to have been far too little information on autism service dogs available to the public of South Africa. Participants recommended this matter be addressed through an increase in information on autism service dogs being made available by the SAGDA as well as utilizing both print and digital media platforms to make information available to a large percentage of the South African public.

With regard to additional training of the autism service dogs, participants from five out of the eight interviews were found to have recommended this due to feeling slightly disappointed at the capabilities of the autism service dogs which they had been provided with. International research was found to have also commented upon this matter, noting participants having had unrealistic expectations of the autism service dogs. Interestingly, disappointment of the participants from this study appeared to have stemmed from their expectations of autism service dogs based on international information. While the SAGDA were found to have explained how the training which they supply to their autism service dogs differs to that of international organizations, the participants were found to have still been disappointed and expected more. The recommendations for further training provided by the participants were, however, rather challenging and even possibly unethical to achieve, highlighting how, as was found internationally, caregivers may have rather unrealistic expectations of these dogs, while failing to remember that they are, after all, dogs and not mechanical robots. Although some of the participants were disappointed, it must be noted that they were still very pleased with the training which the dogs had received and believed them to have been of great help for both their ASD children and themselves, however, the participants did appear to question why the dogs were labelled as service dogs, as they were found to have been unable to perform tasks which the participants deemed to have been expected of a service dog.

With regard to training and supplying a greater number of autism service dogs, participants from three out of the eight interviews were found to have recommended this, believing there to have been a far greater need for autism service dogs than the SAGDA were capable of fulfilling. Recommendations included the SAGDA opening a second facility to train only autism service dogs as well as other dog training organisations beginning to train such dogs. While these are valuable recommendations, consideration must be given to the financial implications for the SAGDA which would likely be the reason for them being unable to train a larger number of autism service dogs. In addition to this, should other organisations train and supply autism service dogs within South Africa, they would likely not be granted the same rights as a dog trained by the SAGDA, as they would not be allowed to be labelled as service dogs, so would be legally unable to accompany their owners into a variety of businesses and facilities.



### **5.3) Final Conclusions**

This qualitative research study aimed to generate answers to eight guiding questions relating to autism service dogs within South Africa. The results outlined above highlight the answers which the researcher was able to gather for each of the guiding questions from this study. It appears that the researcher was able to answer all of the questions, although, some to a greater extent than others. From these results it can be seen that autism service dogs within South Africa are certainly viewed as beneficial by their owners, however, they are not without their challenges.

### **5.4) Limitations**

Due to financial and time restrictions, as well as the limitations of a Master's research project, this research study was unable to accommodate a larger sample of individuals. In addition to this, due to there being only a limited number of autism service dogs within South Africa, all of whom were spread out around the country, the researcher was unable to travel to each of the owners in order to conduct interviews.

The sample selection method used of non-probability sampling, where the participants volunteered to take part in the research may also be considered a limitation. While this sampling method was best suited to the research study, this method of sampling may result in biased results as only participants who volunteer to take part in the research are interviewed and it is likely that only participants who have had either highly positive or negative experiences would be keen to partake in research. This is a limitation which must be taken into consideration when using such a sampling method as was used in this research.

A further limitation regards the fact that there was no previous research available within South Africa on autism service dogs. Following on from this, as autism service dogs were fairly new to South Africa at the time of this research, and due to time constraints, longitudinal effects were unable to be identified.

### **5.5) Recommendations for Future Research**

As this research was the first to explore autism service dogs within South Africa, recommendations for future research are plentiful as this dissertation provides only a baseline for much needed future research on the topic. Below is a list of such recommendations:

- A larger sample size would be highly beneficial. A quantitative research study may be beneficial in this regard in order to gather information from a far larger population of autism service dog owners.

- A longitudinal study would be beneficial in order to gather information on the long-term effects of autism service dogs as well as the suitability of an autism service dog for an older ASD child.
- Research into the proceedings following the death or retirement of the autism service dogs would be useful as this was a topic unable to be discussed as no autism service dog had passed on or retired at the time of this research study.
- Additional research on school attendance would be useful in order to ascertain the ways in which the autism service dogs are being utilized within the school, the welfare of the dogs while at school as well as the practicality of their attendance.
- Deeper research into the bond formed between ASD child and autism service dog would be useful to ascertain whether a stronger connection would result in a greater number of benefits.
- Lastly, a deeper investigation into each of the areas researched for this study would be beneficial in order to gain a more detailed understanding of all of the topics mentioned in this dissertation.

## References

- American Psychiatric Association. (1980). *Diagnostic and Statistical Manual of Mental Disorders* (3<sup>rd</sup> ed.).
- American Psychiatric Association. (1987). *Diagnostic and Statistical Manual of Mental Disorders* (3<sup>rd</sup> ed., revised).
- American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.).
- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.).
- Anderson, C., Law, K., Daniels, A., Rice, C., Mandell, D.S., Hagopian, L., & Law, P.A. (2012). Occurrence and Family Impact of Elopement in Children with Autism Spectrum Disorders. *Pediatrics*, 130 (5), 870-877.
- Baderoon, G. (2016). Animal Likeness: Dogs and the Boundary of the Human in South Africa. *Journal of African Cultural Studies*, 29 (3), 345-361. DOI:10.1080/13696815.2016.1255599.
- Bakare, M.O., & Munir, K.M. (2011). Autism Spectrum Disorders (ASD) in Africa: A Perspective. *African Journal of Psychiatry*, 14, 208-210.
- Banister, P., Bunn, G., Burman, E., Daniels, J., Duckett, P., Goodley, D., Lawthom, R., Parker, I., Runswick-Cole, K., Sixsmith, J., Smailes, S., Tindall, C., & Whelam, P. (2011). *Qualitative Methods in Psychology A Research Guide* (2<sup>nd</sup> ed.). England: McGraw Hill Open University Press.
- Barlow, D.H., & Durand, V.M. (2015). *Abnormal Psychology An Integrative Approach* (7th ed.). Stamford, USA: Cengage Learning.
- Berry, A., Borgi, M., Francia, N., Alleva, E., & Cirulli, F. (2013). Use of Assistance and Therapy Dogs for Children with Autism Spectrum Disorders: A Critical Review of the Current Evidence. *The Journal of Alternative and Complementary Medicine*, 19 (2), 73-80. DOI: 10.1089/acm.2011.0835.

- Blacher, J., & Christensen, L. (2011). Sowing the Seeds of the Autism Field: Leo Kanner (1943). *Intellectual and Developmental Disabilities*, 49 (3), 172-191.
- Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3, 77-101.
- Bryman, A. (2012). *Social Research Methods* (4th ed.). Oxford: Oxford University Press.
- Buhrmann, M.V. (1979). Early Recognition of Infantile Autism. *SA Medical Journal*, 724-727.
- Burghardt, W.F. (2003). Behavioural Considerations in the Management of Working Dogs. *Veterinary Clinics: Small Animal Practice*, 33, 417-446.
- Burgoyne, L., Dowling, L., Fitzgerald, A., Connolly, M, Browne, J.P., & Perry, I.J. (2014). Parents' perspectives on the value of assistance dogs for children with autism spectrum disorder: a cross-sectional study. *BMJ Open*, 4, 1-10. DOI: 10.1136/bmjopen-2014-004786.
- Burrows, K.E., Adams, C.L., & Millman, S.T. (2008). Factors Affecting Behavior and Welfare of Service Dogs for Children With Autism Spectrum Disorder. *Journal of Applied Animal Welfare Science*, 11, 42-62. DOI: 10.1080/10888700701555550
- Burrows, K.E., Adams, C.L., & Spiers, J. (2008). Sentinels of Safety: Service Dogs Ensure Safety and Enhance Freedom and Well-Being for Families With Autistic Children. *Qualitative Health Research*, 18 (12), 1642-1649. DOI: 10.1177/1049732308327088.
- Byrne, M. (2001). Evaluating the findings of qualitative research. *Association of Operating Room Nurses Journal*, 73 (3). 703-706.
- Carlisle, G.K. (2015). The Social Skills and Attachment to Dogs of Children with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 45 (5), 1137-1145. DOI: 10.1007/s10803-014-2267-7.
- Creswell, J. W. (1998). *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. London: Sage Publications.
- Daly, B., & Morton, L.L. (2006). An Investigation of Human Animal Interactions and Empathy as Related to Pet Preference, Ownership, Attachment and Attitudes in Children. *Anthrozoos: A Multidisciplinary Journal of the Interactions of People & Animals*, 19 (2), 113-127.

- Davidson, A. S. (2013). Phenomenological Approaches in Psychology and Health Sciences. *Qualitative Research in Psychology*, 10 (3), 318-339. DOI: 10.1080/14780887.2011.608466.
- Davis, B.W., Nattrass, K., O'Brien, S., Patronek, G., & MacCollin, M. (2004). Assistance Dog Placement in the Paediatric Population: Benefits, Risks, and Recommendations for Future Application. *Anthrozoos*, 17 (2), 130-135. DOI: 10.2752/089279304786991765
- Dotson, M.J., & Hyatt, E.M. (2008). Understanding Dog-Human Companionship. *Journal of Business Research*, 61, 457-466.
- Elsabbagh, M., Divan, G., Koh, Y.J., Kim, Y.S., Kauchali, S., Marcín, C., Montiel-Nava, C., Patel, V., Paula, C.S., Wang, C., Yasamy, M.T., & Fombonne, E. (2012). Global Prevalence of Autism and Other Pervasive Developmental Disorders. *Autism Research*, 5 (3), 160-179.
- Fine, A.H. (2002). Animal-Assisted Therapy. In: M. Hersen, & W. Sledge (eds.). *Encyclopedia of Psychotherapy* (pp. 49-55). New York: Elsevier Science.
- Fung, S., & Leung, A.S. (2014). Pilot Study Investigating the Role of Therapy Dogs in Facilitating Social Interaction Among Children with Autism. *Journal of Contemporary Psychotherapy*, 44, 253-262. DOI: 10.1007/s10879-014-9274-z.
- Fylan, F. (2005). Semi structured interviewing. In J. Miles & P. Gilbert (Eds.), *A handbook of research methods for clinical and health psychology* (pp. 65-78). Oxford: Oxford University Press.
- Galletta, A. (2013). *Mastering the Semi-Structured Interview and Beyond: From Research Design to Analysis and Publication*. New York: New York University Press.
- Geist, T.S. (2011). Conceptual Framework for Animal Assisted Therapy. *Child and Adolescent Social Work Journal*, 28, 243-256. DOI: 10.1007/s10560-011-0231-3.
- Giorgi, A., & Giorgi, B. (2003). Phenomenology. In J. A. Smith (Eds.), *Qualitative Psychology A Practical Guide to Research Methods* (pp. 25-50). London: SAGE Publications Ltd.
- Goble, E., & Yin, Y. (2014, October 16). Introduction to Hermeneutic Phenomenology: A research methodology best learned by doing it. *International Institute for Qualitative Methodology*. Retrieved from <https://iiqm.wordpress.com/2014/10/16/introduction-to-hermeneutic-phenomenology-a-research-methodology-best-learned-by-doing-it/>.

- Guest, G., Namey, E. E., & Mitchell, M. L. (2013). *Collecting Qualitative Data: A Field Manual for Applied Research*. London: Sage Publications.
- Harris, K.I., & Sholtis, S.D. (2016). Companion Angels on a Leash: Welcoming Service Dogs into Classroom Communities for Children with Autism. *Childhood Education*, 92 (4), 263-275. DOI: 10.1080/00094056.2016.1208003.
- Howitt, D. (2010). *Introduction to Qualitative Methods in Psychology*. United Kingdom: Pearson Education Limited.
- Jorgenson, J. (2006). Animal-Assisted Therapy. In: M. Snyder, & R. Lindquist (eds.). *Complementary/Alternative Therapies in Nursing* (5<sup>th</sup> ed.) (pp.175-180). New York: Springer Publishing Company.
- Kafle, N.P. (2011). Hermeneutic Phenomenology Research Method Simplified. *Bohdi: an Interdisciplinary Journal*, 5, 181-200.
- Kanner, L. (1943). Autistic Disturbances of Affective Contact. *Nervous Child*, 2, 217-250.
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24 (1), 120-124, DOI: 10.1080/13814788.2017.1375092
- Kruger, K.A., & Serpell, J.A. (2006). Animal-Assisted Interventions in Mental Health: Definitions and Theoretical Foundations. In A. H. Fine (eds.), *Handbook on Animal-Assisted Therapy: Theoretical Foundations and Guidelines for Practice* (2<sup>nd</sup> ed.) (pp. 21-38). California: Academic Press.
- Ludlow, A., Skelly, C., & Rohleder, P. (2012). Challenges Faced By Parents Of Children Diagnosed With Autism Spectrum Disorder. *Journal of Health & Psychology*, 17 (5), 702-711, DOI: 10.1177/13591053114222955.
- Maluleke, T. (2015, March 06). I am an African and I grieve for my dog Bruno. *Mail & Guardian*. Retrieved from <https://mg.co.za/article/2015-03-06-i-am-an-african-and-i-grieve-for-my-dog-bruno/>.
- Martin, F., & Farnum, J. (2002). Animal-Assisted Therapy for Children with Pervasive Developmental Disorders. *Western Journal of Nursing Research*, 24(6), 657-670.

- Martin, J., & Sugarman, J. (2001). Interpreting Human Kinds: Beginnings of a Hermeneutic Psychology. *Theory & Psychology, 11* (2), 193-207. DOI: 10.1177/0959354301112003.
- Masi, A., DeMayo, M.M., Glozier, N., & Guastella, A.J. (2017). An Overview of Autism Spectrum Disorder, Heterogeneity and Treatment Options. *Neuroscience Bulletin, 33* (2), 183-193. DOI: 10.1007/s12264-017-0100-y.
- McCrindle, C.M.E., Gallant, J., Cornelius, S.T., & Schoeman, H.S. (1999). Changing Roles of Dogs in Urban African Society: A South African Perspective. *Anthrozoos: A Multidisciplinary Journal of the Interactions of People & Animals, 12* (3), 157-161. DOI: 10.2752/089279399787000228.
- McPartland, J.C., Law, K., & Dawson, G. (2016). Autism Spectrum Disorder. In H. S. Friedman (eds.), *Encyclopaedia of Mental Health* (2<sup>nd</sup> ed.) (pp.124-128). California: Academic Press.
- Mesibov, G. B., Shea, V., & Adams, L.W. (2001). *Understanding Asperger Syndrome and High Functioning Autism*. New York: Kluwer Academic / Plenum Publishers.
- Mjamba, K.O. (2015, March 19). Dogs as pets: An African's best friend?. *This Is Africa Me*. Retrieved from <https://thisisafrica.me/lifestyle/dogs-pets-africans-best-friend/>.
- Nealy, C.E., O'Hare, L., Powers, J.D., & Swick, D.C. (2012). The Impact of Autism Spectrum Disorders on the Family: A Qualitative Study of Mothers' Perspectives. *Journal of Family Social Work, 15* (3), 187-201. DOI: 10.1080/10522158.2012.675624
- Odendaal, J.S.J. (2000). Animal-Assisted Therapy – Magic or Medicine? *Journal of Psychosomatic Research, 49*, 275-280.
- O' Haire, M. (2012). Animal-Assisted Intervention for Autism Spectrum Disorder: A Systematic Literature Review. *J Autism Dev Disorder, 43*, 1606-1622, DOI: 10.1007/s10803-012-1707-5.
- O' Haire, M.E., Guerin, N.A., Kirkham, A.C., & Daigle, C.L. (2015). Animal-Assisted Intervention for Autism Spectrum Disorder. *Habri Central Briefs, 1*, 1-8.
- O'Haire, M. E., McKenzie, S.J., Beck, A.M., & Slaughter, V. (2013). Social Behaviours Increase in Children with Autism in the Presence of Animals Compared to Toys. *PLoS ONE, 8* (2), e57010. DOI: 10.1371/journal.pone.0057010

- O'Haire, M. E., McKenzie, S.J., Beck, A.M., & Slaughter, V. (2015). Animals May Act as Social Buffers: Skin Conductance Arousal in Children with Autism Spectrum Disorder in a Social Context. *Developmental Psychobiology*, 57, 584-595. DOI: 10.1002/dev.21310
- Prothmann, A., Ettrich, C., & Prothmann, S. (2009). Preference for, and Responsiveness to, People, Dogs and Objects in Children with Autism. *Anthrozoos*, 22 (2), 161-171. DOI: 10.2752/175303709X434185.
- Sapa. (2012, December 27). Zuma's dog comments meant to 'decolonise the African mind'. *Mail & Guardian*. Retrieved from <https://mg.co.za/article/2012-12-27-zumas-dog-comments-meant-to-decolonise-the-african-mind/>.
- Schreibman, L. (2005). *The Science and Fiction of Autism*. England: Harvard University Press.
- Sloan, A., & Bowe, B. (2014). Phenomenology and Hermeneutic Phenomenology: the Philosophy, the Methodologies and Using Hermeneutic Phenomenology to Investigate Lecturers' Experiences of Curriculum Design. *Quality & Quantity*, 48 (3), 1291-1303.
- Solomon, O. (2010). What a Dog Can Do: Children with Autism and Therapy Dogs in Social Interaction. *ETHOS Journal of the Society for Psychological Anthropology*, 38 (1), 143-166. DOI: 10.1111/j.1548-1352.2009.01085.x.
- Solomon, O. (2012). Doing, Being and Becoming: The Sociality of Children with Autism in Activities with Therapy Dogs and Other People. *Cambridge Anthropology*, 30 (1), 109-126. DOI: 10.3167/ca.2012.300110.
- Sue, D., Sue, D.W., Sue, D., & Sue, S. (2014). *Understanding Abnormal Behavior* (11th ed.). Canada: Cengage Learning.
- Sundler, A. J., Lindberg, E., Nilsson, C., & Palmér, L. (2019). Qualitative Thematic Analysis Based on Phenomenology. *Nursing Open*, 6, 733-739.
- Surujlal, J., & Rufus, S. (2011). Perceptions of Parents about Equine Therapy for Children with Intellectual Disabilities. *African Journal for Physical, Health Education, Recreation and Dance*, 1, 372-385.
- Taylor, P., Funk, C., & Craighill, P. (2006). Gauging Family Intimacy: Dogs Edge Cats (Dads Trail Both). *Pew Research Centre*. Retrieved June 27, 2019, from <http://pewresearch.org/assets/social/pdf/Pets.pdf>.



- Trevvarthen, C., Aitken, K., Papoudi, D., & Robarts, J. (1998). *Children with Autism Diagnosis and Interventions to Meet Their Needs* (2<sup>nd</sup> ed.). Great Britain: Athenaeum Press.
- Triebenbacher, S.L. (1998). Pets as Transitional Objects: Their Role in Children's Emotional Development. *Psychological Reports*, 82 (1), 191-200.
- van Steensel, F.J.A., Bögels, S.M., & Perrin, S. (2011). Anxiety Disorders in Children and Adolescents with Autism Spectrum Disorders: A Meta-Analysis. *Clin Child Fam Psychol Rev*, 14, 302-317. DOI:10.1007/s10567-011-0097-0
- Viau, R., Arsenault-Lapierre, G., Fecteau, S., Champagne, N., Walker, C., & Lupien, S. (2010). Effect of Service Dogs on Salivary Cortisol Secretion in Autistic Children. *Psychoneuroendocrinology*, 35, 1187-1193. DOI: 10.1016/j.psyneuen.2010.02.004.
- Volkmar, F.R., Bregman, J., Cohen, D.J., & Cicchetti, D.V. (1988). DSM-III and DSM-III-R Diagnoses of Autism. *The American Journal of Psychiatry*, 145 (11), 1404-1408.
- Volkmar, F.R., & Lord, C. (2007). Diagnosis and definition of autism and other pervasive developmental disorders. In F. R. Volkmar (Eds.), *Autism and Pervasive Developmental Disorders* (pp.1-31). Cambridge: Cambridge University Press.
- Wertz, F. J. (2014). Qualitative Inquiry in the History of Psychology. *Qualitative Psychology*, 1 (1), 4-16. DOI: 10.1037.qup0000007.
- Willig, C. (2009). *Introducing Qualitative Research in Psychology* (2<sup>nd</sup> ed.). England: McGraw Hill Open University Press.
- Wing, L. (1981). Asperger's Syndrome: A Clinical Account. *Psychol Med*, 11, 115-129.
- Wing, L., & Gould, J. (1979). Severe Impairments of Social Interaction and Associated Abnormalities in Children: Epidemiology and Classification. *Journal of Autism and Developmental Disorders*, 9 (1), 11-29.
- World Health Organization. (2019, November 7). Autism Spectrum Disorders. *World Health Organization*. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/autism-spectrum-disorders>.

Dear Sir/Madam,

I am currently a Psychology Masters by Thesis student at Rhodes University where I am conducting research, under the careful supervision of lecturer Ms Henriette van Zyl, relating to trained autism service dogs in South Africa. The topic of my thesis is the effects of trained autism service dogs for children diagnosed with autism spectrum disorder as well as for the caregivers of these children. The information which I plan to gather will be from the caregivers' perspectives.

This research study will be guided by the following set of questions:

**Question 1:** How accessible are autism service dogs for South Africans, based on the experiences of the caregivers of ASD children placed with such service dogs?

**Question 2:** How did the children with ASD, their siblings and their caregivers experience adjusting to life with the autism service dog?

**Question 3:** How are autism service dogs being used by their recipients within South Africa?

**Question 4:** What are the experienced effects, both positive and negative, of autism service dogs for the ASD children supplied with such service dogs, as described by the caregivers?

**Question 5:** What are the experienced effects, both positive and negative, of autism service dogs for the caregivers of the ASD children supplied with such service dogs?

**Question 6:** What is the general public's perception towards the use of autism service dogs within South Africa, as experienced by the caregivers of those placed with an autism service dog?

**Question 7:** What are the effects of life as a South African autism service dog on the welfare of the service dogs?

**Question 8:** What could be implemented to enhance the benefits of autism service dogs for South Africans?

It is hoped that I will be able to find approximately 10 participants who will be willing to take part in my research. Participants will be required to agree to take part in one face to face interview with me. These interviews will be approximately 1 hour in length. Participants will not be forced to answer any questions which they are not comfortable with answering. Once the research project has been completed, each participant will receive a copy of the research report with the hope that the report will provide them with additional information about autism service dogs as well as acting as a token of gratitude for their participation.

Participation in this research is entirely voluntary meaning that no one will be forced to take part and participants will be able to withdraw from the research at any time should they wish to do so without there being any negative repercussions. All participants will have the structure of the research

and the requirements of their participation explained to them and strict confidentiality will be explained to and ensured for every participant. This research project has received ethical approval by the ethical standards committee of Rhodes University. Although the research is positive in nature, should any participant experience emotional distress from their participation they will be put in contact with a psychological counselling service provider to ensure that they will be able to receive any help which they may require. I, as the researcher, will have necessary details available for such counselling providers and will provide these details to the participants should the need arise.

In order to identify participants, it is hoped that you may be kind enough to send out information, of which I will supply to you, regarding this research project to people who you have supplied with trained autism service dogs. The information which I will supply will explain why the research is being done as well as what will be involved should they wish to participate. This will be an invitation for participation and people will be asked to contact me for further information, however, no one will be forced to participate should they not want to.

This research project will hopefully contribute greatly to the lack of research on this topic. Autism service dogs have been found to be highly beneficial to autistic children and their caregivers as found from studies done internationally, however, no such studies have been conducted in South Africa. It will be so beneficial to uncover if the same is true in a South African context.

I would be so grateful for your co-operation with this research. Should you be kind enough to assist me, then it will be thanks to you that this research will be able to be done. Should you have any queries about my research please feel free to contact me, as I would be more than happy to provide you with more details. You are also welcome to contact my supervisor should you wish for her to explain any queries which you may have. Please see below for our contact details. I am absolutely passionate about this research and I sincerely hope that you will consider helping me in this very important way.

Warm regards,

Emma Martin.

**Contact details:**

**Researcher:**

Emma Martin

emma.martin96@gmail.com

072 906 2141

**Supervisor:**

Ms Henriette van Zyl

h.vanzyl@ru.ac.za

046 603 7461



Do you have an autism service dog?

If yes, I need your help!

I am a psychology masters student currently undertaking research on the use of autism service dogs in South Africa and am looking for participants to take part in my research.

Participation will simply require you to take part in one interview with me of approximately 1hr in length. This interview will be conducted as a discussion rather than a strict interview and you will be encouraged to express your thoughts on the impact your autism service dog has had on your family.

People residing anywhere in South Africa are welcome to participate. I will travel to you so you need not worry about transport problems.

The research will focus on the value and impact of autism service dogs from the caregiver's perspective. Interviews will be conducted with parents/caregivers only to minimize the possibility of any distress being caused for the children.

Confidentiality will be ensured and you will be able to withdraw your participation at any time, without any negative repercussions, should you feel the need to do so.

Should you be interested, have any queries or would like more information, please feel free to contact me:

Miss E Martin:

[emma.martin96@gmail.com](mailto:emma.martin96@gmail.com)

Your participation would be greatly appreciated!

This research has been approved by all necessary ethical committees and is being conducted under the strict supervision of a highly experienced psychology lecturer at Rhodes University.



### Semi-structured interview schedule

#### 1) Basic Information:

- What age is your child?
- When was your child diagnosed with autism spectrum disorder?
- What was the exact diagnosis which your child received?
- Do you work? \*if yes, full-time or part time? (Should the participants have a partner the same question would be asked of said partner)
- Does your child have any siblings?
- Does your child attend school? \*if yes, is it a regular or a special school?

#### 2) Accessibility

- How did you experience the process of applying for the autism service dog?
- How long did you have to wait prior to receiving the autism service dog?
- What costs were involved in obtaining the autism service dog?
- Did you and your child receive any training by the SAGDA? \*If yes further details would be inquired.
- How do you experience the maintenance requirements of the autism service dog?

#### 3) Life Adjustments

- How did your child adjust to the autism service dog?
- How did you experience adjusting your life to include the autism service dog?
- \*If there were siblings\* How did the siblings adjust to the autism service dog?

#### 4) Use of the autism service dog

- In what ways do you and your child make use of the autism service dog? \*Probe uses within the house, on outings, at school and therapy sessions should need be.

#### 5) Effects of the autism service dog for the ASD child

- Have you observed any positive effects for your child as a result of owning an autism service dog?
- Have you observed any negative effects for your child as a result of owning an autism service dog?

#### 6) Effects of the autism service dog for the caregiver of the ASD child

- Have you experienced any positive effects within your own life as a result of owning an autism service dog?
- Have you experienced any negative effects within your own life as a result of owning an autism service dog?

#### 7) Public response to autism service dog

- How have you found the public to respond to the autism service dog?

- How have you found the public to respond to your child while out with the autism service dog?
- How have you found the public to respond to you while out with your child and the autism service dog?

8) Welfare of the autism service dog

- What care procedures do you follow for the autism service dog?
- Does the autism service dog have time off from service?
- Have there been any concerns for the safety of the autism service dog while in service?

9) Recommendations to enhance benefits of the autism service dogs

- Are you satisfied with your autism service dog?
- Are there any recommendations for ways in which to improve the benefits of autism service dogs?

10) Additional comments

- Are there any additional topics you would like to discuss regarding your autism service dog?

**RHODES UNIVERSITY  
DEPARTMENT OF PSYCHOLOGY**

**AGREEMENT BETWEEN STUDENT  
RESEARCHER AND RESEARCH  
PARTICIPANT**

*Updated 29 May 2018*

I (participant's name) \_\_\_\_\_ agree to participate in the research project of Emma Martin on Service Dogs for Autism Spectrum Disorder: The Experiences of Caregivers.

**I understand that:**

1. The researcher is a student conducting the research as part of the requirements for a master's degree in psychology at Rhodes University. The researcher may be contacted on 072 906 2141 or emma.martin96@gmail.com . The research project has been approved by the relevant ethics committees, and is under the supervision of Ms Henriette van Zyl in the Psychology Department at Rhodes University, who may be contacted on 046 603 7461 or h.vanzyl@ru.ac.za .
2. The researcher is interested in the uses, effects, accessibility and public perception of autism service dogs within South Africa, as described by caregivers, as well as the welfare and possible ideas for the future of autism service dogs within South Africa.
3. My participation will involve taking part in one face to face interview with the researcher. Following this, I will be required to read and comment on my interview transcription which will be supplied to me by the researcher.
4. I may be asked to answer questions of a personal nature, however I can choose not to answer any questions about aspects of my life which I am not willing to disclose.
5. I am invited to voice to the researcher any concerns I have about my participation in the study, or consequences I may experience as a result of my participation, and to have these addressed to my satisfaction. Should any distress result from my participation I will be welcome to contact the researcher and will be put in touch with a counselling facility capable of addressing my needs.
6. I am free to withdraw from the study at any time - however I commit myself to full participation unless some unusual circumstances occur, or I have concerns about my participation which I did not originally anticipate.
7. The report on the project may contain information about my personal experiences, attitudes and behaviours, however, the report will be designed in such a way that it will not be possible to be identified by the general reader.
8. I agree to allow the report, as mentioned above, to be published, provided that identifying information are adjusted to ensure confidentiality.

Signed on (Date):

Participant: \_\_\_\_\_

Researcher: \_\_\_\_\_

## Rhodes University – Department of Psychology

# USE OF TAPE RECORDINGS FOR RESEARCH PURPOSES

## — PERMISSION AND RELEASE FORM

<i>Participant name &amp; contacts (address, phone etc)</i>	
<i>Name of researcher &amp; level of research (Honours/Masters/PhD)</i>	Emma Martin Masters
<i>Brief title of project</i>	Service Dogs for Autism Spectrum Disorder: The Experiences of Caregivers
<i>Supervisor</i>	Ms Henriette van Zyl

### Declaration

(Please initial/tick blocks next to the relevant statements)

1.	<i>The nature of the research and the nature of my participation have been explained to me</i>	verbally	
		in writing	
2.	<i>I agree to be interviewed and to allow tape-recordings to be made of the interviews</i>	audiotape	
		videotape	
3.	<i>I agree to take part in and to allow tape-recordings to be made.</i>	audiotape	
		videotape	
4.	<i>The tape recordings may be transcribed</i>	without conditions	
		only by the researcher	
		by one or more nominated third parties:	
5.1	<i>I have been informed by the researcher that the tape recordings will be erased once the study is complete and the report has been written.</i>		
5.2	<i>OR I give permission for the tape recordings to be retained after the study and for them to be utilised for the following purposes and under the following conditions:</i>		

### Signatures

<i>Signature of participant</i>		<i>Date</i>
<i>Witnessed by researcher</i>		



