

AZUSA PACIFIC UNIVERSITY

**ANIMAL-ASSISTED INTERVENTIONS WITH  
DOGS: A REVIEW OF THE CURRENT LITERATURE**

by

Emma Doney

A dissertation submitted to the  
School of Behavioral and Applied Sciences  
in partial fulfillment of the requirements  
for the degree Doctor of Psychology in Clinical Psychology

Azusa, California

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COMMITTEE MEMBERS

Holli Eaton, Psy.D., Committee Chair

Joy Bustrum, Psy.D., Committee Member

ACCEPTED BY

Robert K. Welsh, Ph.D., ABPP, Dean, School of Behavioral and Applied Sciences

PREVIEW

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## **DEDICATION**

I wish to dedicate this dissertation to all of the humans and non-humans who have loved, supported, and helped me along the way.

PREVIEW

## ABSTRACT

The purpose of this paper was to conduct a systematic literature review of the current state of research on animal-assisted interventions (AAIs) in ten distinct clinical populations, identify gaps in the literature, and discuss future directions. This literature review was conducted from January 2018 to December 2019. Databases searched included: Academic Search Premier, APA PsycArticles, APA PsycExtra, APA PsycInfo, Health and Psychosocial Instruments, Health Source: Nursing/Academic Edition, Military & Government Collection, and MEDLINE. Ten distinct clinical populations were assessed: children with autism spectrum disorder (ASD), children with a history of sexual abuse, college students, medical settings, older adults in long-term care living facilities, prison inmates, adults with posttraumatic stress disorder (PTSD), educational settings, severe psychiatric population, and individuals with substance use disorders. Articles were included if they represented an original research study, were written in the English language, and focused on AAIs utilizing a dog. To broaden results, case studies and studies with small sample sizes were included. A total of 78 articles that met inclusion criteria were found. Results indicated that AAIs appeared to be effective and feasible programs. Methodological issues such as small sample size, inability to run randomized controlled trials, and length of intervention were noted as barriers to research. Animal-assisted interventions are rapidly increasing in the United States and around the world. Current research has shown that AAIs are an effective means for augmenting current therapeutic practices. However, there appears to be several gaps in the literature. Development of new methodological practices to study AAIs, exploring the

experience of the dog involved, and understanding of culture all warrant further investigation.

*Keywords:* animal-assisted interventions, animal-assisted therapy, companion animal, dog-assisted intervention, dog-assisted therapy, pet therapy

PREVIEW

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## **CHAPTER 1**

### **BACKGROUND**

#### **The Human-Dog Relationship**

Dogs and humans have coexisted for millennia (Calcaterra et al., 2015; Furst, 2015; Hosey & Melfi, 2014; Knight & Herzog, 2009; Netting et al., 1987). Archeological evidence strongly suggests that wolves began to evolve into domesticated dogs alongside humans as early as 14,000 years ago, and have played a significant role in the evolutionary development of the human species (Glenk, 2017; Krol, 2012; Mims & Waddell, 2016; Montolio & Sancho-Pelluz, 2019; Prato-Previde et al., 2003; Silva & Osório, 2018; Solomon, 2010; Stahl, 2016; Viviers, 2014; Walsh, 2009). Since the beginning of this symbiotic relationship, dogs have been a source of food, partners for hunting and herding, and providers of protection and companionship (Calcaterra et al., 2015; Chu et al., 2009; Furst, 2015; Glenk, 2017; Koukourikos et al., 2019; Krol, 2012; Montolio & Sancho-Pelluz, 2019; Parenti et al., 2013; Silva & Osório, 2018; Thomas & Matusitz, 2016; Turner, 2007; Viviers, 2014; Walsh, 2009).

#### **The Therapeutic Use of Dogs**

##### **History**

The therapeutic power of dogs has been recognized for centuries. Ancient civilizations, such as the Greeks and the Romans, bred dogs purely for the purpose of companionship (Cooley & Barker, 2018; Mims & Waddell, 2016). In the 9<sup>th</sup> century, domestic animals in Belgium were provided to disabled members of the community in an effort to provide comfort and social support (Shubert, 2012). In the late 1600s, philosopher John Locke wrote about the beneficial impact of animals on children. He

proposed that close interaction with small animals would help children foster empathy, explore their feelings, and develop a sense of responsibility (Compitus, 2019; le Roux & Kemp, 2009).

According to anecdotal reports, animals have been utilized in Western physical and mental medical care since the early 18<sup>th</sup> century (Chu et al., 2009; McCune et al., 2017; Stevens et al., 2017). Small domesticated animals were housed in hospitals, to be cared for by patients, in an effort to increase socialization among residents (Chu et al., 2009; Mims & Waddell, 2016; Stevens et al., 2017). The first documented instance of this type of treatment occurred in 1792 at a Quaker-founded inpatient psychiatric hospital in England. The founder of York Retreat, William Tuke, advocated for the integration of animals into treatment plans with the purpose of cultivating a sense of humanity and accomplishment among the patients (Chitic et al., 2012; Chu et al., 2009; Compitus, 2019; Jenkins et al., 2014; Macauley, 2006; Mims & Waddell, 2016; Montolio & Sancho-Pelluz, 2019; Netting et al., 1987; Parshall, 2003; Shubert, 2012; Turner, 2007; Vrbanac et al., 2013).

Florence Nightingale, an important and influential figure in the field of nursing, documented her observations of animal interactions with physically wounded patients (Chu et al., 2009; Cruz-Fierro et al., 2019; Macauley, 2006). Her writings depicted small companion animals engaged in social interaction with injured soldiers and note the healing benefits of these exchanges (Compitus, 2019; Chu et al., 2009; Goddard & Gilmer, 2015; le Roux & Kemp, 2009; Macauley, 2006; Mims & Waddell, 2016; Stevens et al., 2017). Often she perceived increased mental and physical functioning after a patient engaged in an animal encounter (Chu et al., 2009).

Throughout the 17<sup>th</sup>, 18<sup>th</sup>, and 19<sup>th</sup> centuries, numerous efforts were made to involve animals in informal therapeutic practices such as the ones mentioned above (Hosey & Melfi, 2014; Parshall, 2003). In the 20<sup>th</sup> century, formal programs began to develop and animals were incorporated into numerous healthcare interventions (Macauley, 2006; Malamud, 2013; Parenti et al., 2013; Shubert, 2012). In 1919, the process of providing daily care for dogs was assimilated into the everyday routine for veterans receiving psychiatric care at St. Elizabeth's Hospital in Washington, D.C. (Beck et al., 2012; Chu et al., 2009; Macauley, 2006; Thomas & Matusitz, 2016). In the early 1940s, the Army Air Corps Convalescent Hospital in Pawling, New York instituted a formal animal therapy program. Veterans recovering from service-related injuries performed basic chores related to the care of farm animals and teaching dog obedience (Chumley, 2012; Netting et al., 1987; Shubert, 2012; Thomas & Matusitz, 2016). These activities provided patients with a source of physical activity, a sense of comfort, and a means of empowerment (Chumley, 2012; Parshall, 2003; Shubert, 2012).

The presence of a dog in individual psychotherapy dates back to one of the most famous psychotherapists, Dr. Sigmund Freud. Although many details of Dr. Sigmund Freud's work are widely known, his recognition of the therapeutic benefits of dogs is not. Freud noted that he first brought his chow chow, Jo-Fi, into sessions to help alleviate some of Freud's own anxiety. He soon found that the dog appeared able to pick up on the patients' energy. Jo-Fi provided a calming presence that Freud believed helped to facilitate patient disclosure and speed up treatment progression (Compitus, 2019; Goddard & Gilmer, 2015).

Child psychologist Dr. Boris Levinson is widely credited with identifying the therapeutic benefits of dogs and incorporating dogs into individual psychotherapy sessions (Aoki et al., 2012; Chu et al., 2009; Compitus, 2019; Crossman, 2017; Evans & Gray, 2012; Friesen, 2010; Goddard & Gilmer, 2015; le Roux & Kemp, 2009; Muela et al., 2017; Rossetti & King, 2010). Levinson first began to explore this concept in the 1960s, when he accidentally discovered that his dog, Jingles, had a profound impact on helping an extremely withdrawn and resistant patient open up in treatment (Chu et al., 2009; Compitus, 2019; Goddard & Gilmer, 2015; Jenkins et al., 2014; Krause-Parello & Gulick, 2015; le Roux et al., 2014; Netting et al., 1987; Parshall, 2003; Shubert, 2012). As the child became more engaged in sessions, Levinson theorized that Jingles helped to facilitate the therapeutic relationship and provided a sense of comfort to the patient (Berry et al., 2013; Chitic et al., 2012; Chu et al., 2009; Crossman, 2017; Cruz-Fierro et al., 2019; Goddard & Gilmer, 2015; Krause-Parello & Gulick, 2015; le Roux & Kemp, 2009; Macauley, 2006; Moretti et al., 2011; Turner, 2007; Vrbanac et al., 2013). Based on the idea that Jingles acted as a social lubricant, Levinson went on to conduct therapy alongside his canine partner for many years (Cruz-Fierro et al., 2019; Evans & Gray, 2012; Friesen, 2010; Goddard & Gilmer, 2015; Krause-Parello & Gulick, 2015; Macauley, 2006; Rossetti & King, 2010; le Roux & Kemp, 2009; Moretti et al., 2011; Muela et al., 2017; Vrbanac et al., 2013). His published works, depicting the integration of his dog into therapy, faced heavy criticism from the psychological community (Chumley, 2012; Crossman, 2017; Hines, 2003; Muela et al., 2017; Shubert, 2012). Despite the resistance from his peers, Levinson continued to advocate for utilization of this intervention. His efforts led to the development of a body of research, and current

practices of animal-assisted therapy (AAT) have developed from the techniques that Levinson devised and promoted (Compitus, 2019; Turner, 2007). Since the turn of the 21<sup>st</sup> century, the volume of literature exploring the integration of dogs into therapeutic interventions has steadily increased. Dogs have been effectively utilized with children and adults in a variety of settings, under the direction of volunteers and mental health professionals (Cooley & Barker, 2018; Dietz et al., 2012; Phelps et al., 2008; le Roux & Kemp, 2009).

## **Terminology**

### ***Overview***

An assortment of terms have been used to describe therapeutic programs involving dogs (Kirnan et al., 2016). Pet Partners (formerly the Delta Society), now the largest nonprofit registry for therapy animals in the United States, has previously offered classifications for such interventions in an attempt to provide clarity. While these definitions are the most widely used today, the language remains inconsistent across individual studies. Labels are often used interchangeably, resulting in confusion and misrepresentation between the public, practitioners, and researchers (Chumley, 2012; Hosey & Melfi, 2014; Jones et al., 2019; Parenti et al., 2013; Schoenfeld-Tacher et al., 2017; Stapleton, 2016; Stewart et al., 2013; Walsh, 2009). It has become clear that in order to develop a strong foundation moving forward, arriving at a consensus on terminology is critical (Glenk, 2017; Hosey & Melfi, 2014; Jones et al., 2019; Parenti et al., 2013). For the purpose of this paper, the following definitions will be used.

### ***Animal-Assisted Intervention***

Animal-assisted intervention (AAI) is the overarching term that encompasses animal-assisted activity (AAA) and animal-assisted therapy (AAT) (Bassette & Taber-

Doughty, 2013; Bibbo, 2013; Calcaterra et al., 2015; Evans & Gray, 2012; Jones et al., 2019; Muela et al., 2017; Nordgren & Engström, 2014; Rodrigo-Claverol et al., 2019). Any therapeutic activity that involves an animal as part of the process can be classified as an AAI. These interventions capitalize on the social, biological, and educational benefits that animals provide in order to advance the wellbeing of the individual(s) involved (Berget et al., 2013; Glenk, 2017; Glintborg & Hansen, 2017; Krause-Parello & Gulick, 2015; Kazdin, 2017; Jones et al., 2019; Muela et al., 2017; Rodrigo-Claverol et al., 2019; Stern & Chur-Hansen, 2013).

### ***Animal-Assisted Activity***

Animal-assisted activity (AAA) includes any program that incorporates an animal from a recreational, motivational, or educational approach. The intention is to provide comfort and improve quality of life for the individual(s) coming into contact with that animal (Bassette & Taber-Doughty, 2013; Bibbo, 2013; Boyer & Mundschenk, 2014; Friesen, 2010; Hosey & Melfi, 2014; Jaspersen, 2010; Jones et al., 2019; Kelly & Cozzolino, 2015; Kirnan et al., 2016; Kirnan et al., 2018; Mims & Waddell, 2016; Muckle & Lasikiewicz, 2017; Shubert, 2012; Stern & Chur-Hansen, 2013; Stevens et al., 2017; Walsh, 2009; Vitztum & Urbanik, 2016). Designed to provide broad support rather than target specific needs, AAAs are informal visitations that lack a predefined goal and progression documentation (Cipriani et al., 2013; Evans & Gray, 2012; Friesen, 2010; Glenk, 2017; Glintborg & Hansen, 2017; Goddard & Gilmer, 2015; Grigore & Rusu, 2014; Haubenhofner & Kirchengast, 2007; Jones et al., 2019; Kelly & Cozzolino, 2015; Kirnan et al., 2016; le Roux et al., 2014; le Roux & Kemp, 2009; Muckle & Laikiewicz, 2017; Stevens et al., 2017; Stewart et al., 2014). Animals that take part in AAAs are

referred to as visitation animals. They provide emotional support and physical comfort through the act of companionship and socialization (Parenti et al., 2013). Although the animal's handler may be a mental health professional, AAAs are typically conducted by a volunteer and their companion animal (Bassette & Taber-Doughty, 2013; Berget et al., 2013; Bibbo, 2013; Boyer & Mundschenk, 2014; Cipriani et al., 2013; Evans & Gray, 2012; Friesen, 2010; Glintborg & Hansen, 2017; Goddard & Gilmer, 2015; Grigore & Rusu, 2014; Jaspersen, 2010; Kelly & Cozzolino, 2015; Kirnan et al., 2016; Kirnan et al., 2018; le Roux et al., 2014; le Roux & Kemp, 2009; Mims & Waddell, 2016; Muckle & Laikiewicz, 2017; Stevens et al., 2017; Uglow, 2019). The handler and animal receive basic training and must meet certain criteria in order to participate in the program (Berget et al., 2013; Friesen, 2010; Kelly & Cozzolino, 2015; Kirnan et al., 2016; le Roux et al., 2014; Mims & Waddell, 2016; Muckle & Laikiewicz, 2017).

### ***Animal-Assisted Therapy***

AAT is the inclusion of an animal as a formal and structured intervention with the purpose of providing comfort, facilitating connection, and offering assistance alongside a mental health professional (Boyer & Mundschenk, 2014; Dietz et al., 2012; Dravnsnik et al., 2018; Friesen, 2010; Glenk, 2017; Goddard & Gilmer, 2015; Jenkins et al., 2014; Jones et al., 2019; Kelly & Cozzolino, 2015; Kirnan et al., 2016; Kirnan et al., 2018; le Roux et al., 2014; Mims & Waddell, 2016; Minatrea & Wesley, 2008; Signal et al., 2017; Stevens et al., 2017; Stewart et al., 2013; Vitztum & Urbanik, 2016; Walsh, 2009; Zents et al., 2017). As AAT is goal-directed, tailored to individual needs, each session is documented, and progress is measured (Bassette & Taber-Doughty, 2013; Bibbo, 2013; Boyer & Mundschenk, 2014; Calcaterra et al., 2015; Compitus, 2019; Dravnsnik et al.,

2018; Elmaci & Cevizci, 2015; Evans & Gray, 2012; Glenk, 2017; Glinborg & Hansen, 2017; Goddard & Gilmer, 2015; Grigore & Rusu, 2014; Haubenhofner & Kirchengast, 2007; Hediger et al., 2019; Jaspersen, 2010; Jones et al., 2019; Kirnan et al., 2016; Kloep et al., 2017; le Roux & Kemp, 2009; Mims & Waddell, 2016; Montolio & Sancho-Pelluz, 2019; Rossetti & King, 2010; Signal et al., 2012; Stevens et al., 2017, Uglow, 2019; Vitzum & Urbanik, 2016). AAT involves an individual patient, competent psychologist or other mental health professional, and a trained animal (Bassette & Taber-Doughty, 2013; Berget et al., 2013; Calcaterra et al., 2015; Dietz et al., 2012; Dravnsnik et al., 2018; Elmaci & Cevizci, 2015; Engelman, 2013; Evans & Gray, 2012; Friesen, 2010; Glinborg & Hansen, 2017; Grigore & Rusu, 2014; Hediger et al., 2019; Jaspersen, 2010; Jones et al., 2019; Kelly & Cozzolino, 2015; Kirnan et al., 2018; le Roux & Kemp, 2009; le Roux et al., 2014; Macauley, 2006; Marcus et al., 2013; Minatrea & Wesley, 2008; Mims & Waddell, 2016; Montolio & Sancho-Pelluz, 2019; Rodrigo-Claverol et al., 2019; Signal et al., 2017; Stevens et al., 2017; Stewart et al., 2014; Vitzum & Urbanik, 2016; Vrbanac et al., 2013; Zents et al., 2017). Animals that take part in AAT are referred to as therapy animals. They act as therapeutic agents to augment treatment and should enhance the process rather than distract from the attainment of goals (Dietz et al., 2012; Montolio & Sancho-Pelluz, 2019; Parenti et al., 2013; Stewart et al., 2013; Walsh, 2009). The most common animal employed are dogs. Canine-assisted therapy (CAT) can be used to describe AAT that involves a dog (Binfet et al., 2018; Cooley & Barker, 2018; Elmaci & Cevizci, 2015).

## **Research**

### *History*

Presently, the study of the dog-human bond is multidisciplinary in scope; however, this was not always the case. Professionals in the field of veterinary medicine should be attributed with pioneering the development of dedicated research looking into this relationship (Hines, 2003; Hosey & Melfi, 2014; Vitztum & Urbanik, 2016). In the 1970s, various veterinary experts pursued a deeper understanding of the interactions between their human and animal clients (Chumley, 2012; Hines, 2003). Despite pushback citing questionable credibility from the larger scientific community, early mainstream media developed an interest in AAIs and brought them to the attention of the general public (Hines, 2003; Hosey & Melfi, 2014).

Founded in 1981 as the Delta Society, one of the main goals of Pet Partners was to facilitate exploration of the human-animal relationship (Chumley, 2012; Hines, 2003). Since its launch the organization has advocated for AAI program development, provided funding for research, and organized conferences aimed at identifying gaps in the field and reaching out to other disciplines (Netting et al., 1987). An emerging body of literature, increasing multidisciplinary involvement, and growing public interest has further helped to boost recognition of AAIs. The majority of research has been conducted in North America, Europe, and Asia (Chumley, 2012; Dietz et al., 2012; Franklin et al., 2007; Friesen, 2010; Fung, 2017; Haggerty & Mueller, 2017; Hartwig & Smelser, 2018; Hosey & Melfi, 2014; Netting et al., 1987; Prato-Previde et al., 2003).

Despite the increase in volume there remains a perceived lack of quality studies (Dietz et al., 2012; Hall et al., 2016). The absence of rigorous methodology has created a