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Animal Assisted Therapy: An explorative case study of elder residents'
experiences with a therapeutic canine within a long-term residential setting

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Abstract

*“The bond with a true dog is as lasting as the ties of this earth can ever be”
(Lorenz, 1994, p. 148).*

History suggests that man and canine have shared a therapeutic relationship for centuries, however speculation regarding the significance of the therapeutic relationship on our overall wellbeing has been debated. Animal Assisted Therapy (AAT) has had a rapid increase in research interest over the last forty years but its progress is inhibited by the dearth of information involving the perspectives of AAT users. This pilot, qualitative, explorative case study research explores elder residents’ experiences of interacting with a trained canine within a long-term residential setting, Elizabeth Knox, an Eden Alternative care home and hospital. Experiences of residents were gathered via individual semi-structured interviews, and data was analysed and interpreted through thematic analysis. Knowledge, or meaning, is understood from a social constructionist perspective, recognising that meaning is created and interpreted from social, lived experiences in the moment. A prominent theme of connectedness was constructed and further defined into two sub-themes, emotional connectedness and social connectedness. Findings suggest that for this population of elder residents, AAT is an initiative that has multiple therapeutic health benefits which are influenced by the visual and behavioural characteristics of the canine. Findings contribute to an international supposition that canine AAT can be a beneficial therapeutic initiative for elders. Additionally, findings have built a platform for New Zealand contextual AAT research to further advance the understanding of the potential therapeutic benefits of canines when in relationships with people.

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Chapter 1: Introduction

“The fidelity of the dog is a precious gift demanding no less binding moral responsibilities than the friendship of a human being” (Lorenz, 1994, p. 148).

1.0 Introduction to AAT

Recently, Animal Assisted Therapy (AAT) has been the subject of serious empirical investigation, yet the phenomenon that canines may provide therapeutic benefits to humans is not a modern proposition as our connection dates back centuries. Carbon dating originally suggested that an affectionate relationship with canines developed over 12,000 years ago evidenced by the discovery of a tomb under Israel’s soil which unearthed a human skeletal hand clutching the remains of a young puppy (Morrison, 2007). More recently, DNA testing of ancient canine fossils approximates that domestication of canines may have occurred around 18,800 to 32,100 years ago (Thalmann et al., 2013).

Domestication of canines developed due to a shift in societal living caused by glaciation (Young, 1985). Prehistoric man and canines living in the age of glacial melt, in the late Paleolithic and early Mesolithic ages, were forced to follow dispersing herds of larger animals, sharing similar hunting and scavenging techniques. Closer proximity to each other during this time is thought to be the origin of domestication. A simultaneous process of genetic evolution and sharing communal space modified human-canine interactions from competitive to cooperative.

Human association with canines has since been evidentially traced through early civilisation mythology, spirituality, and historical discoveries. Greek, Roman, Peruvian, and Egyptian empires utilised canines’ heightened senses for agriculture and hunting,

revered them as spiritual guides, and valued the canines' loyal companionship, mourning their absence as a loved one (Walsh, 2009).

Since these early ages of societal living our human-animal bond with canines has served us therapeutically, providing comfort, relaxation, and motivation (Evans & Gray, 2012; Hooker, Freeman, & Stewart, 2002). The human-animal bond with canines continues to be a complex, symbiotic relationship. Influenced by emotional, psychological, physical, and social behaviours, the bond is intrinsic to the wellbeing of both canine and human (American Veterinary Medical Association, 1998, cited in Hosey & Melfi, 2014).

Despite our long association with canines, the last 40 years have been most influential for the field of human-animal bond phenomenon. Led by veterinarian scholars, the 1970's and 1980's saw a global rise of organisations, centres, and conferences devoted to researching and promoting the human-animal bond (Hines, 2003). Advisory committees for pets in society were developed in Britain (1974), France (1976), and Australia (1980), with the development of research institutes for the study of the human-animal bond emerging in Austria (1977), Britain (1979), and the United States (1977, 1981, 1982). Proceedings and research developed by these committees and institutions, together with pioneering human-animal bond research by Levinson (1975), Mugford and M'Comisky (1975), Corson, Corson, and Gwynne (1975), Friedmann, Katcher, Lynch, & Thomas (1980), resulted in the human-animal bond being introduced to mainstream media and subsequently to a worldwide public audience (Hines, 2003). From this movement a philosophy focusing on the effect of animal, specifically canine, interactions on human health emerged. This philosophy is referred to as Animal Assisted Therapy (AAT) in this study.

The following pages of this chapter outline my position in relation to the study, the purpose of the research and the rationale for the work. Chapter Two offers a review of the literature concerned with AAT. In Chapter Three the research design is described, followed by Chapter Four, which details the study's findings. Chapter Five gives a comprehensive discussion of the study's findings, followed by Chapter Six, which summarises and concludes the study.

1.1 My Position

From an early age, I felt the beneficial effect of the human-animal bond. Canines have always been a part of my life and I was fortunate to have a multitude of other temporary animal companions that shared my home throughout childhood. These included the ever present hedgehog found under the cattle stop, lambs, calves, visiting wetas, hawks, as well as Henry, a quirky heron, Shallow, a seal pup who stayed until rehabilitated, and one Christmas, a resident morepork. These animal experiences contributed to a developing interest in understanding the effects of animals, particularly canines, on human health. Pet canines provided many benefits to my overall health. Regardless of my mood the joy expressed by pet canines when I arrived home brought a smile to my face every day, resulting in a burst of happiness sweeping away negative thoughts or feelings. Their loyalty provided companionship when feeling alone or misunderstood. Their instinctual empathy gave comfort during difficult times, and their boundless energy motivated physical exercise and made outdoor activities more carefree.

In addition to my childhood experiences, my professional experience in mental health has influenced the topic of this study. AAT is a topic of professional interest as I have seen young people transform when given the opportunity to experience time with animals. I have watched a young girl with cerebral palsy and intellectual complications develop into

a confident, communicative, physically stronger, and independent young girl following equine therapy. I have met an adolescent whose pet feline contributed to saving her life by reducing anxiety associated with eating. I have also seen the impact a sensory weighted toy canine can have on reducing a young person's anxiety and in stabilising their mood. In addition, seeing the results of allowing young people an opportunity to care for something other than themselves, and the benefits of simply being outdoors and active have consolidated a belief that a canine, as a co-therapist, serves a beneficial therapeutic adjunct to traditional therapies.

Animals, especially canines, give my life additional fulfilment, and the completion of a Masters research study presented an opportunity to seek a greater understanding of other people's canine experiences, and potentially gain insight as to why the canine, in particular, is so endearing to humans. Combining my pet canine experiences and mental health experiences, it was logical to undertake a study that combined canines and therapy. Because canine AAT is a new initiative within New Zealand there were limited options to research individuals' canine AAT experiences. Elizabeth Knox Home and Hospital in Auckland offered an ideal setting for the research due to the development of their inaugural canine AAT programme.

1.2 Research Purpose and Question

The purpose of the research was to explore the research question, *how do elder residents within a long-term residential setting experience AAT with a trained canine?* The impetus for the research was to achieve four aims:

1. Explore the impact of a long-term residential setting having a trained, resident, canine AAT initiative.

2. Offer a population of elder persons an opportunity to contribute to the development of a service of care that directly affects their lives.
3. Further advance AAT knowledge, specifically canines, and their therapeutic abilities. Knowledge gained from the study will supplement growing international understanding of the use of AAT, in particular, AAT within a long-term residential setting.
4. Aid in the establishment of a platform to build upon New Zealand contextual AAT research. Pilot studies increase knowledge about a particular phenomenon and are essential steps in the initiation of larger AAT studies (Maas, Kelley, Park, & Specht, 2002).

1.3 Rationale for Study

Further expansion of AAT knowledge necessitates the inclusion of perspectives from those who directly experience AAT. If a programme, such as an AAT initiative, is to be successful it must take into account the perspectives of the persons for whom the programme was established to benefit (Denzin, 2001; Tee & Lathlean, 2004). Previous AAT research supports a positive link with elders and research participation. Keil's (1998) research on loneliness and stress among elder pet owners had an approximate participant completion rate of 96%. In addition to participation requirements, participants' added additional comments relating to their pets, sent in photos, and phoned the researcher with further information suggesting that participants wanted to talk about their pets. Moretti et al. (2011) distributed a satisfaction questionnaire to elder participants and all recommended the experience of participating in research to other elder persons. Participants reported enjoyment from interacting with the AAT canines, and the experience resulted in the recollection of forgotten memories. These findings suggest animal related research might be an incentive for elder participation and if the impact of research is to be of benefit for

the ageing, then it is imperative that those ageing persons are given the opportunity to be actively involved (Murray, 2013). For this explorative case study, AAT users are elder residents at Elizabeth Knox Home and Hospital, aged 55 years and over, who have had or who would like to have, experiences with trained therapeutic canine, Olive.

AAT literature further recommends that AAT research include qualitative components to expand on the understanding of persons experiencing AAT (Crowe et al., 2014).

Understanding emerges from conscious experiences (Crotty, 1998) and the experiences of another person cannot be understood until they are interpreted (Denzin, 2001). To capture elder residents' experiences of canine AAT, semi-structured interviews were utilised and interview transcripts were thematically analysed to interpret talk of canine AAT experiences.

Spanning the last 40 years, pioneer health professionals and institutions have begun to actively utilise and research the effects of canines on human health (Walsh, 2009). The resulting attention has gathered a momentum of recognition in which AAT is viewed as a therapeutic phenomenon (Hosey & Melfi, 2014; Virués-Ortega, Pastor-Barriuso, Castellote, Población, de Pedro-Cuesta, 2012). Yet, despite research, media attention, and a growing field of interest, there are many questions unanswered regarding the effects of AAT. AAT appears to still be in its early stages of development and categorised as a *promising* alternative therapy (Hines & Fredrickson, 1998; Kruger, Trachtenberg, & Serpell, 2004). This study aims to expand on international understanding of AAT, in particular the understanding of AAT effects on an elder population within a residential home, and establish a platform for New Zealand contextual AAT research. Research provides the base for future development (Wilson & Turner, 1998), and there is a need for qualitative

research to explore experiences of AAT with residents in long term care (Le Roux & Kemp, 2009).

1.4 Conclusion

This chapter has introduced AAT as the topic of interest for this pilot explorative case study, and explained that AAT was chosen as the phenomenon of interest based on the researcher's personal and professional experiences. The purpose and aims of the research have been clarified and the rationale for these in terms of their significance to the expansion of AAT knowledge has been detailed. The following chapter presents a more comprehensive literature review of current AAT knowledge.

Chapter 2: Literature Review

“The study of the harmonious concord between master and dog is extraordinarily instructive from the view of both animal and human psychology.... Much is often revealed... by the relationship that later develops between master and charge. Just as in human relations...complete disparity and strong resemblance often lead to mutual happiness”
(Lorenz, 1994, p. 74).

2.0 AAT Definition

Definitions are important to the development of AAT as they create a shared framework of understanding (Holstein & Gubrium, 1995). However, a literature review rapidly reveals disparity despite efforts to standardise. Related titles include pet therapy, pet-facilitation, dog-assisted therapy, dog visitation therapy, pet-assisted therapy, and canine assisted initiative. Variances between definitions reflect the different contexts, populations, and conditions involving AAT (Hosey & Melfi, 2014), such as pet visitations or permanent pet placement within waiting rooms, aged care homes, hospitals, rehabilitation and mental health institutions, or private dwellings (Palley, O’Rourke, & Niemi, 2010). Alongside these inconsistencies is the engagement of multiple animals used in AAT, ranging from mice, guinea pigs, goats, birds, fish, and felines, to canines, horses, and dolphins.

AAT is also commonly enmeshed with Animal Assisted Activities (AAA). AAA focuses primarily on the benefits of the human-animal bond, without the development and evaluation of specific goal directed interventions, and is not usually performed by certified animals or professionals (Evans & Gray, 2012). For the purpose of this study AAT is defined as utilising the interactions of a certified trained canine as a structured form of individualised therapy, towards achieving remedial objectives (Behling, Haefner, & Stowe, 2011).

2.1 AAT History

The first known institution to adopt AAT was the York Retreat, England, beginning its work in the early 18th century (Behling et al., 2011). Other historic accounts of AAT initiatives include a multi-based treatment facility in Bielefeld Germany, 1867, America based St Elizabeth Hospital, Washington D.C, 1919, and the Army Corp Hospital, New York, 1944. One of the first known schools to specifically design educational programmes to incorporate AAT was Green Chimneys (Lutwack-Bloom, Wijewickrama, & Smith, 2005). Opening in New York State, 1948, founder Dr. Ross Samuel had a vision to involve children with animals, for the betterment of both, a foresight that remains at the core of Green Chimneys current therapeutic curriculum (Ross, 2011).

Dr. Boris Levinson, a child psychiatrist, is widely recognised as the father of AAT. With his canine Jingles, the first AAT partnership was created (Evans & Gray, 2012; Kruger et al., 2004; Le Roux & Kemp, 2009; Messant, 1985; Moretti et al., 2011). Upon observing a withdrawn young client's positive reaction to Jingles, Levinson (1969, 1972) focused his work on 'employing' his canine to be a co-therapist and published his findings in "Pet orientated child psychotherapy", and further discussed the role of pets on human development in 'Pets and Human Development". Initial reactions by colleagues were loaded with skepticism and indignation (Evans & Gray, 2012; Hines, 2003). Undeterred Levinson continued to develop his theories promoting further growth in the AAT field (Zawistowski, 2008).

Corson et al. (1975) stimulated further interest in AAT when assessing the utility of canines within a psychiatric institution. Sounds of sporadic barking sparked interest among previously withdrawn and uncommunicative patients, who began inquiring whether they could interact with the canines. Patient curiosity instigated a systemic pilot

study, which offered an opportunity for patients to interact with a chosen canine as part of their regular treatment regime. Selected patients had previously shown no progress with traditional therapeutic techniques at the time, including electric shock therapy, pharmacotherapy, recreation, and individual, and group psychotherapy. AAT sessions were adapted for individual uniqueness and when possible, were videotaped. Results detailed markedly improved patient self-esteem, social interaction, independence, responsibility, and physical mobility.

Leading on from Levinson's pioneering work and early AAT research, Pet Partners, formerly Delta Society (Pet Partners, 2012) became widely known as the organisation responsible for broadening international interest and formalising the foundations of AAT as a therapeutic initiative. Leo Bustad, Michael McCullough, Linda Hines, and William McCullough founded the organisation in 1977. Combining professional forces, they drove AAT into mainstream therapy and through their continued research about the human-animal bond, a scientific evidence based platform developed. Within a decade they had produced comprehensive guidelines, ethical procedures, educational material, and developed professional training. Their formalisation of documentation facilitated the development of AAT programmes within health institutions, charitable and non-government organisations, as well as educational facilities, resulting in animal assisted forms of therapy being widely accessible, prompting further AAT research (Zawistowski, 2008).

In America, during the 1980's and 1990's, a significant increase in AAT research focussed on the effect of animals on a persons' psychological, social, physical, and behavioural wellbeing (Hines & Fredrickson, 1998). Findings piqued wider attention among academics, health professionals, and media, which resulted in national and international

AAT campaigns in Boston, Philadelphia, Vienna, and Monaco (Hines, 2003).

Consequently the concept of canines enriching our overall wellbeing (Erickson, 1985) gained momentum, increasing the use of animals within a therapeutic context. The following section comprehensively reviews literature specifically related to AAT and elder health.

2.2 AAT and Elder Health

The term health encompasses the psychological, physiological, and psychosocial realms of our lives (Cusack & Smith, 1984; Garrity & Stallones, 1998) and elder-focused AAT research suggests that AAT benefits all of these health realms. Regardless of cognitive functioning AAT benefits elder mental or psychological health, promotes healthier physical or physiological functioning, and increases elders' social or psychosocial exchanges.

2.2.1 Psychological Health Benefits

Available literature has explored the psychological effects of AAT for cognitively sound and impaired elder persons, on quality of life, cognitive functioning, mood, and effects on clinical diagnoses such as dementia and depression. Findings have suggested that AAT serves as a positive therapeutic approach for elder psychological health.

Crowley-Robinson, Fenwick, and Blackshaw (1996) conclude that canines can have a beneficial influence on psychological elder health. The influence of resident and visiting canines on mood states was assessed. Ninety-two elder care home residents with a mean age of 82 years participated in the two year study. A profile of mood states questionnaire measured depression, anger, vigour, fatigue, and confusion scores. Findings suggest that contact with canines increased vigour, whilst decreasing fatigue, confusion, tension, anger,

and depression. Moretti et al. (2011) explored the effects of AAT on quality of life, cognitive functioning, and mood, with a population averaging an age of 84.7 years, who were institutionalised mental health residents, with a clinical diagnosis. The most common diagnoses were related to dementia (47.6%), psychosis (33.3%), and depression (19.1%). AAT experimental group sessions involved three canines and handlers who encouraged participants to interact with the canines. Control groups were able to see the canines as they entered the institution but were not encouraged to interact with them, however this was not prohibited. A mini-mental state examination, geriatric depressive scale, and perceived quality of life questionnaire were utilised for collecting data. Analyses concluded that AAT sessions decreased depressive scores by half, scores of cognitive functioning positively doubled when compared with control groups scores, and mood disorders significantly improved. A meta-analysis on the effect AAT has on the psychological functioning of elder persons diagnosed with a psychological disorder also supports that AAT has a statistically significant improvement on depressive, anxiety, and behavioural scores (Virus-Ortega et al., 2012).

Nordgren and Engström (2014b) evaluated the effects of AAT on dementia associated psychological and behavioural symptoms over a six month period. Thirty-three nursing home residents from eight different residential homes, who had a diagnosis of dementia, participated in the study. An intervention group included 20 residents and the remaining 13 residents were part of a control group. The mean age was 81 years. Ten AAT sessions lasting between 45 minutes and an hour were conducted once or twice a week. Aggressive behaviours reduced among the intervention group and verbal agitation reduced after three months. Participants' conversations and memories of the AAT sessions suggest positive psychological benefits as participants recognised the canines when shown photos and spoke about their memories of them following the conclusion of the study. Bernabei et

al. (2013) literature review supports these findings. Upon completion of their review they concluded that AAT is an effective therapeutic intervention for behavioural and psychological symptoms associated with dementia. AAT increased alertness and reduced depressive symptoms, agitation, and aggressive behaviours. Psychological benefits associated with the presence of a canine can be linked to reducing stress and anxiety levels that subsequently lead to lowering heart rate and blood pressure, also benefiting physiological health (Bernabei et al., 2013).

2.2.2 Physiological Health Benefits

The positive association of animals on physiological human health was first highlighted in a now much cited pilot study focusing on the influences of nonhuman companions on incidence or prevalence of somatic illness. Friedmann et al. (1980) recruited participants discharged from hospital following surgical admission for myocardial infarction, heart attack complications. Over a period of 19 months the study included 92 persons, 53 of whom were pet-owners (40 were canine owners). The relationship between pet-owners and patient status upon one year follow up was that 50 pet-owners remained alive, (94.3%), compared to 28 non-pet owners (71.8%). The relationship between pet ownership and survival was not dependent on gender or physiological status. Findings indicated that the effect of social isolation and support, whether human or non-human, could be directly linked to the health of our physiological state and pet ownership was significantly related to survival (Brodie & Biley, 1999).

A comparable follow up study extends on these findings (Friedmann & Thomas, 1995). Data was obtained and analysed from 369 persons discharged following cardiac related hospital admission. One hundred and twelve (30.4%) were pet-owners, and of these 87 (77.7%) cared for at least one canine. Upon the year follow up, 19 non-canine owners

(6.7%) and one canine owner (1.1%) had passed. Findings suggest that canine ownership, as well as social support, can be independent predictors of survival. Levine et al. (2013) critically assessed the effects of animals on physiological health, specifically the influence of pets on cardiovascular disease, by conducting an extensive literature review. They summarise that pet ownership, particularly canine ownership, is probably related to decreased risk and symptoms of cardiovascular disease. The statement is supported by Arhant-Sudhir, Arhant-Sudhir, and Sudhir's (2011) critical review of pet ownership, particularly canine ownership, and positive human health outcomes.

Canine associated benefits to physiological health can also be linked with increased physical exercise. Private dwelling canine owners, aged between 70 and 79 years, were found to be more likely to engage in exercise, have reduced sedentary lifestyles, and greater overall physical activity (Thorpe et al., 2006). Cutt, Giles-Corti, Knuiiman, and Burke, (2007) examined canine ownership and physical activity, demonstrating that ownership facilitated an increase in physical exercise, as well as mediating social interactions, and health benefits. Canine ownership can also initiate an increase in physical exercise for persons living with a disability or chronic illness (Rijken & van Beek, 2011). Responses from 1,410 participants aged over 65 years indicated that canine owners are more likely to engage in physical exercise when compared to other animal pet owners, and non-pet owners.

Physiological health has also been related to the level of attachment owners feel with their canines. Garrity, Stollones, Marx, and Johnson (1989) examined whether level of pet attachment was associated with physiological health in a sample size of 1,232 persons aged 65 or over, of which 408 were pet owners. Participants were interviewed, and measured variables were recent life events, human-animal attachment, emotional distress,

illness, and demographic descriptors. Pet attachment was positively associated with reduced perceptions of depressive symptoms and reports of illness, especially for those who had experienced recent bereavement and had minimal confidant support. Siegel (1990) supports these findings, concluding from a sample size of 938 elder adults. After the removal of controlled variables such as age, gender, income, education, social network, and chronic health problems, pet ownership, especially canine, decreased reports of illness, resulting in fewer visits to the doctor, when compared to non-pet owners. Other research has also found that pet owners have a higher self-reported perception of health and wellbeing (Virués-Ortega et al., 2012). Erickson (1985) suggests that a perceived improvement in health is due to our pets' non-judgmental attributes and unconditional affection and elder respondents have revealed that their canine pets provide them with companionship, feelings of security and of being loved (Siegel, 1990). This suggests that canines' pleasant characteristics help construct meaning and feelings of validation and good health. In addition to psychological and physiological health, canines have been attributed to benefiting elder psychosocial health.

2.2.3 Psychosocial Health Benefits

Age related social isolation and loneliness are well noted in social gerontology (Erickson, 1985; Virués-Ortega et al., 2012). Siegel's (1990) study revealed that of 938 respondents, 49% had experienced a loss of companionship within the last six months. The absence of significant confidants is likely to interfere with a person's ability to interact and maintain a healthy psychosocial state of mind (Friedmann et al., 1980).

The earliest noted research (Bustad & Hines, 1983; Erickson, 1985; Ryder, 1985) contributing to the exploration of animals and their therapeutic social benefits with an elder population is Mugford and M'Comisky (1975). Their objective was to research the

effects of pet budgerigars on their owners' mental and physical health, and social attitudes, demonstrated via a self-developed questionnaire using a four-point scale. All participants were visited monthly by a social worker, for five months. The social worker administered the study's questionnaire on the first and final visits only. Participants consisted of home-dwelling elders aged between 74 and 81 years of age, who lived alone without any pets. Participants were divided between having a television, and not having a television, and were offered either a potted begonia or a budgerigar. A control group consisted of non-pet owners who owned, or did not own a television also. Budgerigars and potted begonia's were unconditional gifts and all related animal welfare collateral was provided. A small percentage of participants refused budgerigars for reasons including fear, superstition, moral stances, and inadequate health to care for an animal.

Findings revealed a significant improvement in budgerigar groups only, particularly on scores relating to attitudes of self and people. The presence of a television was irrelevant. Qualitative data gathered from informal interviews revealed that participants formed a strong and intimate attachment to their budgerigars, indicated by all owners naming their pets and insisting on buying extra food. The majority of owners also bought extra-curricular equipment for their pets and taught them to leave their cages. Owners voiced that their pets were objects of empathy and companionship. They attributed improvements in fractured relationships to their presence as they provided a 'social lubricant', supporting the notion that pets can initiate social interaction by acting as a catalyst for communication (Bustad & Hines, 1983; Erickson, 1985).

Keil's (1998) descriptive exploration study supports the idea that pets can benefit elder psychosocial health. Focusing on the relationship between pet attachment, loneliness, and stress scores among 275 home dwelling elder pet owners, aged over 60 years, evaluated

responses revealed a significant correlation. High pet attachment scores correlated with high measures of loneliness, and stress. Persons who lived alone, reported poor health, low income, a reliance on others for transportation, and absence of human confidants, scored higher for all measures. Findings indicated that animals provided an active, reciprocal, attachment resource for home dwelling elder persons, especially for those living with greater economic, social, and physical disadvantages.

Canine attachment has been shown to be a comforting social factor for persons receiving palliative care. Phear (1996) sought day hospice visitors' attitudes on the importance of animal companionship and how their companionship might complement palliative therapy. The hospice had a resident budgerigar, tropical fish tank, and two visiting canines were introduced for the duration of the research. Historic animal experiences and attitudes relating to the animals presence within the hospice were discussed with 37 visiting patients. Many respondents had extensive experience with animals as pets but only seven currently owned a pet. Visiting patients who did not have pets, desired ownership, however age, illness, or living situation restricted their ability to care for a pet. Companion scores from the seven pet owners revealed their pets were intimate companions. A desire to own a pet and the companionship felt by current pet owners corresponds with the evaluation of attitudes regarding continued canine visitations to the hospice. Thirty-two visiting patients were "very keen", three were "keen", and although approving of the visits, two rated the canine's visits with "little interest". Hospice staff and volunteers reported the canine's visits increased socialisation, provided relaxation, a homey environment, affection, companionship, and prompted reminiscence of past animal companions. Results from the study initiated the development of a regular canine visitation programme at the hospice.

AAT is also particularly well suited for aged care homes and special care units, as the canine provides interaction that is not dependent on cognitive functioning (Marx et al., 2010). For example, AAT is shown to be psychosocially effective for persons diagnosed with Alzheimer's disease (AD), a disease that affects a wide spectrum of cognitive functioning including language, memory, mood, and social behaviours. McCabe, Baun, Speich, and Agrawal (2002) recorded the effects of canine AAT on 25 persons ranging in age from 68 to 96 years, who were diagnosed with AD and were residing in an institutional special care unit. Although the frequency of verbal communication showed no significant difference between AAT and non-AAT sessions, tactile touch, smiles, and physical intimacy were enhanced whilst the canine was present. Touch was non-existent without the canine presence. Non-verbal communication, such as touch, may be just as beneficial to psychosocial health, and perhaps even more important for persons who are limited or restricted in their verbal communication (Keil, 1998).

Nordgren and Engström (2014a) found AAT to be of psychosocial benefit for persons living with a cognitive disorder. Nine persons living with dementia, aged between 58 and 88 years, each participated in 10 AAT sessions with a certified canine, for an approximate duration of 45-60 minutes, once or twice a week. AAT sessions were individually tailored according to recommendations from the supervising occupational therapist and included remedial objectives such as walking, grooming, feeding, teaching, and talking to the canine. The aim of the study was to investigate the effect of AAT on quality of life measures, which improved for all residents, and the presence of the canine induced memory recollection. Residents were able to talk with the canine handler about their memories, experiences, and related emotions. The authors do not expand on whether the memories were canine related however they recommend that AAT be considered as a therapeutic psychosocial intervention for persons with dementia. Other research reports that during AAT sessions,

participants diagnosed with dementia are able to recollect memories and feelings that are attributed to childhood and animals, as well as memories involving friends and places (Bernabei et al., 2013; Swall, Ebbeskog, Lundh Hagelin, Fagerberg, 2015). This suggests that AAT might induce an awareness of past and present existence that can benefit psychosocial health by enabling persons with, and without cognitive impairment, to reflect, express, and share past and present events, contributing to social conversations and interactions.

Research has also shown AAT to be a verbal and non-verbal communication catalyst for persons with speech and language difficulties, such as those diagnosed with Aphasia. Aphasia is characterised by a total or partial inability to comprehend or articulate the written or spoken language, caused by trauma to the brain from injury or disease (Aphasia New Zealand Charitable Trust, 2010). Lafrance, Garcia, and Labreche's (2007) single participant study followed a 61 year old male, diagnosed with Aphasia, who participated in AAT with a certified canine, as part of his speech and language rehabilitation. Eleven AAT sessions were completed, once a week for an hour. AAT sessions involved the participant walking around the rehabilitation centre, where he was encouraged to communicate and socialise with people. The first two weeks the participant walked alone, week three and four included the canine handler, week five to nine introduced the canine with the canine handler, and the final two weeks the participant walked alone. Weeks five to nine showed a significant difference in verbal and non-verbal behaviours. Non-verbal scores increased to 1.13 per minute from 0 per minute for the first four weeks. Verbal scores during the fourth week were 1.7 but increased to 4.7 for weeks seven and nine. In the presence of the canine the participant, described as shy and quiet, animatedly introduced the canine to strangers and was observed to be less passive. Results conclude that while the canine's presence increased social behaviour by being a social facilitator for

strangers to interact, the canine also increased the participant's confidence and willingness to engage socially.

Comparing the effectiveness of canine AAT and non-AAT sessions on elder residents' social interactions, Bernstein, Friedmann and Malaspina (2000) concluded that animals serve as social facilitators. Nursing home residents aged between 70 and 90 years were observed while participating in scheduled art sessions or canine AAT sessions. AAT sessions generated a significant increase in conversational initiation and duration. Physical contact occurrences were significantly higher with the canine when compared to physical contact with other residents or staff. Friedmann and Thomas (1995) suggest that the effect a canine has on elders' improved psychosocial health is due to the immediacy and ease of exchange with canines, when compared with human exchanges, which can be intermittent, pressurised, and demanding. AAT with canines offers an opportunity to re-balance social equality, as the role of companion, caregiver, and confidant is shared.

Associations with canines have the potential to improve elder health by acting as social lubricants, increasing psychosocial functioning, reducing and aiding recovery from physiological symptoms while increasing physical exercise, and reducing psychological ailments. Research has also investigated the effect of canine AAT on elder health, compared to alternative interventions including a "happy person", and a robotic canine.

2.3 AAT and Alternative Interventions

Kaiser et al. (2002) observed and evaluated the effects of a 'happy person' and a visiting canine on nursing home residents' mental states. The nursing home did not have a current AAT programme but allowed pet visitations on a monthly basis. Participants were aged between 74 and 98 years with no medical diagnosis. The 'happy person' was a young

energetic adult. Visits consisted of the canine handler and the canine, and then the canine handler and 'happy person'. The observing researcher was present for all visits, so the only change to visitations was the canine or 'happy person'. The canine handler did not speak during visits. Participating residents were visited by each duo once, separately, on alternating weeks for five minutes. Social behaviours were similar with the 'happy person' and canine, but participants initiated more behaviours with the canine than with the 'happy person'. Participants were observed to elicit more smiles, physical touches, and affectionate behaviour when the canine was present.

AAT research also compared the effectiveness of a happy visitor, a living canine, and a robotic canine. Kramer, Friedmann, and Bernstein (2009) observed and recorded the reactions of long term elder care residents, diagnosed with a form of dementia, when visited by a canine, a 17 year old male visitor, and AIBO. AIBO is a Sony designed computerised canine, 41 centimetres in length and 11 centimetres in height. Participating residents completed a session with each intervention once, over a period of three weeks. All three experimental sessions stimulated an increase in socially interactive behaviour and conversations, although AIBO held visual interest for longer, resulting in lengthier conversations. AIBO has also been shown to reduce loneliness for residents in nursing homes at the same statistical significance as AAT with a living canine, when compared to a control group receiving neither (Banks et al., 2008). Residents experienced the same level of attachment to the robotic canine as to the live canine. These findings suggest that if AAT with a living canine is not possible, the adoption of a robotic canine or 'happy person' may elicit similar therapeutic opportunities.

The supposition that canines can alleviate, and promote human wellbeing has resulted in thousands of anecdotal reports, case studies, scholarly articles, and media statements,

which are supported by empirical research. AAT research suggests that canines in particular may prevent or reduce a deterioration of elder health and if deterioration continues or evolves, canines may facilitate recovery and promote elder psychological, physiological, and psychosocial health (Wells, 2007). Further AAT research is required in order to advance understanding of AAT and the effects it has on elder health, but progression is hindered by limitations.

2.4 AAT Limitations

Further development of AAT as a substantiated therapeutic intervention is impeded by limitations associated with research deficiencies and challenges associated with working alongside animals.

2.4.1 Research Related Limitations

In addition to difficulties associated with varying definitions of AAT, criticisms of AAT research are related to a disparity of research designs. The myriad of variables, populations, settings, methodologies, and study designs illuminate difficulties when attempting to generalise or compare conclusions regarding the effects of canines (Bernabei et al., 2013; Cutt et al., 2007; Garrity & Stallones, 1998; Lutwack-Bloom et al., 2005). Inconsistencies are found in methodologies, instruments, variables tested, and experiential time frames (Brodie & Biley, 1999; Chur-Hansen, Stern, & Winefield, 2010; Evans & Gray, 2012; Kruger et al., 2004; Palley et al., 2010). In conjunction with these variances, it is also difficult to produce outcome results demonstrating that during AAT, it is the canine alone which produces positive effects, because canine handlers are commonly involved during AAT sessions (Kaiser et al., 2002). Due to these discrepancies AAT as an alternative healthcare treatment is hindered in its development (Hines & Fredrickson, 1998). Research regarding AAT and elders is also inhibited in growth due to

reasons specific to the elder population, including subject loss, degenerative health, changes in physical locality, unplanned visitations, and personal grievances (Lutwack-Bloom et al., 2005; Mugford & M'Comisky, 1975; Nordgren & Engström, 2014a; Nordgren & Engström, 2014b).

A further limitation of AAT research is a dearth of qualitative investigations. Explanations relating to why canines may be of benefit to elder health are rare, due to the voices of people experiencing AAT being largely ignored in the literature. Hendry (2010) argues that if researchers are unable to communicate to increase understanding, then the research is of no use as questions lie at the very centre of inquiry, and henceforth, understanding. Obtaining insights directly from persons experiencing AAT could advance AAT knowledge and practices, as talk conveys and links experiences, constructing vivid pictures depicting the progression of individual understanding (Gubrium & Holstein, 2000). For example, Scheibeck, Pallauf, Stellwag and Seeberger (2011) utilised semi-structured interviews to explore the meaning of importance given to pet canines for 23 private dwelling elders aged over 70 years. Comments such as “he watches over me, he gives me purpose” and “my dog means everything to me, even more than my relatives do” (p. 560), highlights how canines contribute to meanings associated with intimacy, support, and companionship. Canines were viewed as alternative ‘children’ in the eyes of some who stated “... we never had children ... he had become a part of our little family” and “well, to us, our dog was our substitute for the children we never had ...” (p. 561). These personal reflections build an intimate life picture of respondents’ history and experiences, and offer meaning about why canines are important in elder lives, suggesting that we cannot understand a phenomenon wholly without conversing with individuals who are experiencing it (Savin-Baden & Major, 2013).

2.4.2 Animal Related Limitations

The close proximity humans' share with pets has always posed potential health risks, some we accept knowingly, with other risks we may not be informed about (Cohen, 1975). One cannot expect a canine to be perfectly domesticated and there is no absolute certainty that a canine will not attack a handler or other persons. However, appropriate handler and canine training resulting in certification, rigorous selection of canine breeds, as well as continued nurturing and veterinary care, can aptly minimise and control potential animal behaviour related risks (Brodie, Biley & Shewring, 2002; Johnson, Odendaal & Meadows, 2002). Appropriate screening of clients, development of, and strict adherence to, policy processes can also reduce risk associated with canine AAT.

One potential uninformed risk related to AAT is the contraction of zoonoses. The New Zealand Ministry of Health defines zoonoses as diseases, some severe, caused by micro-organisms that are transmitted from animals and birds to humans (Ministry of Health, n.d). Transference occurs via several modes, airborne, vector-borne (that is via mosquitos or fleas), direct contact via animal bites and scratches, and vehicle spread via food or water (Guay, 2001). Zoonotic concerns have been noted as a primary reason for resistance to the development of AAT programmes within healthcare facilities (Johnson et al., 2002). However, empirical evidence that validates concerns related to zoonoses is insubstantial (DiSalvo et al., 2006). New Zealand is largely unaffected by a great number of potential zoonoses that can affect canines, therefore the minimal risk of contracting zoonoses should not deter the opportunity to have pets, considering their potential value (Thompson, 1995). However, whether evidenced or not, cautionary infection control procedures are recommended (Khan & Farrag, 2000) to reduce transmission of zoonoses including implementing hygienic measures such as hand washing guidelines (Guay, 2001; Lefebvre et al., 2006). The progression and implementation of canine AAT is hindered by

some associated limitations and risks, however these can be minimised with the acceptance of responsibility shared with legality, professionalism, education, and veterinary care (Cohen, 1975; DiSalvo et al., 2006; Guay, 2001; Lefebvre et al., 2006; Wells, 2007).

2.5 AAT in New Zealand

The New Zealand Companion Animal Council have substantiated that the population of Aotearoa New Zealand values animals (Mackay, 2011). Their survey revealed that 68% of households within New Zealand own a pet, ranking New Zealand as having one of the highest numbers of pet owners worldwide. Of the 68% of households who own a pet, 29% own canines, contributing to a canine population of 700,000. The most common reason for acquiring a pet was companionship, and 77% of respondents consider their canines as members of their family. Yet, despite our pronounced connection with animals, growth and recognition of AAT as a beneficial health intervention for a variety of health conditions has been gradual within New Zealand.

Equine AAT appears to have found a progressive platform within New Zealand, with, for example, the nationally positioned Riding for the Disabled Association, and Auckland based Ambury Park Centre for Riding Therapy and Dune Lakes Lodge, an equine educational centre. Despite international awareness of the potential benefits of canines as a complementary form of therapy, St John's Outreach Therapy Pets emerges as the only service offering formalised canine AAT programmes within New Zealand. Outreach Therapy Pets was established in 1988 under Auckland SPCA, before becoming a joint initiative with St John's in 2003. The programme involves over 300 people and animal volunteers. Operating within the regions of Auckland, Kerikeri, Waihi and Thames, the

programme offers AAA and AAT to persons residing in hospices, hospitals, care homes, and educational facilities.

St John's commissioned report (Austin & Cosslett, 2013) was the only New Zealand contextual AAT research located during this pilot study. Information regarding AAT benefits were obtained by interviews with staff (n=23) and residents (n=5) of programme hosts (i.e., hospitals, nursing homes, specific care units), and programme delivery volunteers (n=26). Social stimulation, elevated mood and alertness, as well as increased mobility were identified as benefits associated with AAT visitations, of which 85% involved contact with a canine. Impending visits inspired unmotivated elder residents to get dressed and leave their bedroom. Physically impaired residents made significant mobility improvements and formerly uncommunicative residents spoke to volunteers and canines. These findings complement international AAT literature that supports AAT as a beneficial therapeutic incentive.

2.6 AAT at Elizabeth Knox

Elizabeth Knox Home and Hospital (Knox) is a charitable trust, Eden Alternative home and hospital based in Auckland. It offers round the clock professional and medical care, rest home care, hospital care, young disabled care, interim care scheme, respite care, palliative care, and carer support for 200 subsidised and fee-paying private residents (Elizabeth Knox, 2014). Developed and founded by geriatrician, Dr. William Thomas in 1991, the Eden Alternative follows 10 principles of care (Appendix 1) that focus on eliminating loneliness, helplessness, and boredom (Thomas & Johansson, 2003). Knox is the first New Zealand home to achieve full Eden registration, where a home must demonstrate a commitment to implementing all Eden principles within a living, and working, environment (Brownie, Neeleman, & Noakes-Meyer, 2011).

Driven by the Eden Alternative philosophy of care to offer elder persons a life worth living (Brownie et al., 2011), discussions with professionals involved in the use of training and utilising canines for therapeutic work, led to Knox initiating New Zealand's inaugural AAT programme within a long-term residential setting. Knox commenced New Zealand's first residential canine AAT programme in early 2014. Initiation of the AAT programme was prompted by a partnership with Mobility Dogs (MD) New Zealand. MD is a registered charitable trust that provides certified canines to assist and enhance the lives of New Zealanders living with disabilities by supporting independence, confidence, and community participation (Mobility Dogs, 2014). Knox acquired one MD certified canine, Olive, a three-year-old black Labrador. Olive was trained as part of the MD Puppies in Prison (PIP) programme, where she achieved Assistance Dogs International (ADI) certification. MD canine trainers mentored Knox staff at the commencement of Olive's placement to ensure training consistency and a Knox staff member volunteered to be Olive's primary carer. As a pilot scheme, the Knox AAT programme is at development stage, creating an opportune setting to govern this pilot study.

2.7 Conclusion

This literature review chapter has identified that AAT has played a role in the enhancement of human health for centuries and can serve as a therapeutic technique for elder persons, benefiting psychological, physiological, and psychosocial health. However, despite a rising interest in the topic of AAT resulting in many research reports, development is hindered due to research and animal related limitations. The following research design chapter details how this study sought to minimise these limitations, and the processes involved whilst seeking to achieve the four stated aims of the study, and attending to the governing research question, *how do elder residents within a long-term residential setting experience AAT with a trained canine?*

Chapter 3: Research Design

“It becomes a world of meaning only when meaning-making beings make sense of it” (Crotty, 1998, p. 10).

3.0 Introduction

The intent of this study was to explore canine AAT experiences of elder residents to achieve four aims; explore the impact of a trained resident canine in an aged care setting, offer an opportunity for residents to voice their experiences, contribute to international AAT literature, and provide a platform to build upon further NZ contextual AAT research. A noted limitation of AAT is the inconsistencies of research methodologies. This chapter details the study’s research design, expanding on the methodology and methods utilised in order to achieve the study’s aims.

3.1 Methodology

Theoretical perspectives aid in the processing of understanding what is, and what it means to know (Crotty, 1998), by giving direction to what is examined and how it is examined (Guest, MacQueen & Namey, 2012). This New Zealand pilot study employed a qualitative, exploratory case study design methodology, guided by social constructionism.

3.1.1 Qualitative Research

Qualitative or interpretive paradigms seek to understand the lived world, by obtaining the perspectives of persons experiencing the phenomenon of interest (Allsop, 2013; Andrews, 2012; Vaismoradi, Turunen, & Bondas, 2013). Qualitative research offers the opportunity for participants to express their views in the form of talk that allows for the insight of individual construction and expression of meaning (Mishler, 1986). Listening to others

and interpreting accounts of their experiences is part of qualitative research (Glesne, 2006). This is relevant to this study, which sought elders' AAT experiences. Qualitative research also increases understanding about the phenomenon being studied by supporting the gathering of in-depth information (Maas et al., 2002). By doing so, qualitative research offers the means to understand the meaning of complex situations (Black, 2006). Literature has identified that AAT is a phenomenon with varying complexities therefore a qualitative research design for this study was appropriate. Additionally, qualitative research facilitates the exploration of a phenomenon within the context it occurs (Baxter & Jack, 2008) supporting an exploratory case study approach.

3.1.2 Exploratory Case Study

Case study research is employed to understand the complexities of a social phenomenon (Yin, 2014), by exploring the uniqueness of a single case in-depth, from multiple perspectives (Simons, 2009). Case study research provides a boundary of scope for a study and is flexible to any methods appropriate to the research question (Luck, Johnson, & Usher, 2006). This flexibility allows the researcher to learn and develop skills as the case progresses (Flyvbjerg, 2006), making it an appropriate approach for a pilot study. The boundary of this case study is one New Zealand, long-term residential setting and the unit of analysis is the AAT experiences of elders who reside within that setting.

Exploratory case study research is applied to discover whether something exists and the extent to which it exists (Davidson & Tolich, 1999); case study research is designed to be exploratory (Hancock & Algozzine, 2011; Wolcott, 1994). This standpoint allows for the absence of hypotheses, which would impose expectations before the study commences (Hosey & Melfi, 2014). Exploratory studies are instead, better suited to be guided by a

research question (Guest et al., 2012). This study's research question explored elder residents' AAT experiences with a therapeutic canine.

3.1.3 Social Constructionism

Due to case study research placing particular importance on participants' version of experiences, social constructionism was a relevant standpoint for this study (Platt, 1992; Rubin & Rubin, 2012). Social constructionism theorises that individual meaning evolves from social, lived experiences, creating multiple, continually 'under construction' realities (Gubrium & Holstein, 2000). This suggests that knowledge is not discovered but created by the mind, influenced by on-going, lived social experiences that change and transform meaning (Savin-Baden & Major, 2013). Anchored from stories of individual social experiences, meaning creates a framework of knowledge, aiding how we feel, define, organise, represent, and comprehend reality (Denzin, 2001; Holstein & Gubrium, 1995). Meaning can then be applied to the same phenomenon in different ways (Crotty, 1998) while still maintaining realness to the world (Andrews, 2012). Crotty (1998) simplifies social constructionism stating, "the way things are is really just the sense we make of them" (p. 64). To gain an understanding of elders' experiences with AAT, an opportunity for them to articulate their experiences was offered in the context that those experiences occurred. This is because knowledge is best learned and understood within the context of the research topic occurring (Flyvberg, 2006).

To capture, understand, and present the complexities of meaning within participants' AAT experiences, thematic analysis was applied (Guest, et al., 2012). Analysis of data is the process of continually sorting and defining pieces of collected data to create an organisational framework that leads to understanding (Glesne, 2006). Understanding evolves through interpretation, which uncovers how the event in question organises and

gives meaning to the persons studied (Denzin, 2001). Thematic analysis pursues the pathways in which individuals create meaning by eliciting subjectively relevant material about a given topic (Joffe, 2011). Thematic analysis allows for the process of illuminating the idea that multiple realities exist, complementing the study's social constructionist standpoint (Braun & Clarke, 2006; Joffe, 2011; Vaismoradi et al., 2013). The steps of how thematic analysis was conducted are detailed in the following methods sections.

3.2 Methods

3.2.1 Participant Selection

Participant selection involves choosing those persons who can produce the best information with which to address the research question (Hancock & Algozzine, 2011), and it is appropriate for a case study to involve participants who can provide the richest information (Flyvbjerg, 2006). Participant selection was informed via selective sampling that allowed the chance to purposively select a group of respondents in accordance with the research question (Joffe, 2011). The research question asked *what are elder residents' experiences of AAT with a therapeutic canine?* Permanently residing residents were selectively distinguished if:

1. They had historical AAT experience with Olive.
2. Expressed an interest in spending time with Olive.

For the safety of participants and canine, exclusion was due to one or more of the following:

1. Informed consent was unobtainable.
2. Known history of violence towards animals.
3. Fear, phobia, or negative emotive responses to canines, including allergies.

A criterion for all research participants was the ability to give informed consent. Informed consent as a term alone carries a myriad of opinions and definitions, especially when referring to elder persons and is noted as a particular challenge when conducting research within care homes (Hall, Longhurst & Higginson, 2009; Wood et al., 2013).

3.2.2 Informed Consent

Informed consent for this study was defined as ensuring potential participants had absolute clarity regarding the purpose of the study, the processes, and what participation involved, while having freedom to decide to participate without coercion, and withdraw at any time without consequence (Alt-White, 1995). Taking into account the nature of the research setting and the persons residing within the setting, it was acknowledged that potential participants would be living with comorbid physical and mental ailments. This may be perceived as being unable to give informed consent, however, a cognitive impairment does not preclude the ability to make an informed decision (Fisk, Beattie & Donnelly, 2007). Age is also not a determinate of special protection, however distinctive populations, such as those who are institutionalised or who have cognitive impairments, may require special consenting processes (High and Doole, 1995). Informed consent for this study was determined by the competency of five abilities:

1. Receive and understand information.
2. Process information.
3. Appreciate the situation and its consequences.
4. Weigh benefits, risk, and alternatives.
5. Make and communicate decisions (Meulenbroek et al., 2010).

Measures were put in place to determine informed consent including; succinctly querying a resident's decision to participate, gauging understanding pertaining to the study details,

specifically focusing on the study's purpose, risks, benefits, and the requirements of participation (Hall et al., 2009). Participants all demonstrated informed consent by recalling details of the research, asking questions about the research, querying if they could participate, and remembering the researcher in person and by name.

3.2.3 Participant Recruitment

Participant recruitment was aided by the distribution of a flyer (Appendix 2) that briefly detailed the study. The flyer's purpose was to inform all Knox residents, staff, and support networks of the impending study while also allowing residents time to contemplate participation. Kristen, a staff member, aided participant recruitment, acting as the study's "insider". The employment of a staff member to recruit participants is common for aged care residential contextual research (Barker, Pandurangi, & Best, 2003; Hall et al., 2009; Nordgren & Engström, 2014b) and the involvement of an enthusiastic and reliable "insider" from inception to completion of a research study is recommended (Tarzia, Bauer, Fetherstonhaugh, & Nay, 2013). As volunteer coordinator and Olive's handler, Kristen had a positive rapport with many residents and invaluable knowledge pertaining to residents who met the inclusion criteria. It is common that a setting's volunteer coordinator is the assigned contact for persons visiting residential settings, such as individuals conducting AAT (Granger & Kogan, 2000). Aided by the study's information sheet (Appendix 3) Kristen advertised and explained the research to potential participants. In consideration of previous research difficulties with elder resident recruitment, the researcher was flexible and allowed sufficient time for this process (Alt-White, 1995; Harris & Dyson, 2001; Kaiser et al., 2002; Maas et al., 2002).

3.2.4 Participant Sample

Qualitative research can fall into the temptation to increase sample size due to criticism that a small number of participants can undermine the ability for generalisation; but increasing the number of participants reduces the ability to proportionately give attention to each participant (Wolcott, 1994). This case study initially sought six permanent residents between the ages of 55 and 75 years. The age range was guided by the diversity of persons residing at Knox. However the age criterion was eventually eliminated due to recruitment difficulties. Following participant recruitment and selective sampling it was identified that the age range was excluding residents, both under 55 years and over 75 years, who met all inclusion criteria except the age range. In accordance with selective sampling this meant that residents who could offer rich insight into answering the study's research question were excluded. Following supervisor guidance the age range was withdrawn as an inclusion criterion.

Participant recruitment and sampling concluded with five residents consenting to participate. Two males and three females, aged between 50 and 80 years. Five residents were reliant on a manual or electric wheelchair for all or most of their mobility, and one resident used a walker for mobility assistance. Time residing at Knox varied between six weeks and six years. Reasons for transferring to Knox varied due to physical and cognitive complexities. All participants gave informed consent (Appendix 4) before participating in semi-structured interviews.

3.2.5 Semi-Structured Interviews

Interviews are one of the most important aspects of a case study (Platt, 1992; Yin, 2014). They allow for the opportunity to explore what cannot be seen thereby giving insight into alternative explanations for what is seen (Glesne, 2006). Audio-recorded, individual, semi-

structured interviews offered a flexible and effective method to capture participants' voices and access how they interpreted the meaning of their canine AAT experiences (Rabionet, 2011). Semi-structured interviews are predominantly suited to case study research as they permit follow up questions that are conversationally directed, in order to probe for more insightful and richer data (Hancock & Algozzine, 2011). Individual interviews, as opposed to group focused interviews, were used as a result of noting that this form of interview appears to generate greater beneficial data throughout AAT literature (Virués-Ortega et al., 2012). Interview date, time, and location, were organised with participants and Kristen to moderate disruption to daily routines and responsibilities. To aid memory, an interview reminder card (Appendix 5) was offered to respondents, with the purpose of reducing difficulties in locating and organising participants (Hall et al., 2009; Kaiser et al., 2002).

Adapted from Holstein and Gubrium's (1995) active interview approach, a loosely designed set of questions constrained by the researcher's topical objectives was constructed to serve as an interview schedule (Appendix 6). The interview schedule was divided into three main sections: pre-AAT questions to introduce Olive and gain insight into daily life at Knox; followed by an opportunity for the participant to interact with Olive (AAT session); and post-AAT questions relating specifically to Olive and AAT.

A flexible time limit of 60 minutes was placed on each interview as the duration of interviews within AAT literature vary between nine, 45, 54, and 75 minutes (Hall et al., 2009; Wood et al., 2013). The time of AAT intervention sessions also vary considerably within AAT literature, from as little as three minutes (Kramer et al., 2009), five minutes (Kaiser et al., 2002), 15 minutes (Marx et al., 2010) to 30 minutes (Banks et al., 2008), 45-60 minutes (Nordgren & Engström, 2014b), and between one to two hours (Bernstein et

al., 2000). AAT sessions were given a flexible time limit of 15 minutes, and were unstructured, allowing participants to naturally govern their interaction with Olive. Interactions such as petting, brushing, talk, feeding, and communicating with the canine, as well as reminiscing about pet canines or animals, were identified as therapeutic intervention methods (Cipriani, et al., 2013). The researcher implemented the commencement of each AAT session. Following completion of the pre-AAT interview questions, a simple text to Kristen initiated Olive's arrival and her departure was guided by Kristen's judgment. One interview took place in a private corner within a small communal lounge setting (Bernstein et al., 2000) whilst the other four interviews took place in participant's private rooms (Kaiser et al., 2002; McCabe et al., 2002). All five interviews lasted approximately 60 minutes, with each AAT session lasting approximately 20 minutes.

3.3 Ethics

Ethics approval is a central component of research involving human participants to ensure that risk has been assessed and managed to maximise participant benefit and minimise harm (Tee & Lathlean, 2004). This study required full approval from the Massey University Human Ethics Committee, which was granted in December 2014 (Appendix 7). Following discussions with Kristen and Knox Chief Executive Officer, permission was granted to conduct the research at Knox. A letter to Knox's Board Chairman and Trustees followed as a courtesy. Permission was also sought and offered from Mobility Dog's Chief Executive Officer, in consideration of their partnership with Knox.

3.4 Thematic Analysis

An inductive, semantic thematic analysis was used, where codes and themes were developed from the data content and interpreted at a surface level, providing a rich

description of the data set (Braun & Clarke, 2006). The researcher was the only person who analysed the data. A computer application was not used because qualitative research is about immersion within the data, to gain familiarity, make decisions and interpretations that a computer cannot (Davidson & Tolich, 1999). An adaptation of Braun and Clarke's (2006) six phases of thematic analysis was applied which concluded with three phases: familiarisation with the data; generation of initial codes; and search, naming, review, and defining of themes.

3.4.1 Phase 1: Familiarisation with Data

Familiarisation with data was continuous with fragmented analysis taking place during the verbatim transcription of interview recordings. It was the first process in which data was explored for key words, trends, and ideas (Guest et al., 2012) that would shape the resulting two phases. Transcription is a time consuming process but it allows for immersion into the data and the beginnings of searching for active meaning (Braun & Clarke, 2006). Interview transcripts were edited by removing content not considered relevant to the answering of the research question and were individually distributed to participants for their review. This is a process of "member checking" (Houghton, Casey, Shaw, & Murphy, 2013), allowing participants to correct mistakes and ambiguities (Rubin & Rubin, 2012). Participants did this diligently, correcting misheard words, clarifying interpretations, and changing use of language. Following participants' individual amendments the transcripts were then analysed to generate codes.

3.4.2 Phase 2: Generation of Initial Codes

Codes are summaries of raw data that highlight initial interesting features from individual transcripts (Guest et al., 2012). They essentially flag a worthy piece of talk, or data, which is likely to establish a research theme (Davidson & Tolich, 1999). Interesting descriptions

were drawn from the main text of each interview transcript, coded in short phrases, and identified with distinctive quotes. Initial considerations for themes were recorded under “memory triggers”. Table 1 shows an example of how an interview transcript extract was coded.

Table 1: Example of Thematic Analysis Coding Process

J Transcript	Code	Quotes	Memory Triggers
<p>Question 6. How would you describe Olive?</p> <p>Big, black. A very friendly dog, very friendly. Not overly friendly but if you want to be friendly she wants to be friendly, she’s quite good like that.</p>	<ul style="list-style-type: none"> • Visually appealing • Appealing temperament – friendly but not overly friendly • Reciprocal feelings – if you’re friendly Olive is friendly (Induces feelings of acceptance?) 	<p>“A very friendly dog, very friendly”</p>	<p>SENSORY – VISUAL</p> <p>TRAINING</p> <p>RECIPROCITY</p>

The format of the table was developed to keep the initial codes with the main body of the transcript so the contexts of descriptions were not lost, and ownership was identifiable. Often the meaning or significance of what is spoken about is dependent upon the characteristics of the speaker (Guest et al., 2012). The quotes served as verification for each code and were quick references for analysis interpretation. “Memory triggers” allowed initial thoughts of potential themes to be recorded as they arose during transcription.

3.4.3 Phase 3: Search, Review, Naming, and Defining of Themes

Following the development of initial codes, portions of each code were reduced to smaller units with identifying key words, and collated into related groups to form initial themes (Glesne, 2006). Themes capture patterned responses of important data or insight that relate to the research question (Braun & Clarke, 2006). The use of small note cards was

used for this part of the analysis. For example, the above extract was reduced to the words “visual appeal and friendly” with the ownership being identified by the speakers first initial “J”, and written on one card. This card was grouped with other cards that had related smaller units of codes including; intelligent, practical uses, evokes laughter, reciprocity, acceptance, calm, enticing eyes, snuggly, and placid. Following this grouping of cards a broad theme titled “Olive” was developed. This process followed for all codes until every card was grouped under a related theme heading, which was identified by red writing. All cards were laid out on a flat surface within their grouped theme headings, forming a large visual brainstorm. The use of cards eased the process of reviewing and rearranging codes into specific themes as they acted much the same way puzzle pieces do when being rearranged to create the full picture. Initial themes were further expanded following a continuation of reviewing. The example theme was expanded into two themes, “Olive visual” and “Olive behaviour” and related cards transferred accordingly. For example “Olive visual” had cards such as enticing eyes and snuggly.

Thematic maps were developed throughout this stage in order to find links between the themes. However, following difficulties grouping and attempting to define themes I reflected that my views on what should have been said were influencing the construction of themes. Themes are working processes that develop to become upgraded to support additional processed information (Guest et al., 2012) that guides the interpretation of the data (Davidson & Tolich, 1999). I was unable to form a plausible link between the themes, and additionally, was unable to interpret the meaning of data associated with those themes, identifying a problem in my analysis. I reflected that I was creating themes based on my views of what was important, attempting to “fit” the data into themes instead of the data constructing the themes. It was unavoidable that my pre-conceived concepts would affect the analysis on some level, but I was not remaining open to the construction of new

concepts (Joffe, 2011). The most important element of analysis is time (Glesne, 2006), and following a period of removal from the data, I questioned why the participants reported what they did. One prominent theme was eventually constructed that linked all previously constructed themes, the theme of “connectedness”. The idea that participants felt connected with Olive gave meaning to all other constructed themes, and this led to further in-depth interpretation.

3.5 Conclusion

This study’s qualitative exploratory case study research design, aligned with social constructionism, offered the opportunity to explore AAT experiences from the perspective of elder users. Using semi-structured interviews to obtain experiences of AAT, thematic analysis was utilised to make connections among those stories (Glesne, 2006) with the construction of codes and themes. A prominent theme of “connectedness” was constructed following three phases of thematic analysis. The next chapter discusses the findings of analysis, detailing further interpretation of the data in order to understand the meaning of elder’s AAT experiences.

Chapter 4: Findings

“The whole charm of the dog lies in the depth of the friendship and the strength of the spiritual ties with which he bounds himself to man” (Lorenz, 1953, p. xviii intro).

4.0 Introduction

This chapter reports on the pattern and interpretation of themes found within transcripts of participants’ AAT experiences, following an inductive, semantic level thematic analysis approach. An inductive approach searched for themes within the data and semantic level analysis identified the surface level meaning of the themes (Braun & Clarke, 2006).

Interview transcripts from five permanent Knox residents were analysed by an adaption of Braun and Clarke’s (2006) six phases of thematic analysis, to explore experiences of AAT, as presented through participants’ interactions with the trained canine, Olive. Following the completion of analysis the most prominent theme identified was, “connectedness”. The definition of participant connectedness with Olive used in this study parallels with Whitlock, Wyman, and Barreira’s (2010) definition which identifies connectedness as a psychological state where individuals feel a belonging that is created by a sense of being valued, trusted, and cared for as a unique individual by the social groups with whom they interact with or within which they are geographically embedded.

Following the identification of connectedness, two sub-themes of connectedness were interpreted from the data. Emotional Connectedness (sub-theme 1) is a psychological state of connectedness that is experienced by the strong emotional connection participants feel with Olive. Social Connectedness (sub-theme 2) is presented by experiences with Olive benefiting individual social relationship systems by increasing

social engagement and communication, promoting meaningful relationships and a greater sense of belonging.

This chapter presents each sub-theme, supported by quotes from individual interview transcripts. The first letter of each participant's pseudonym identifies ownership of each quote, which are italicised with quotation marks, and larger quotes are formatted in block text. An ellipsis (...) represents a removal of words and square brackets ([]) identifies that the word has been added by the researcher.

4.1 Sub-theme 1: Emotional Connectedness (EC)

EC relates to the strong attachment participants feel with Olive, creating a psychological state of connectedness that results in beneficial emotional and physiological responses. Three components of EC are presented: participants' encouragement of Olive's presence and further promotion of AAT with a canine; a unique collective sense of ownership towards Olive; emotional changes participants experience when interacting with Olive.

All participants emphatically supported Olive's presence at Knox, replying "no" when asked whether any experiences with Olive had been unpleasant, suggesting that they feel a positive emotional connection with Olive when spending time with her. Their response to questions about whether other residential settings would benefit from having a canine like Olive also support EC as there was an overwhelming agreement: *"just a hearty YES!" (A)*, and *"oh yes, [of] course they would, course they would (sic)" (V)*. Their emphatic replies indicate that other residential settings would similarly benefit by having a therapeutic canine.

Although articulating that a canine like Olive benefits Knox, and a similar canine would benefit other residential settings, participants acknowledge potential disadvantages

(Cohen, 1975; Johnson et al., 2002). While no negative incidents specifically associated with Olive were experienced or observed, participants recognised that some people feel, *“dogs shouldn’t be inside, they’re outside animals” (A)*. Also, some people feel and display fear when in the presence of a canine, *“some people are terrified, they just withdraw completely” (H)*. Participants articulated that some people might even actively avoid settings with animals inside, *“some people would choose to not come because of the animals” (J)*.

Despite potential disadvantages, participants felt a strong collective EC with Olive. Olive is predominantly cared for by one staff member, Kristen. Kristen volunteered to be Olive’s handler at the initiation of Olive’s arrival, and subsequently manages AAT at Knox. A connection between Kristen and Olive was noticed, *“Olive is Kristen’s alter-ego” (S)*, as are difficulties associated with sharing a canine, *“if you’re going to train a dog you need to have one master really” (H)*. However, participants view Olive as being uniquely Knox’s residents’ canine, *“she is the residents’ dog. She is Knox’s pet” (S)*, *“oh yes, she is [Knox’s dog]” (H)*, *“Olive is different, she is Knox’s dog” (A)*. This connection, in the form of a collective sense of ownership towards Olive is unique because Olive is not the only animal, or canine, to reside at Knox. Olive is however the only trained therapeutic canine and the only animal to be viewed as the residents’. Other animals present at Knox are automatically identified with their owner’s name. For example: *“Buster is J’s dog” (A)*, *“when I see [Buster] I know the boss is around [laughs]” (S)*, *“...there were a couple of dogs around at the time, C’s dog and the hairdressers...” (J)*.

When asked how they felt when interacting with Olive, two participants explicitly identified an emotional connection with Olive that resulted in pleasant feelings. One participant identified Olive’s presence as changing the atmosphere of her room to

pleasant, “ you just get that feeling in the room...it just feels nice to have her there...” (J). Another participant identified an internal, physiological change when experiencing time with Olive, resulting in feelings of happiness, “oh delighted [chuckles]... it makes me feel good, feel good inside” (V). Whilst not distinctly articulating how they felt, other participants displayed positive reactions in the form of smiles and laughter when engaging with Olive, suggesting they also feel an emotional connection with her.

A particular EC with Olive was due to one participant’s innate disposition. She feels a connection with Olive because she has a love for canines, “it comes from ME! Just me ... I love them” (V). Another participant attributed the reason for an EC with Olive as being due to the human-animal bond (AVMA, 1998, cited in Hosey & Melfi, 2014):

“It’s the connection. Because they are animals but they have a feeling for people, they like them ... its real empathy. They love people. Look at people when they come home and the dog is all over them. It’s just wonderful” (J).

This quote suggests that because Olive is a social animal, like humans, she has an innate desire to interact with another living being, reciprocating an emotional connection. Other participants supported this view, articulating that Olive actively encourages interactions because she also benefits, “she loves people, and she loves to be with people” (S), and “she also gets a ‘kick’ out of [the interactions]” (A).

Further exploration of participants’ responses identified Olive’s unique physical canine characteristics as also contributing and influencing participants’ EC. When asked to describe Olive, participant responses reflected a specific attentiveness to the visual attractiveness of Olive’s physical characteristics: “oh she’s a beautiful dog ... I love her face I thinks she’s gorgeous. I love her body I think she’s beautiful ... oh yeah lovely dog...” (V), “in

the way she is groomed, it's like looking at a woman" (S), "she's snuggly..." (A), "they sit there looking at ya [sic] with their eyes coming down" (H).

Participants' responses mirror similar characteristics that connect and attract human relationships (Archer, 1997). Her face and body is viewed as being beautiful and is likened to the beauty and shape of a woman. Her body and coat is spoken of as being soft and cuddly, resulting in a desire to embrace her. There is a focus on Olive's eyes and how she holds eye contact, provoking feelings of tenderness and warmth. Olive's physical characteristics are viewed as attractive which seems to influence and contribute to EC, by stimulating feelings of affection.

When recalling past pet canine experiences, participants used a similar affectionate tone, further supporting the theme that participants feel an EC with canines: *"...I had my own standard poodle which was very beautiful. I showed it for about a year, I just loved it" (J), "...but that dog died a long time ago, it was much loved, and not replaced" (V), "yeah it was a good dog ... very intelligent, you could train it to do anything" (H), "[my dog] really understood me for me" (A).*

The first response identifies the visual attractiveness of the participant's canine and highlights an emotional connection based on affectionate feelings associated with companionship and love. The second participant also speaks of affectionate feelings associated with love, and the emotional connection she felt towards her canine as irreplaceable. The latter two responses distinguish different canine characteristics that influence EC. A connection between one participant and his pet canine is identified as being based on respect for the canine's intelligence. The last response reflects a connection built from understanding and acceptance.

An emotional connection with Olive is articulated through each participants' positive responses regarding their experiences with Olive, their endorsement of other residential homes similarly benefiting despite potential disadvantages, and a shared sense of ownership towards Olive. Participants' believe that an emotional connection is created from an innate human disposition to connect with Olive because she is a canine, further strengthened by Olive's reciprocal desire to connect.

Responses suggest that participants' experience with Olive are more than simply engaging with an animal because of an innate desire to be with another living being. Olive has unique qualities that similarly attract and connect people to each other, like beauty, gentleness, warmth, and intelligence. Experiences with Olive have evoked pleasant and beneficial feelings for participants, so much so that they feel love and affection for Olive, with all of these positive aspects serving to form and strengthen the theme of EC.

4.2 Sub-theme 2: Social Connectedness (SC)

Complementing the emotional connection, analysis also identified themes of social connectedness. The New Zealand Ministry of Social Development (2010) simply defines SC as the relationship individuals have with others, but this study considers it is more than that. SC is a component of self that reflects a feeling of belongingness to the social world and is defined by the meaningfulness, not quantity, of individual relationship systems (Lee, Draper, Lee, 2001; Statistics New Zealand, 2013). SC is presented by experiences with Olive stimulating communication and facilitating social interactions, which creates new experiences and shared knowledge. Shared knowledge builds meaningfulness, strengthening participants' individual social relationship systems, which include family, friends, and peers.

Socialising within a residential setting can be particularly difficult as identified in the following quote:

"It's alright talking to people but I like to have the animals there ... its more closeness ... I talk to people, a lot of [residents] don't talk but if I say hello first well that gets them, but a lot of them don't talk they just sit there. And I sit there too and that's alright, I don't mind" (V).

The participant has identified challenges associated with building social connections within Knox, due to residents' varying level of cognitive abilities. Physically being able to speak and being cognitively able to comprehend speech is challenging for some residents. The participant accepts that unresponsiveness may be due to these difficulties and if required, she felt animals are beneficial alternative listening companions. SC is illustrated by this reflection as the participant talks about communication with people as satisfactory, but articulates a greater connection when communicating with animals.

While providing an alternative for personal communications, Olive is a focal conversational topic. When interacting with Olive, participants communicate to her directly, greeting her and asking her questions: *"oh, aren't you beautiful? Aren't you nosey, you're a nosey little dog?"(V), "hello doggy, what do you want aye?" (H), "hello, excuse me you are not a person... [laughs] ... no food sorry Olive, I'm really sorry about that" (J).* A tone of ease within participant communication with Olive is similar to that used among friends and relatives, suggesting Olive is viewed as part of the social group.

Experiences with Olive may further foster communication by triggering vivid recollections of past pet experiences that are intertwined with memories of family and hobbies. The

quotes below, though lengthy, are included to illustrate how much can be revealed when one's memory is prompted:

"I remember once I took [the dog] down T----- to do some shooting [with mates] and we were just sitting on a clearing... when next thing the dog took off and I called him and he didn't come back. And he's gone for about an hour and a half and we just sat there and waited. I called and whistled but nah, and then just out of the blue he comes trotting back and he must have been miles away, and it turned out, I took up to where he had been and there had been some deer there. I could see all the prints and he must have chased them for miles" (H).

"We had dogs in Auckland, family ones, Corgies and that, and when we moved to town my youngest daughter really wanted a dog so we got a little Labrador but we got a failed guide dog and one could see why [laughter]. [The dog] would see a car and vrooommm, he would get a bit over excitable. Yes, we had her for quite a while until we shifted to a different place and some people on a farm took her" (J).

"People on the street, and persons visiting the house would also tell me how special [my dog] was. Neighbours would ask to walk him but they got frustrated because he would always be looking back for me, whimpering. One day I fell out of my wheelchair and he made an unexplained noise, like a cry and howl mixed together, he was yelling for help, I have never heard anything like it before. A neighbour came out to help and I asked if she had seen me fall, no she had heard the [dogs] cry" (A).

"I used to go to Pak N Save and get the cabbage pieces, the outer layer, I used to fill my black bag up with cabbage leaves and I used to go round to the goats. I used to hop over the fence and feed all the goats and they used to love the cabbage pieces. And I did that for a long time. I used to love it. And they used to make me laugh sometimes. I'd throw the cabbage leaves and one time the cabbage leave flew up in the air and landed on the goat's horn, it looked so funny I laughed my head off! [laughter]" (V).

Experiences with Olive may serve as a catalyst for communication by triggering memories about pet experiences that are meaningful, rich in content, and can be shared with ease.

Olive further promotes SC by facilitating social exchanges. She is invited to partake in social group activities and aids family visitations: *"a group, my newfound friends, we call Olive to come with us. ...one time with my granddaughters ... when they came [to visit], Olive just joined the group and the kids were patting her. She is a natural" (S)*. The participant acknowledges a desire for Olive's company, she calls her to come over and talks about how Olive has a natural ability to spontaneously engage with visitors.

Olive's presence also serves as an interface for social exchanges and interaction with staff. Because Olive is predominately cared for by Kristen, participants articulated that visiting Olive and Kristen serves a dual SC benefit. Olive is a catalyst to interact with Kristen, which additionally leads to both social and task-orientated communication: *"Kristen said that [Olive] likes carrots and so I said, well I got some out in the garden so I go and pull one and give it to her" (H)*, *"I visit Olive when I visit Kirsten" (A)*, *"oh yeah of all the offices [Olive and Kristen's] is the first thing I visit. I say hi Kristen, do we have any volunteers [to*

accompany me today]?" (S). One participant's SC with Kristen is built on a unique relationship that involves him visiting Olive and Kristen's office to feed Olive carrots. Another participant articulated that visiting Kristen offers the additional benefit of interacting with Olive. The final response highlights that visiting Olive not only serves as a beneficial social interaction but also an opportunity for the participant to confirm whether a volunteer is available to accompany her throughout her social outings.

SC with staff is important as staff provide up to 90% of resident communicative opportunities, however communication between staff and residents is often impersonal, and task orientated, focusing on the details and care of illnesses (Williams, Ilten, & Bower, 2005). Participant responses suggest that a canine provides a focus of interest to assist the frequency and meaningfulness of interactions while assisting with diversifying communications between staff and residents.

Factors influencing SC were often related to Olive's unique behavioural characteristics. While some participants articulated the distinction between Olive and the other animals in a non-judgmental frame, *"oh it doesn't bother me" (H)*, and *"I love seeing all the animals here" (V)*, other participants articulated a clear difference. Olive was described as: *"a settled, silent dog" (S)*, *"a very controlled dog" (J)*, *"placid and calm" (A)*, *"...she's a socialite" (S)*. Olive's behaviour is spoken of as being composed and welcoming, characteristics pertinent for a therapeutic canine in a residential setting like Knox, as explained by another participant who describes Olive as ideal:

"She's a very friendly dog. She's probably the best type of dog you could have here, she'll go up to anyone" (H).

This participant has highlighted how Olive's behaviour is ideal for Knox because she greets everyone equally irrespective of appearance, behaviour, or ability. Olive is not constrained by social customs, so her friendly behaviour is unprejudiced and sincere. In comparison, when describing experiences associated with other canines, participants articulated interactional difficulties: "[he] runs around everywhere and is hard to touch and pat" (A), "[he] is easily distracted" (J), "...I don't see much of [him], you can't always touch him he runs away" (V), "[he is] too playful ... at times I thought I might run over him because he runs all over the place" (S). A predominant difference interpreted from these responses is that due to Olive's welcoming behaviours she is more approachable, which allows time for participants to interact with her, enabling SC.

Another behavioural difference distinguishing Olive from other residing canines is that Olive makes a conscious and active choice to socialise and connect with people. Other canines "just want to trot around all the time ... (H), "can put [their] nose in the air and say oh no thank you, not today (J), and even if "...you are not a stranger [sic] he will bark at you and jump up, it's scary" (S).

In comparison:

"[Olive] goes out of her way to be friendly, which is what you want. She makes a connection ... the other [dogs] sort of wait and see if you want to [interact], and then if you want then that's very nice, but do they want to? They're never quite sure ... and the cats, well the cats are the cats, they're always going to keep to their own agenda..." (J).

Highlighted within these responses is how Olive makes a social connection by reciprocating a desire to socialise, differentiating her from other canines and animals that display disinterest or reluctance.

Due to residents' varying cognitive and physical capacities, participants acknowledged that SC is challenging within a long-term residential setting. Participants' responses suggest that Olive can minimise these challenges by serving as an alternative listening and communication companion. Olive strengthens SC as participants feel able to express intimate thoughts and feelings to her that are not always shared with peers. Olive provides a focal point of interest for social communication and triggers the recollection of vivid personal memories. This further serves as a benefit to SC as these memories are often rich in detail and shared with fondness and ease. Additionally, experiences with Olive promote SC through increasing social engagement between participants and staff, which can initiate unique bonds. Participant responses identified that Olive's unique behaviours influence and contribute to SC. Olive's calm and affectionate behaviours attract interest that invites social engagement. Additionally, Olive reciprocates social advances towards her, but she also initiates socialisation, greeting everyone equally and with sincerity, thus strengthening SC.

4.3 Conclusion

Thematic analysis of five interview transcripts explored participant experiences of AAT at Knox, as experienced through interactions with trained therapeutic canine, Olive.

Analysis identified the very prominent theme of connectedness that is represented by two subthemes, emotional connectedness (EC) and social connectedness (SC).

EC relates to the attachment participants' feel with Olive. EC is illustrated through participants' encouragement to promote AAT with a canine regardless of potential disadvantages, through a unique collective sense of ownership towards Olive, through the beneficial emotional changes participants experience when interacting with Olive, through their admiration of Olive's characteristics, and their consequent affection for Olive.

SC refers to how experiences with Olive influence participants' social involvement and relationships. Olive assists SC by being an alternative listening companion, triggering a recollection of memories, and providing a focal point of interest for communication, social exchanges, and engagement. Olive's unique calming, welcoming, and socially reciprocal behavioural characteristics influence, contribute, and strengthen SC.

Analysis has identified that participants feel a connectedness with Olive that influences emotional and social bonds. Additionally, participants articulated a fondness for Olive's physical characteristics that certainly enhance EC and identified that her differing behavioural characteristics, which distinguish her from other canines within the setting, promotes SC. This analysis suggests that specific canine characteristics may contribute to and influence AAT experiences.

Further interpretation and understanding of the meaning of emotional and social bonds with Olive, the influence each have on participants' overall health, how Olive's physical and behavioural canine characteristics affects these bonds, and implications for their effects are detailed in the following discussion.

Chapter 5: Discussion

"Through relationships with animals and using them as 'transitional objects' to gain meaningful and altruistic relationships human beings, man in the year 2000, will rediscover the meaning of life ... pets will become a very important safety valve..."
(Levinson, 1975, p. 159).

5.0 Introduction

AAT literature has increased considerably within the last thirty years but there is still a dearth of qualitative AAT research, and contention regarding the effectiveness of AAT. Taking the view that understanding emerges from conscious experiences (Crotty, 1998), and that we cannot understand the experiences of another person until they are interpreted (Denzin, 2001), the current study sought to understand the experiences of people who have directly experienced AAT. A prominent theme of connectedness was identified and specific elements of Olive's canine characteristics, both physical and behavioural, were interpreted as influencing and contributing to participants' AAT experiences.

While participants' AAT experiences were interpreted as being positive, analysis indicated that interactions with Olive are not necessarily articulated as therapeutic by participants. However, using participants' accounts and current literature, this discussion highlights that experiences with Olive do have a therapeutic component. In the following sections the theme of connectedness is briefly defined before a discussion regarding each sub-theme. This is followed by an exploration of therapeutic benefits, theories for these effects, and contributing influential canine characteristics. The chapter concludes with an examination of the findings implications and limitations of the study.

5.1 Connectedness

As social beings, connectedness forms the basis for all human existence and has implications for our quality of life (Register & Herman, 2010; Register & Scharer, 2010). A connection cannot form unless interactions are positively received (Archer, 1997). As previously stated, this study understands participants' connectedness with Olive as a state of psychological belonging. From the perspective of emotional connectedness, individuals feel this among their peers, family, and other close relationships, when they feel valued, respected, cared for, and trusted. Social connectedness moves into the realm of psychological connectedness, created by feeling a sense of belonging to individual social and community groups, in which people have regular contact with or are geographically located within (Whitlock et al., 2010), in this case, Knox.

The psychological state of feeling connected to Olive is presented in the findings as Emotional Connectedness (sub-theme 1). Connectedness serving as a psychological state of belongingness to relationship systems, which are benefited by experiences with Olive, is presented as Social Connectedness (sub-theme 2).

5.2 Sub-theme 1: Emotional Connectedness (EC)

This theme embodied the strong emotional connection participants felt with Olive. History suggests that humans have had an EC with canines that dates back centuries (Thalmann et al., 2013), developing close emotional bonds with pets in a similar affectionate way as they do with other people (Wells, 2007). Pereytti's (1990) review of elder animal bonds showed that 88% of male and 95% of female participants felt an emotional bond with their canine pets and felt the bond was as strong as any human relationship. The New Zealand Companion Animal Council commissioned survey reported that 53% of canine owners acquired their canine for companionship and 83% of owners considered their

canine a part of their family, or a trusted companion (16%), suggesting a strong EC (Mackay, 2011). That participants' would feel an emotional connection with Olive is therefore easily conceivable.

Three components of EC were present in this study. Firstly, all participants acknowledged that the presence of Olive within the home (Knox) was positive. Participants' illustrated this by their collective "no", denying any experienced or observed interactions with Olive as being unpleasant. This positive reaction to Olive correlates with another study, which demonstrated that residents within long-term residential settings desire interactions with animals. Behling et al. (2011) follow up exploration study into AAT programmes within long-term care settings stated that 77% of residential settings reported their residents had requested access to animals, and 78% reported a similar request from family or friends of their residents.

Participants of this study emphatically agreed, "*just a hearty yes!*" (A), that other residential settings would benefit from introducing an AAT initiative by employing a canine like Olive, "*oh yes, [of] course they would...*" (V). Participants' encouragement was despite acknowledging, "*some people would choose to not come [to the setting] because of the animals*" (J) due to some associated disadvantages, such as a fear of canines, "*some people are terrified...*" (H), and thoughts that canines "*shouldn't be inside, they are outside only animals*" (A). These results are congruent with an earlier study. Winkler, Fairnie, Gevicevich, and Long (1989) explored and evaluated the effect of a resident canine within a residential setting. Initially their participants anticipated a number of limitations associated with the canine inducing fear, damaging property, and being a nuisance by getting in the way. However, none of these concerns materialised, instead the canine's presence was viewed as providing emotional gratification in the form of enjoyment.

Moretti et al. (2011) previously discussed study regarding effects of AAT on institutionalised mental health residents wellbeing, reported similarly favourable experiences of AAT. All participants who participated in AAT enjoyed the sessions and recommended the experience to others, and 80% wanted the sessions to continue.

The second component of EC is participants' unique, collective sense of ownership towards Olive, believing that *"Olive is different, she is Knox's dog" (A)*, *" [Olive is] the residents dog, Knox's pet" (S)*. This belief suggests that Olive is viewed as a pet, as opposed to a therapeutic service canine, which may contribute to participants not perceiving interactions with her as therapeutic. Instead, interactions with Olive were articulated in much the same way as interactions with any pets might be articulated, as natural occurrences. This could be very relevant, because terminology related to therapy still holds stigmatisation. For example, elder persons unused to therapeutic terminology can find the terminology daunting or off-putting. It may seem foreign to their particular cohorts, who have not grown up in a world where seeking help in the form of therapy is socially accepted. Interpreting Olive as providing therapy, or indeed being offered any kind of therapy when presented through the use of therapeutic language, may affect the willingness for elder persons to seek such help, and restrict access to such help (Benek-Higgins, McReynolds, Hogan, & Savickas, 2008). Interestingly, it could then be considered that AAT, certainly in this study, is serving as "therapy in disguise".

Olive being articulated as Knox's pet has the added benefit of participants feeling like they have a pet canine without responsibility for care. Difficulties maintaining pet care due to health complications have been acknowledged as a central reason for individuals to discontinue having pets (Chur-Hansen, Winefield, & Beckwith, 2008; Mugford & M'Comisky, 1975; Phear 1996), situating owners in the unfortunate position of having to

choose between animal companionship or care responsibility (Pettigrew & Roberts, 2008). As the analysis informed, all participants had ownership of canine pets sometime before transitioning to Knox, and therefore Olive may also contribute to assisting a sense of normalcy or 'home' for participants.

Thirdly, participants identified EC with Olive by articulating that when spending time with her they felt emotional and physiological changes. Emotional responses are unconsciously driven and can result in physiological changes that are strong enough to overcome cognitive systems (Odendaal, 2000). Participant experiences of time spent with Olive are interpreted within the specific therapeutic intervention, within chance encounters, or within deliberate visits, such as visiting Olive in Kristen's office. From a general therapeutic standpoint, Ratcliffe (2005) and Drummond (2004) suggest that the way the world is experienced generates embodied background emotions. The physiological response and the emotion together shape cognitions, thus co-constituting an experience. Varga (2013) takes this further in promoting the notion that background embodied emotion generated within specific time frames leads to automatic, but not necessarily acknowledged, thoughts that generate specific emotions that can be articulated. Participants' emotional responses to Olive take place within specific time frames that are deemed as pleasant, leading to automatic thoughts interpreted as happiness, thus a feeling of EC occurs. Participants translate their time with Olive as feeling happy and the strength of the emotion, happiness, overcomes any cognitive thoughts that might question other reasons about why such a pleasant feeling occurs.

5.2.1 Therapeutic Benefits

Experiences with Olive induced physiological and psychological changes that resulted in therapeutic benefits. One participant articulated that Olive's presence altered the

atmosphere of her room, making it more pleasant by inducing feelings of calm and serenity, *“you just get that feeling in the room ... it just feels nice to have her there...” (J)*. These findings are consistent with Friedmann and Son (2004), who state that the presence of a canine companion has a positive therapeutic effect on individual psychological and physiological health status by altering the perception of situations to appear more benevolent. This favourable calming effect correlates with a canines presence reducing levels of stress and anxiety levels (Hoffman et al., 2009), also supporting the notion that canines can be a contributing factor in the survival rate of those affected by cardiovascular complications (Friedmann et al., 1980, Friedmann & Thomas, 1995, & Arhant-Sudhir et al., 2011). Canine experiences, such as feeding, brushing, talking, and playing with canines, while also interacting and talking with canine handlers, are also shown to be a calming influence for persons living with dementia, indicated by a reduction in dementia associated agitated behaviours (Richeson, 2003). These findings suggest that the presence of the right sort of canine and an appropriate activity with the canine can produce reductions in stress and anxiety levels.

As previously stated in the literature review, AAT has also been shown to induce happiness in forms of petting, laughter, and smiles during and following AAT interventions for residents living with dementia (Nordgren & Engström, 2014a). One of the participants in this study attested to this aspect when she said, *“oh delighted...it makes me feel good, feel good inside” (V)*. Other research has also reported that elder residents felt happier when visited by a canine. Following interacting with a canine for approximately 10 minutes once a week, for six weeks, elder participants articulated they felt happy during the visits, and wanted the visits to continue (Phelps, Miltenberger, Jens, & Wadeson, 2008). Happiness has been a topic of research interest for its propensity to change and improve health outcomes for older adults (Henricksen & Stephens, 2010), and has been related to

characteristics associated with a fulfilling and healthy long life (Lyubomirsky, King, & Diener, 2005).

Associated with happiness, is laughter, which was displayed by all participants during AAT sessions with Olive. Laughter is reported to increase in frequency and spontaneity when a canine is present (Valeri, 2006) and can serve a therapeutic physiological and psychological effect. Westburg (2003) explored laughter and humour experiences of 24 elder residential setting residents and found that pets were a source of their laughter, and after laughing residents felt 'relaxed', 'good', 'happy', 'healthy', 'energised', 'relieved', and 'wonderful' (p. 23).

Participants' articulation of Olive as the residents' canine is also significant to her potential therapeutic effect, because like AAT, canine pet attachment has been linked with numerous health benefits (Garrity et al., 1989; Siegel, 1990; Thorpe et al., 2006).

Participants' previous pet canine experiences support this notion. Their memories spoke of beneficial health qualities including love and affection, "*[the dog] was much loved, and not replaced*" (S), "*...I had my own standard poodle which was very beautiful ... I just loved it*" (J), "*yeah it was a good dog*" (H), as well as understanding and acceptance, "*[my dog] really understood me for me*" (A). Chandler, Fernando, Minton, and Portrie-Bethke (2015) qualitative study investigating eight domains related to pet ownership and wellness, reported similar emotional benefits articulated by participants, including "helps me to feel good," "makes me happy," "unconditionally loving," "reduces my stress," "helps me relax," "comforting," "understands me," and "provides emotional support" (p. 273). Furthermore, Olive's presence may induce feelings of being at "home". Participants' articulation of past pet canine experiences were linked with and associated with their homes: "*oh yes, I used to take in stray animals*" (V), "*we had a horse on the farm ... and a dog to guard the house*" (S),

“my wife, she had dogs” (H), “as children we always had pets ... then when I got married and went out to the farm we had a little Sydney Silky and a sheep dog” (J). This is important for psychological health as the feeling of being at home in a residential setting has been shown to correlate with residents’ view of quality of life (Bland, 2005; Cooney, 2012). ‘Home’ is a complex concept involving emotional, cognitive, behavioural, and social bonds to a particular place (Cooney, 2012), and the introduction of a canine can help make a residential environment feel more like home to residents (Winkler et al., 1989).

When enquiring why they felt an EC with Olive, one participant articulated that it was due to an innate disposition to be with canines because she loves them, *“it comes from ME! Just me...I love them” (V).* Another participant articulated an EC with Olive as being due to the human animal bond (AVMA, 1998, cited in Hosey & Melfi, 2014), *“it’s the connection. Because they are animals but they have a feeling for people...they like them...its real empathy” (J).* Additionally, participants viewed Olive as mutually benefiting from interactions, perceiving that she *“also gets a ‘kick’ out of [the interactions]” (A),* because *“she loves people, and she loves to be with people” (S),* suggesting that Olive feels an EC towards participants. Canines’ having an EC with humans has been indicated by their ability to empathise, and other elder pet owners have suggested their pets provide them with empathy (Mugford & M’Comisky, 1975). Based on the theory that contagious yawning is correlated with empathy in humans, Romero, Konno, & Hasegawa (2013) observed 25 canines’ reactions to their owners yawning. Canines yawned more frequently when watching their owners’ yawns as opposed to unfamiliar (control) persons yawning, demonstrating a possible EC. This suggests that participants’ feeling that Olive not only benefits, but also reciprocates an EC with them, is possible.

5.2.2 Physical Canine Characteristics

Archer (1997) suggests that humans are attracted to canine physical features due to their resemblance of human infants. When asked to describe Olive, participants focused on the visual attractiveness of Olive. Participants acknowledged the beauty of Olive's face and body, *"oh she's a beautiful dog ... I love her face I think she's gorgeous. I love her body I think she's beautiful (V)*. Physical characteristics originally attributed to a canine's attractiveness included a large forehead, low lying eyes, chubby cheeks, thick limbs, and clumsy movements (Lorenz, 1971 as cited in Archer, 1997). Excluding the chubby cheeks, as a three-year-old Labrador, Olive resembles all of these physical characteristics.

Another theory supporting the way that Olive's physical characteristics affect participants' EC with her, is her eyes and her ability to hold eye contact, *"they sit there looking at ya [sic] with their eyes coming down" (H)*. This is important as eye contact releases a chemical in the brain called oxytocin (Beet, Uvnäs-Moberg, Julius & Kotrschal, 2012). Oxytocin is known to be a contributing factor in the formation of bonds among species (MacLean & Hare, 2015). Research has also found that oxytocin is released regardless of genetic or reproducing interest, suggesting intra-species interactions also release oxytocin. When sprayed with oxytocin, canine's interactions with owners significantly increased (Romero, Nagasawa, Mogi, Hasegaw & Kikusui, 2014). Also, human oxytocin levels increased after interactions and sustained eye contact with pet canines (Nagasawa, Kikusui, Onaka, & Ohta, 2009). Oxytocin is also attributed to forming and continuing the domestication process. Due to canines' ability to maintain eye contact, an EC is formed by a mutually beneficial loop providing positive emotional feedback to both canine and human, similar to how the connection between mothers and infants forms (MacLean & Hare, 2015; Nagasawa et al., 2015). This notion supports the study's findings that EC is mutually beneficial to participants and to Olive.

Other identified physical characteristics contributing to EC were Olive's body and coat. The visual appeal of Olive's body was likened to a woman's, "*in the way she is groomed, it's like looking at a woman*" (S), and her coat induced feelings of warmth and a desire to embrace her, because "*she's snuggly...*" (A). Olive provides the opportunity to touch another living being without the complications inherently associated with touching people (Bernstein et al., 2000). This opportunity serves an emotional need to nurture, and be nurtured, in a warm, trusting, secure, and unconditional manner (Pereytti, 1990). This is particularly relevant within a residential setting where opportunities for tactile touch may be reduced (Bernstein et al., 2000). Additionally, petting is a contributing factor to EC between human and canine, and research concludes that canines also benefit from touch, preferring petting to vocal praise (Feuerbacher & Wynne, 2015).

EC with Olive and the correlation of EC with potential AAT therapeutic benefits is not specific to just one reason or characteristic. Instead EC is a psychological state which is formed and maintained by physiological and psychological responses that are influenced by different types of therapeutic interactions with Olive, and by Olive's physical characteristics and traits.

5.3 Sub-theme 2: Social Connectedness (SC)

SC refers to the effect interactions with Olive have on participant sociability at Knox. Analysis identified two components of SC, the first being that interactions with Olive promote communication, and the second that Olive serves as a catalyst for social interactions.

Forming and maintaining SC within residential settings is particularly important as transitioning can be specifically disruptive to individuals' social networks, especially if

individuals are physically or cognitively impaired (O'Shea, Weathers, & McCarthy, 2014). Knox is a hospital level care residential facility and residents' physical and mental capacities vary. One participant identified difficulties maintaining SC due to communication difficulties with other residents who have dialectal limitations, *"I talk to people, a lot of [residents] don't talk but if I say hello first well that gets them, but a lot of them don't talk they just sit there ..."* (V). While the participant tries to communicate with other residents, she found it difficult because her attempts were not reciprocated due to the other resident's unresponsiveness. These difficulties have also been reported in other studies. Cognitively Intact (CI) residents attempting to socialise and converse with fellow residents with dementia, have reported the process of socialising difficult, even when accepting the unresponsiveness of fellow residents as being due to an illness (Bergland & Kirkevold, 2008; Wen-Yun, Chia-Jung, Wen-Chen, Kaas, & Jing-Jy, 2013).

Analysis suggests that Olive can minimise this negative SC effect by serving as an alternative listening companion. Research has reported that residents in a care setting do not necessarily require peer support relationships to feel connected (Bergland & Kirkevold, 2008). One participant even articulated that speaking with animals felt more intimate than speaking with people, *"it's alright talking to people but I like to have the animals there ... it's more closeness..."* (V). Elder residents in Pereytti's (1990) study maintained they spoke with their canine pet, told them stories, confided in them, and this was beneficial as it provided an outlet to express thoughts that often led to a resolution of their problems.

In addition to serving as an alternative listening companion, interactions with Olive promoted communication. Participants spoke to Olive directly, as if she was a friend or family thus fostering the SC effect. Participants used her name, asked her questions like

“hello doggy what do you want aye?”(H), and repeated sentences to her, *“aren’t you nosey, you’re a nosey little dog”(V)*. Bradshaw (2010) says that when communicating with animals, inter-species dialogue is as natural as it is integral to our souls. Commonly, persons do speak to canines, often using specifically tailored language and repetitive sentences that include the canine’s name or nickname (Rogers, Hart & Boltz, 1993). Tannen’s (2004) analysis on families’ conversations concluded that in the presence of the pet canine family members would speak as if they were the canine, to get their point across, used their conversation with the canine to distance themselves, figuratively, from their own speech, and talked about their pet canines as though they were family members. Family members utilised the presence of the canine for both negative and positive talk, including humour, praise, resolving conflict, buffering criticism, and as a teaching tool. All conversations bonded the family identity of which the canine was viewed as a member.

Olive’s presence further fostered communication by triggering the recollection of memories associated with past pet experiences, which were intertwined with participant life histories. These findings replicate previous research which found that the presence of a canine can result in the stimulation of memories for elder participants (Moretti et al., 2011), and can encourage group conversation regarding pet experiences, leading to the sharing of life histories, which can continue after the canine has left (Fick, 1993). As previously stated, AAT research has also concluded that a canine can trigger the recollection of memories for persons living with dementia, which in turn benefits their SC as they are able to talk about the retrieved memories and remember the emotions attached to the memories (Nordgren & Engström, 2014a; Swall et al., 2015). Such research suggests that the presence of the canine provided a catalyst to awaken their awareness to both past and present existences.

The second component of SC identifies how Olive provides an interface and acts as a catalyst for social interactions. Participants identified that Olive's company aides social interactions with residents and visiting family or friends, *"a group, my newfound friends, we call Olive to come with us. ...one time with my granddaughters ... when they came [to visit], Olive ... just joined the group and the kids were patting her. She is a natural" (S)*. Literature supports the positive effect canines have on SC within a residential setting (Phelps et al., 2008), with some residents reporting twice as many verbal and non-verbal social interactions in the presence of a canine (Fick, 1993). Participants also articulated that when visiting Olive, they are also able to visit Kristen, a staff member and Olive's handler, *"I visit Olive when I visit Kirsten"(A), "oh yeah of all the offices [Olive and Kristen's] is the first thing I visit" (S)*. A stimulus to promote social interactions with staff is significant as residents commonly rely on staff to take responsibility for initiating and building a relationship (Bergland & Kirkevold, 2005). Further research supports this notion explaining that caring staff have a professional responsibility to ensure that a relationship with residents results in positive encounters (Westin & Danielson, 2007). Participant responses suggest that Olive's presence serves a dual benefit that leads to both social and task-orientated communication, promoting professional and personal SC with Kristen.

5.3.1 Therapeutic Effects

Canine companionship is associated with SC, and SC is associated with positive health outcomes (Bryan, Quist, Young, Steers, Foster, Lu, 2014), suggesting that AAT has the capacity to therapeutically benefit psychosocial health.

Olive's ability to serve as an alternative listening companion and confidant serves a useful therapeutic benefit. Due to people's unpredictable reactions, expressing personal

thoughts can lead to hesitancy, regret, or non-disclosure, which can be considered to have negative psychological implications (Bryan et al., 2014). Canines provide an opportunity to express personal thoughts and feelings without fear of judgment or repetition. As well as providing an emotional outlet, verbalising thoughts can ameliorate solutions to problems (Pereytti, 1990). The process of talking things over in confidence helps situations appear differently, with alternative connections becoming apparent. This can reshape the meaning and understanding of what is 'known' (Barnes, 2010).

Participant communication with Olive, as though she is a person, suggests that AAT may benefit psychosocial health, as in addition to serving as a listening companion Olive is viewed as a communicative companion. Language use when talking with Olive is defined as Motherese Language, and it is typical of language and syntax used between mothers and newborns (Archer, 1997). Motherese language leads to anthropomorphism, a phenomenon of animals being seen and spoken to as more of a person than an animal (Dotson & Hyatt, 2008). A combination of motherese language and anthropomorphism creates a cognitive picture that leads individuals to view canine interactions as similar to human interactions (Archer, 1997), thus having positive psychosocial benefits. Also, this cognitive creativity may explain why communication with canines is experienced as an intimate process not dissimilar to communication with individuals' other social attachment figures.

Analysis identified that experiences with Olive promote social interactions and relationships between residents and visiting family or friends. Participants also identified that experiences with Olive are positively linked to social interactions with staff. This may lead to positive therapeutic outcomes as relationships between residents and care staff are correlated with health. The strength of the relationship has been related to quality of

life, standard of care measures (Heliker, 2009), ease of life (Bergland & Kirkevold, 2005), feelings of self-worth (Westin & Danielson, 2007), and is indicative of the relationship strength between staff and residents' families (Gaugler & Ewan, 2005).

Critics claim that the effect a canine has on SC is due to the novelty effect of the canine's presence, compounded with the presence of the canine handler (Lafrance et al., 2007). This study does not support this theory as Olive has resided at Knox for over a year and analysis suggests she remains a therapeutically beneficial social influence. More likely than the notion of novelty, is that Olive provides a stable and interesting topic of interest for communication, aiding social interactions (Rogers et al., 1993). Furthermore, individuals in the presence of a canine appear friendlier and induce a greater willingness for others to initiate and engage socially. Gueguen and Coccolti (2008) findings indicate that a canine companion enhances a handler's attractiveness, positively affecting strangers' willingness to communicate with them. These findings indicate that as well as providing a topic of conversation Olive's presence increases individuals or social groups approachability.

5.3.2 Behavioural Canine Characteristics

Olive's behavioural characteristics were identified as influencing SC and subsequently AAT's capacity to benefit psychosocial health. Connectedness with canines is positively correlated with socially acceptable canine behaviours (Odendaal, 2000). Owners who perceive their canines as gentle, obedient, and energetic are highly attached to their pets, whereas moderately attached owners are less satisfied with their canine's behaviour (Serpell, 1996). This study supports these results. While all participants expressed a general affinity for canines, responses relating to Olive behaviours were more positively described when compared to the descriptions of other canines' behaviours. Participants

described Olive's behaviours as, "settled, silent" (S), "very controlled" (J), "placid and calm" (A). Other canines were described as being much less approachable because: "[he] runs around everywhere and is hard to touch and pat" (A), "[he] is easily distracted" (J), "...you can't always touch him he runs away" (V), "[he's] too playful...at times I thought I might run over him because he runs all over the place" (S). Participants clearly distinguished that due to Olive's more welcoming behaviours, experiences with her are more satisfying than with other canines at Knox, who are distracted, hard to pat, too energetic, and who get in the way.

One participant identified Olive's behaviours as ideal for the setting because she is so friendly, "she's probably the best type of dog you could have here [at Knox], she'll go up to anyone" (H). This statement was further interpreted as being advantageous because Olive interacts with everyone, irrespective of appearances, behaviour, or ability. Human reaction is difficult to suppress and is often visually apparent through facial expressions or behaviours, therefore a canines' more impartial and non-judgmental behaviours are superior in situations that may be perceived as unpleasant or awkward (Kaiser et al., 2002). Erickson (1985) suggests that improvement in health is due to our pets' non-judgmental attributes and unconditional affection. As social beings, people need social attention which further leads to positive validation, a universal emotional need (Odendaal, 2000). Olive's impartial behaviours serve a therapeutic purpose; she provides validation and social attention when she willingly walks up to people wagging her tail, nuzzling legs, or placing a paw on a wheelchair, initiating contact without hesitation. Participants' responses suggest that Olive's simple gestures of acknowledgment and care promote further social engagement and dialogue amongst themselves, family, and other residents (Bradshaw, 2010). The success of a canine on elders' psychosocial health lies in the canine's non-ambivalent characteristics, sensory stimuli, immediacy and ease of exchange,

when compared to human exchanges, which can be erratic, pressured, and demanding (Friedmann & Thomas, 1995). Due to Olive's more calming and interactive behaviours, participants are drawn to engage with Olive, by talking and petting her for a period of time, allowing for greater attachment and the formation of SC.

Olive's behaviours are additionally advantageous to SC as her behaviours demonstrate reciprocity for affection. As a participant identified, other canines show hesitation to become engaged, "*they're never quite sure...*" (J), or they withdraw from an approach, but Olive "*goes out of her way to be friendly, which is what you want. She makes a connection*" (J). If a participant is affectionate towards Olive, Olive responds with behaviours that are interpreted as affectionate, such as tail wagging, licking, and sitting or lying down next to the participant. Reciprocal behaviours are important in developing a social connection as the absence of reciprocity can negatively impact connectedness. Winkler et al. (1989) participants, who gave negative feedback about the presence of a canine within their residential setting, explained that they thought the canine didn't like them because they felt the canine ignored them or they felt the canine was not affectionate towards them. Participants' response that Olive reciprocates social interactions supports psychosocial health as it builds a symbiotic social relationship which can be described as an interaction between two social beings that results in equal and mutual benefits (Odendaal, 2000).

5.4 Implications for Findings

New Zealand and international research relating to nursing home residents' health and wellbeing is limited. Institutionalised persons are not included in the New Zealand National Mental Health Survey (Oakley Browne, Wells, Scott, 2006). Grenade and Boldy (2008) have identified that more residential care-focused research needs to be conducted as higher rates of disability and psychological disorders have been reported among

residents. Butler, Fonseca, Barclay, Sembhi, & Wells, (1998) reported the mental health of residents in long-term settings within New Zealand as 17% of residents living with a depressive disorder, 75% living with dementia, and 83% were diagnosed with at least one psychiatric diagnosis. Oakley Browne et al., (2006) suggests that persons with mental disorders are likely to have several chronic physical conditions, such as cardiovascular disease and high blood pressure, and persons with chronic physical conditions generally experience higher prevalence of mental disorders. Statistics New Zealand (2001) reports 97% of persons aged over 65 who live in a residential settings live with a disability, which has also been associated with higher levels of depressive symptoms (Collins et al., 2006).

Due to high rates of psychological, physiological, and physical disabilities, AAT can be particularly advantageous in long-term residential settings. Firstly, this study suggests that a canine's presence can alter the perception of a situation to appear more pleasant. This may alter the overall experience and feel of the residential environment, making it appear more welcoming and feel more like "home". Secondly, the presence of a canine can benefit physiological health by reducing stress and anxiety levels that subsequently can lead to lowering heart rate and blood pressure as well as reducing agitated behaviours (Bernabei et al., 2013). Thirdly, AAT can improve depressive symptoms by inducing beneficial emotions and behaviours such as happiness and laughter, which have been shown to lead to an improved perception of quality of life. Additionally, AAT offers an opportunity to express happiness and laughter through non-verbal interactions. This provides a natural alternative for persons who have difficulties articulating feelings and thoughts, such as residents who live with a cognitive impairment (Zilcha-Mano, Mikulincer, & Shaver, 2011). The expression of happiness, and laughter, also benefits psychological health, because without an outlet to express emotions, feelings are inwardly

drawn resulting in an undermined self-worth and likelihood of emotional complications (Zilcha-Mano et al., 2011).

AAT also provides an opportunity for tactile experience. This is an important part of emotional stimulation and the enhancement of this response can be significantly increased with a canine as part of a therapeutic approach (Bernstein et al., 2000). A canine can be caressed continually for long periods, while also allowing intimate touch such as hugs and kisses, without complications associated with human contact. Research has noted that tactile touch within a residential setting is reduced therefore the need to nurture and feel tactile comfort may be more easily obtained from a canine (Kaiser et al., 2002).

In addition, as discussed previously, although many residents may be diagnosed with a mental health disorder, research has shown that the term 'therapy' restricts willingness for elder persons to seek help. Engagement with a canine, whether under the guise of AAT or simply as an interaction that takes place in their residential setting, may increase elder persons' willingness to engage in a therapeutic initiative.

AAT capacity to facilitate and initiate social engagement has implications for residential settings by positively affecting elder residents' psychosocial health. Social networks are intrinsically important to human health and broader social networks, such as those outside of the family, positively contributing to mental and physical health (Stephens, Alpass, Towers, & Stevenson, 2011). Meaningful social connections can eliminate feelings of loneliness and isolation, both of which are known to contribute to negative health consequences (La Grow, Neville, Alpass, & Rodgers, 2012; Palacios-Ceña et al., 2014; Statistics New Zealand, 2013; Thomas & Johansson, 2003).

Whether to promote or maintain personal communications, analysis has shown, and research has supported, that canines can instigate a variety of conversational topics among residents, staff, and visiting family or friends. This has important implications as communication is a valuable tool to build relationships and it is through dialogue that we come to understand meaning (Bradshaw, 2010). Meaningful relationships are essential for human life, their absence leads to feelings of isolation and loneliness (Brownie & Horstmanshof, 2011). Meaningful encounters are defined as being authentic and sincere, helping individuals feel unique (Westin & Danielson 2007). Qualitative research affirms that while long term residents spend a lot of time interacting with staff, and other residents, time does not necessarily translate into meaningful relationships (Bergland & Kirkevold, 2005; Palacios-Ceña et al., 2014).

Difficulties pertaining to building peer relationships have been identified in this study and other research, as being due to the cognitive impairment or disability of fellow residents. Analysis suggests that a canine can obviate these difficulties by serving as a communication catalyst, thus providing a shared topic of interest and triggering the recollection of memories, initiating multiple pathways for further discussions. In addition, this effect can also occur for persons with communication difficulties, such as persons living with dementia (Nordgren & Engström, 2014a; Swall et al., 2015). This suggests that canines can provide a communicative bond between residents, who are cognitively intact and who are impaired, minimising the effect impairment has on building social relationships, thus benefiting psychosocial health for all residents. Additionally, a barrier to building meaningful relationships between staff and residents is that speech is often task-orientated, focused on care needs or illness. SC with staff is important as staff provide up to 90% of resident communicative opportunities (Williams et al., 2005). Analysis identified that a canine's presence can provide an interface for exchanges between staff

and residents, and can assist greater personal conversations, minimising task-orientated speech, contributing towards SC.

Additionally, analysis identified that Olive's distinguishing behavioural and physical characteristics influence and contribute to participants' emotional and social connectedness. Other research has revealed that canines provide elders with companionship, feelings of security, and of being loved, suggesting that canines' pleasant characteristics help construct meaning and feelings of validation and health (Siegel, 1990). Participants identified that Olive, a young Labrador, has endearing visual physical characteristics, such as big brown eyes, an attractive face and body, as well as a soft and shiny black coat, which collectively induce emotive responses. Participants also distinguished Olive's calm, placid, settled, and invitingly friendly behaviours as behavioural characteristics that strengthen and promote social engagement and communication. These findings suggest that for this particular cohort of people, the type of canine might be influential to the success of AAT experiences. The canine might need to have particular visual physical characteristics alongside particular behaviours. The findings also support AAT distinguishing itself from AAA, Animal Assisted Activities. AAT is conducted with a certified canine whereas AAA utilises pet canines. Participants have identified that, when compared to pet canines, a certified canine's behaviours are more friendly and approachable, which is articulated as being advantageous to a residential setting.

Participants feel connected with Olive. This contributes to a positive psychological state in which participants feel valued, cared for, and respected as unique individuals in their residential social community. Connectedness with Olive is formed through an emotional and social bond. Participants are drawn to interact with Olive due to her endearing

physical characteristics, and also because experiences with her induce beneficial emotions associated with pleasure, happiness, and nurturing. These emotions influence and contribute to improvements in physiological and psychological health. Additionally, analysis has suggested that experiences with Olive benefits participants' psychosocial health. Olive's welcoming and reciprocally inviting behaviours facilitate communication and social engagement. Subsequently, continued AAT could be a valuable therapeutic adjunct to achieving positive social outcomes, and could aid in improving the overall social environment of a residential setting (Fick, 1993). Both analysis and discussion support Pereytti's (1990) definition of the connection between elder individuals and their canines, which is an emotional, intimate, and personal bond that involves both psychological and social interplays between canine and human that are mutually beneficial.

The findings of this study substantiate that canine AAT is positively experienced by elder residents, and can be a beneficial therapeutic initiative for a long-term residential setting. While the findings are significant to the field of AAT there are associated limitations that constrain the finding's significance, which will now be detailed.

5.5 Limitations

The limitations of this study include a small sample size, associated with the scope of the research, research design, and complexities of the research setting. The newness of AAT at Knox is also an identified limitation.

The first limitation of this study is the small number of participants. The findings of this study are constructed from the AAT experiences of just five elder residents. The study originally sought to recruit six participants in total. The decision for this number was guided by the research being a pilot study. As a pilot study it was designed to generate

data on a topic that, due to only recently gaining interest in New Zealand, is made challenging by the scarcity of contextually relevant data. The effect of the small participant sample size restricts the diversity of data obtained, reducing the ability to generate enough patterns across the data set to effectively utilise thematic analysis (Braun & Clarke, 2006). This limitation may be a reason for only one prominent theme being generated from the thematic analysis. A greater number of participants may have produced sufficient additional data to generate more themes, and additionally contribute to a broader and more complex picture of Knox residents' AAT experiences.

Additionally, due to the research design utilising selective sampling for participant recruitment, the findings may be biased. The study sought only participants who had experienced, or who wanted to experience, time with Olive. The study excluded perspectives from residents who do not have a strong desire to be with canines. This may have resulted in a bias due to participant favouritism towards Olive and, perhaps, bias due to having a general affinity towards canines. The findings may have been strengthened if the study was open to all residents who wanted to speak about their experiences with Olive. For example, as articulated by participants, some residents at Knox withdraw from Olive and believe that canines are outside only animals. These residents' perspectives may have potentially highlighted disadvantages of AAT within a residential setting and detailed how that may negatively impact on their lives at Knox. Potentially these residents may have contributed to a more balanced perspective regarding experiences of AAT.

As well as being limited by the scope and design of the study, the small participant sample was limited by the setting of the research, specifically residents' cognitive abilities.

Ethically, only participants who were considered able to give informed consent were able to participate in this study. This posed some recruitment difficulties by eliminating a large

proportion of Knox residents from participation. Because Knox is a hospital level care facility many of its residents live with cognitive disabilities that inhibited their ability to give informed consent. The impact of this limitation excluded a large portion of persons that literature considers as benefiting from AAT, such as persons living with dementia, reducing the ability for the study's findings to create a broader representation of Knox residents' experiences with Olive.

The newness of Knox's AAT initiative is also considered a limitation. Due to the AAT programme still being at developmental stage, clarity associated with the programmes objective, structure, and implementation were not formally developed which led to some confusion in terms of AAT's definition and purpose at Knox. In light of Knox being the first New Zealand long-term residential setting to initiate an AAT programme, and AAT literature offering no definitive terms of reference or procedures regarding initiating a canine AAT programme (Granger & Kogan, 2000), the lack of formality is not surprising. This limitation affected the study because AAT sessions with Olive were unstructured with no tailored or goal setting objectives. This contradicted the formalised definition of AAT being a structured, therapeutic initiative towards achieving remedial outcomes (Behling et al., 2011). Despite this limitation, findings have suggested that experiences with Olive, although unstructured, still achieve remedial outcomes and serve a therapeutic purpose. However a more formalised structure of AAT would have enabled the study to focus on specific AAT experiences, such as walking Olive or grooming her. This may have focused the interview schedule by questioning participants about specific AAT experiences, leading to analysis generating more specific themes associated with AAT's therapeutic capabilities.

5.6 Conclusion

The discussion of limitations recognises that findings from this study cannot be generalised to other Knox residents, residential settings, or the wider elder population. However, an inability to formally generalise findings does not mean the knowledge gained cannot enter into the accumulation of understanding about a topic (Flyvbjerg, 2006). One of the research aims, as a pilot case study, was to generate qualitative data on a topic for which there is limited knowledge within the New Zealand context. This has been achieved. The following conclusive chapter will discuss the relevance of this accomplishment.

Chapter 6: Conclusion

“Man, the human animal, has often looked to other beasts as a source of companionship and an outlet for the expression of kindness and love” (Cohen, 1975, p.139).

6.0 Introduction

An overview of the study's purpose and findings are discussed in this chapter, followed by the finding's implications in the field of AAT and recommendations for future AAT research. The chapter closes the research study with a final reflective statement and concluding summary.

6.1 Overview of Study

This study's findings identified that the success of AAT seems to be determined by the strength of connectedness felt between participant and canine, which is influenced by specific canine physical and behavioural characteristics. The research was guided by a research question asking how elder residents within a long-term New Zealand residential setting experienced AAT. Through exploring participants' talk, the impetus of the research was to gain an understanding of canines and their potential therapeutic abilities within a long-term residential setting. The study had three additional aims. To offer a population of elder persons an opportunity to contribute to the development of a service of care that directly affects their lives, and to assist in the establishment of a platform to build upon New Zealand contextual AAT research, while also contributing to international literature concerning AAT.

The social constructionist theoretical position of the research assisted in better understanding the meaning of participants' lived experiences and interactions with the trained canine, Olive. Social constructionism theorises that there are multiple realities.

Meaning or knowledge is constructed by individual social, lived experiences in any given moment (Gubrium & Holstein, 2000) suggesting that to understand human behaviour it is necessary to explore the construction of individual meaning, and the influencing factors that contribute to the interpretation of that meaning (Atieno, 2009). To further advance understanding of AAT and its potential therapeutic effects, it was necessary to gain insight into how individuals constructed their AAT experience, what it meant to them and what influenced their meaning. By including persons in the study who have direct experience of AAT it offered the opportunity for a small cohort of participants to have their voices heard, while also actively contributing to the development of a service of care that could have a positive impact on their wellbeing.

Using a qualitative, exploratory case study research design, participants' experiences of AAT were obtained through individual semi-structured interviews. Interview transcripts were explored using thematic analysis, which generated a prominent theme of connectedness. Connectedness was described as a psychological state in which participants felt valued and cared for as unique individuals. Two associated sub-themes of connectedness further described participants AAT experiences, emotional connectedness (EC) and social connectedness (SC). EC encompassed how participants' AAT experiences produced beneficial emotional responses, leading to positive psychological and physiological health outcomes. SC embodied how experiences of AAT increased participants' sociability by assisting their communication and social engagement, benefiting psychosocial health. All participants articulated that AAT was a positive experience that benefitted their wellbeing. These findings complement the majority of international AAT literature that fundamentally agrees AAT is a beneficial therapeutic initiative, improving the psychological, physiological, and psychosocial health of elder persons.

Thematic analysis further identified that unique physical and behavioural canine characteristics contributed to the theme of connectedness and influenced participants' experiences of canine AAT. Participants articulated how endearing Olive's physical features were. On a superficial level this suggests that participants' canine AAT experiences are influenced by Olive's "cuteness", relating to her soft coat, big eyes, wagging tail, and puppy like movements. However, a deeper analysis identified the meaning of these characteristics is more profound and is influenced by biological responses. Research identified that physical facial features of canines stimulate emotive responses due to their resemblance of human infants. The canine's ability to hold eye contact releases a brain chemical called oxytocin, a known contributing factor to the formation of bonds, like the mother-infant bond. Recent research suggests that oxytocin is also released through intra-species interactions, like the human-canine bond. The appeal of the canine body and coat reflects a biological need to nurture and be nurtured, by allowing tactile experience and intimate touch that is not inhibited by social norms. Analysis of participants' talk also identified that Olive's behaviours initiate communication and social engagement promoting participant psychosocial health. Additionally, Olive's behaviours were distinguished from the other residing canines who participants articulated as being unapproachable and unfriendly. Olive's approachable, friendly, and socially reciprocal behaviours allow the formation of a symbiotic, mutually beneficial bond connecting Olive with participants, influencing participants' connectedness with her and their experiences of AAT.

Based on the study's limitations and implications of findings, recommendations are made for future AAT research studies with an elder population.

6.2 Implications and Future Research

As detailed in the previous Discussion chapter, this study's findings substantiate that AAT serves a therapeutic benefit, promoting positive psychological, physiological, and psychosocial health outcomes for an elder population. This has implications for long-term residential settings. Firstly, findings support Knox's philosophy of care to provide easily accessible contact with animals as a way of enriching elder residents' quality of life. Findings also provide possible incentives for other New Zealand residential settings to employ a similar AAT initiative, with the additional understanding that having a permanently placed and certified canine is particularly advantageous.

Recommended future pathways for AAT research in New Zealand are specific focuses on the impact of an AAT programme from commencement, leading to the possibility of comparing before and after effects of AAT. Also, a focus on specific AAT interventions towards achieving goal directed objectives, such as improvements in mobility, speech and language, or social engagement, would contribute further understanding to AAT therapeutic capabilities.

The identification of particular canine characteristics influencing AAT experiences initiated an additional significant implication to this study. The findings suggest that AAT is not simply about interacting with a canine, because it is cute or playful, but many complexities associated with biological, emotional, and social responses systematically influence the connection participants feel with Olive. These findings fill a gap in AAT literature as during this process, no research was found that specifically focused on the influence of specific canine characteristics on AAT therapeutic abilities, from the perspective of the participants. Future research may focus on the effect different canine breeds may have on AAT experiences, in relation to their divergent visual characteristics,

sizes, and behaviours. It's also recommended that further research compare canine AAA and canine AAT, to further clarify whether a certified canine is more advantageous for a long-term residential setting.

An increased and broader participant sample size is recommended, such as 10 participants instead of five. The inclusion of persons who have not participated in AAT, have a dislike of canines, or who may disapprove of AAT within a residential setting, would also be beneficial as this would increase the potential sample size and allow for a more in depth and balanced analysis regarding canine AAT experiences. Interviewing family members may also be appropriate to supplement the capturing of residents' experiences and offer an alternative perspective to the effects of canine AAT on elder residents' wellbeing. Additionally, interviewing staff and volunteers regarding their experiences of AAT within the residential setting is recommended as this will allow for the triangulation of data and opportunity to gain a greater overall picture of how canine AAT affects the whole residential setting environment.

Following interpretation of participants' experiences, AAT appears to have served a therapeutic purpose, however the study identified that participants did not necessarily consider AAT experiences as being *therapeutic*. This has significant implications on the inherent ambiguities of language use (Atieno, 2009) and the importance of terminology use with an elder population. Therapy is still a stigmatised term and for the study's particular cohort of participants, who grew up in a time in society when therapy was perhaps more associated with persons who were severely unwell, the term 'therapy' may not be relatable. This implication also highlights the differing constructions of meaning making and the importance of understanding and interpreting these differences. For example, without the opportunity to explore participants' meaning of therapy, their lack of

therapeutic terminology use may have been interpreted as AAT having no therapeutic effect. Instead analysis inferred that participants constructed the meaning of “therapeutic” as being a combination of emotional and social responses that lead to beneficial health related outcomes. Recommendations for future AAT with an elder population would be to take time considering the terminology used for participant recruitment and data collection tools, while allowing participants the opportunity to articulate their own understandings. Further research may also directly query what an elder population’s definition of therapy means, relating the meaning back to their interpretation of AAT.

Practicalities need to be taken into consideration when working with an elder population residing within a long-term residential setting. A flexible research design is recommended to allow for challenges associated with participant recruitment and data collection. Patience is required due to the likelihood of appointments being interrupted by staff, visitors, or having been forgotten (Kaiser et al., 2002). Full immersion into the research setting is recommended to build relationships with potential participants and interest in the study, reduce the effect of researcher presence during data collection, and gain insight into the culture of the environment. An additional recommendation is to involve a communicative and supportive “insider” from the research setting. Kristen was the “insider” for this study and played a pivotal role in the formation and progression of the research. As volunteer coordinator and Olive’s handler, her relationship with residents aided the study’s participant recruitment and data collection phase. Kristen also acted as an advocate for the research. Knox is a busy place with many people entering and exiting, and due to its uniqueness as an Eden Alternative Home, it is the setting for numerous research studies. As a staff member who was a familiar acquaintance to residents, Kristen also facilitated introductions, which eased the effect of a stranger entering into the residents’ home and private rooms.

6.3 Reflective Statement

This pilot, exploratory case study sought to give persons residing within a New Zealand residential setting an opportunity to contribute to a study seeking to establish a platform for further research on a topic for which interest is beginning to grow. There were limitations and challenges associated with achieving this purpose, but I believe the study has achieved its aims. The impact of canine AAT within a long-term residential setting has been explored, giving elder residents an opportunity to contribute to a study that has initiated New Zealand related AAT research, while supplementing and contributing to international AAT literature.

Prompted by my own personal canine experiences my intention of conducting this study was to explore how canine experiences affected individuals' health and gain insight into why canines are so endearing to humans. Having openly shared their canine experiences, which like my own are shrouded among intimate life memories, the participants of this study have indicated that canines are a central part of life, significantly contributing to our wellbeing. Through the writing of this thesis I have gained an understanding that the human-canine bond is systematically driven by evolution, biology, and physiology and is a symbiotic connection. It is because of this connection that canine AAT can be a positive adjunct to traditional therapeutic techniques.

Additionally, the writing of this thesis has enriched my social experience as I have met a cohort of people whom I would never have intentionally met, which has been a gratifying and humbling experience, "fortunate is the researcher who learns how to use the assistance of people with special experience" (Stake, 2010, p.57).

6.4 Conclusion

An impetus for this research was a desire to further advance knowledge regarding animal assisted therapy (AAT), in particular, canines and their therapeutic abilities in a residential setting. Participant experiences support literature that acknowledges AAT serves a beneficial therapeutic initiative. Participants have contributed to further advancing the knowledge of AAT, having identified that positive AAT experiences are related to the strength of the connection between canine and human, and that canine characteristics significantly influence the development of that connection. The knowledge gained from this study will aid in the establishment of a platform to build upon New Zealand contextual AAT research, while supplementing growing international understanding of the use of AAT, in particular, canine AAT within a long-term residential setting, as a way of enriching and maintaining a quality of life deserving of all elder persons.

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Appendix 1: The Ten Principles of The Eden Alternative¹

1. The three plagues of loneliness, helplessness, and boredom account for the bulk of suffering among our Elders.
2. An Elder-centred community commits to creating a Human Habitat where life revolves around close and continuing contact with plants, animals, and children. It is these relationships that provide the young and old alike with a pathway to a life worth living.
3. Loving companionship is the antidote to loneliness. Elders deserve easy access to human and animal companionship.
4. An Elder-centred community creates opportunity to give as well as receive care. This is the antidote to helplessness.
5. An Elder-centred community imbues daily life with variety and spontaneity by creating an environment in which unexpected and unpredictable interactions and happenings can take place. This is the antidote to boredom.
6. Meaningless activity corrodes the human spirit. The opportunity to do things that we find meaningful is essential to human health.
7. Medical treatment should be the servant of genuine human caring, never its master.
8. An Elder-centered community honours its Elders by de-emphasizing top-down, bureaucratic authority, seeking instead to place the maximum possible decision-making authority into the hands of the Elders or into the hands of those closest to them.
9. Creating an Elder-centered community is a never-ending process. Human growth must never be separated from human life.
10. Wise leadership is the lifeblood of any struggle against the three plagues. For it, there can be no substitute.

¹ Retrieved from www.knox.co.nz

Appendix 2: Information Flyer

ANIMAL ASSISTED THERAPY RESEARCH PROJECT

Dear Residents,

You are invited to participate in a research project to discuss your experiences of Olive, your permanent, one of a kind, therapeutic canine.

Olive is really special as she is the only canine in New Zealand to be placed permanently within a care home and hospital and therefore the research is a pilot study, meaning it is the first of its kind to be conducted within New Zealand.

Key points about the study:

- ❖ A period of observations will take place on scheduled days, when I will shadow Olive as she interacts with ALL residents, to help me understand how Olive affects the whole Knox community. NO personal information will be recorded.
- ❖ Individual participation will involve you being informally interviewed by me, so we can discuss your thoughts on Olive. In addition, I will also ask if you could record your experiences of Olive in a diary, which will be provided.
- ❖ Individual participants need to be aged between 55 and 75 years of age, who have already had some experience with Olive or, who are interested in Olive and would like to spend more time with her
- ❖ Your participation is completely voluntary, meaning IT IS YOUR CHOICE!
- ❖ You can withdraw AT ANYTIME, WITHOUT CONSEQUENCE.
- ❖ All information recorded for the research will be kept confidential, so that any information you provide will be kept ANONYMOUS.

If you would like to know more please visit Olive's carer, Kristen. I will be visiting Knox on (date) to introduce myself and answer any questions you may have.

Thank you for your time and I look forward to meeting you.

Lucie Roxburgh
Student Researcher

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 14/92. If you have any concerns about the conduct of this research, please contact Dr Brian Finch, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 350 5799 x 84459, emailhumanethicsoutha@massey.ac.nz

Appendix 3: Information Sheet



ANIMAL ASSISTED THERAPY (AAT)

An explorative case study into individuals' experiences with a therapeutic canine

INFORMATION SHEET FOR PARTICIPATING RESIDENTS

Project Description and Invitation

- ❖ Researcher is Lucie Roxburgh – Masters student at Massey University.
- ❖ Voluntary study.
- ❖ An opportunity to share your experiences with resident therapeutic canine, Olive, to help me understand how she influences your lives at Knox.
- ❖ This research study is the first of its kind in New Zealand.

Participant Identification and Recruitment

You can volunteer to participate in this study if you:

- ❖ Are a permanent resident at Knox.
- ❖ Aged between 55 and 75 years.
- ❖ Have had previous contact with Olive, or;
- ❖ Have an interest in Olive.

What are the benefits of this project?

- ❖ Your story will contribute to worldwide AAT literature and establish a platform for AAT research development within New Zealand.
- ❖ The project will contribute to the establishment of Knox's AAT programme.
- ❖ The project supports Mobility Dog's mission to enhance the lives of people with disabilities.

Project Procedures

How will you be involved?

1. Observations - To gain an overall picture of Olive's interactions with residents at Knox, the researcher will observe Olive and her handler interacting with residents for approximately 10 sessions, over a period of eight weeks.
2. Informal interviews - Direct participation will require a scheduled pre and post interview including an AAT session, at a time that is scheduled with you so as to minimise any interruptions to your day. Pre-interviews are expected to last approximately 15 minutes, AAT intervention to last 15 minutes, and a final post-interview to last up to 30 minutes.
3. Diary writings - I will also ask if you would keep a diary of your time and experiences with Olive for the period of the study. Diaries will be provided to you and the front of each diary will offer you some prompts to help you with your writing, but ultimately you have the freedom to write what you want to write.

If you would like, I can meet with you to discuss my interpretations of your interview and diary transcripts to ensure that you are comfortable with the way your story is written and portrayed.

Data Management

What will happen to the information that you provide?

- ❖ All information you provide will be kept confidential between the researcher and the projects university supervisors only.
- ❖ Your name will be changed to a pseudonym for final publication, unless you specify that you would like your personal name published.
- ❖ After official submission and examination of the dissertation, copies will be offered to Knox and Mobility Dogs management, as well as to participants if requested.
- ❖ A summary of findings will be offered to all participating residents.
- ❖ Aspects of the study may be published in peer-reviewed journals that focus on disciplines such as nursing, therapy, social sciences, public health, AAT, and New Zealand specific studies.
- ❖ The researcher may also present findings to local community services such as District Health Boards, hospices, aged care homes, as well as services that run AAT programmes like St Johns, and organisations that support the Eden Alternative philosophy such as EdenOz and New Zealand.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- ❖ Decline to answer any particular question.
- ❖ Withdraw from the study at any time.
- ❖ Ask any questions about the study at any time during participation.
- ❖ Provide information on the understanding that your name will not be used unless you give permission to the researcher.
- ❖ Be offered a summary report detailing the projects findings, following completion and examination of the thesis.
- ❖ I will ensure that your voice is respectfully heard and that your participation in the project can be as involved as you wish.
- ❖ I am interested in what you think is important therefore there are no “right” or “wrong” answers or behaviours.

Project Contacts

If you have any questions or concerns regarding this project please contact the researcher or university supervisors.

Researchers Details

Lucie Roxburgh
lucieroxburgh@hotmail.com

Supervisors Details

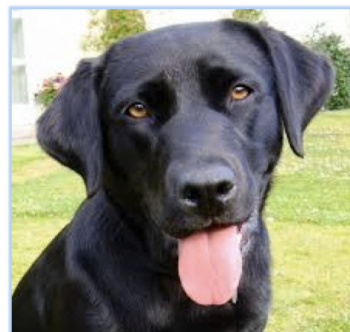
Dr. Karen Frewin
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Committee Approval Statement

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 14/92. If you have any concerns about the conduct of this research, please contact Dr Brian Finch, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 350 5799 x 84459, emailhumanethicsoutha@massey.ac.nz

ANIMAL ASSISTED THERAPY



*An explorative case study into individuals'
experiences with a therapeutic canine*

PARTICIPANT CONSENT FORM - INDIVIDUAL

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time. I am aware that I can withdraw from the study at any time.

- ❖ I agree / do not agree to the interview being sound recorded.
- ❖ I wish / do not wish to have my recordings returned to me.
- ❖ I wish / do not wish to be given a summary report.

I agree to participate in this study under the conditions set out in the information sheet.

Signature:

Date:

Printed Full Name:

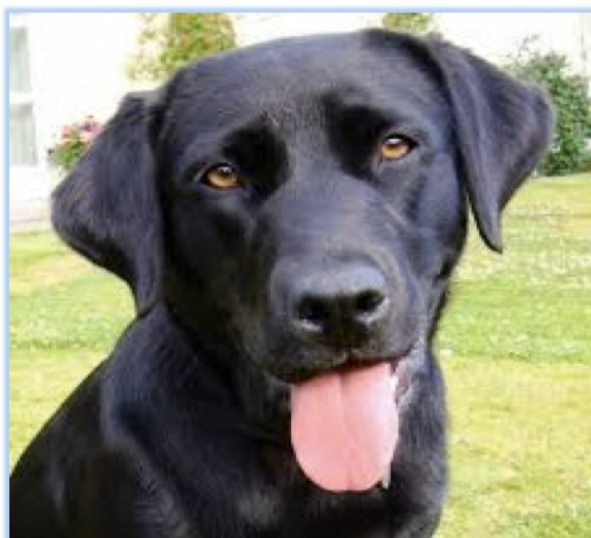
Thank you very much for your participation

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 14/92. If you have any concerns about the conduct of this research, please contact Dr Brian Finch, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 350 5799 x 84459, [email humanethicsoutha@massey.ac.nz](mailto:humanethicsoutha@massey.ac.nz)

Appendix 5: Interview Reminder Card

**ANIMAL ASSISTED THERAPY
RESEARCH PROJECT**

INTERVIEW



Date:

Time:

Location:

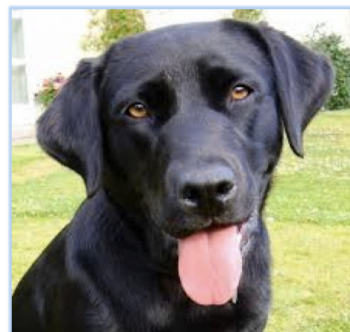
Thank you

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 14/92. If you have any concerns about the conduct of this research, please contact Dr Brian Finch, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 350 5799 x 84459,

Appendix 6: Interview Schedule

ANIMAL ASSISTED THERAPY

*An explorative case study into individuals'
experiences with a therapeutic canine*



INTERVIEW SCHEDULE

Introductions:

- Welcoming comments and appreciation for their time.
- Briefly repeat: purpose of research study and interview, confidentiality processes, participant rights, highlighting right to withdraw at anytime and communicating distress.
- Acknowledge and explain recording device.
- Gain consent to continue.

Pre-AAT Interview Question Schedule: (max 15 minutes)

Background information: Opening statement

Although the purpose of this interview is to discuss your experiences of Olive, I believe everyone has a life story and therefore I would like to ask you some background questions first so as to learn more about you and your story.

Daily Life:

- How long have you lived at Knox?
- Why did you decide to live at Knox?
- Did you have experiences with animals before you lived here? Please explain
- How much time have you spent with Olive since her arrival?
- Could you please explain what your experiences with Olive have been like?
- How would you describe Olive?
- Would you like to spend some time with Olive (canine) now?

AAT Session: (max 15 minutes)

- Encourage interaction with Olive.
- Olive and handler to join natural conversation.

Post–AAT Interview Schedule: (max 30 minutes)

- How do you feel after that experience with Olive?
- What happens for you when you are around Olive?
- Would you like to have contact with Olive more often? If yes please explain in what way.
- Are there any experiences that you have had with Olive that have not been pleasant?
- How do you think Olive's arrival has changed things here at Knox?
- What is it like for you when Olive isn't here?
- Do you like spending time with other animals that visit here? Please explain.
- How do your experiences with Olive differ from experiences you have had with other animals that visit?
- Do you think other residential homes would benefit from having a dog like Olive as one of their residents? Please explain.
- Closing statement: Is there anything else you would like to tell me about your experiences with Olive?

Appendix 7: Ethics Letter of Approval



MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA

4 December 2014

Lucie Roxburgh
13 Mamie Street
Remuera
AUCKLAND 1050

Dear Lucie

Re: HEC: Southern A Application – 14/92
An explorative case study into individuals' experiences with a therapeutic canine

Thank you for your letter dated 4 December 2014.

On behalf of the Massey University Human Ethics Committee: Southern A I am pleased to advise you that the ethics of your application are now approved. Approval is for three years. If this project has not been completed within three years from the date of this letter, reapproval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely

A handwritten signature in blue ink, appearing to read "B Finch".

Dr Brian Finch, Chair
Massey University Human Ethics Committee: Southern A

cc Dr Karen Frewin
Institute of Education
PN500

Mrs Vijaya Dharan
Institute of Education
PN500

A/Prof Sally Hansen, Hol
Institute of Education
PN500

Mrs Roseanne MacGillivray
Institute of Education
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