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Animal-Assisted Therapy: An Adjunctive Intervention for Reducing Depression and Anxiety in Female College Students with Physical Disabilities and Guidelines for Implementation into Psychotherapy Practice and Research

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ANIMAL-ASSISTED THERAPY: AN ADJUNCTIVE INTERVENTION FOR REDUCING DEPRESSION AND ANXIETY IN FEMALE COLLEGE STUDENTS WITH PHYSICAL DISABILITIES AND GUIDELINES FOR IMPLEMENTATION INTO PSYCHOTHERAPY PRACTICE AND RESEARCH

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I HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER MY SUPERVISION BY **ERIN N. ARMOUR** ENTITLED **ANIMAL-ASSISTED THERAPY: AN ADJUNCTIVE INTERVENTION FOR REDUCING DEPRESSION AND ANXIETY IN FEMALE COLLEGE STUDENTS WITH PHYSICAL DISABILITIES AND GUIDELINES FOR IMPLEMENTATION INTO PSYCHOTHERAPY PRACTICE AND RESEARCH** BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PSYCHOLOGY.

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Abstract

The existing literature has indicated that women with physical disabilities are at greater risk for depression and anxiety compared to men with similar limitations and their able-bodied counterparts (Nosek & Hughes, 2003). In addition to this, female college students with physical disabilities are at greater risk for attrition than able-bodied female college students (Gmelch, 1998). This dissertation discusses the benefits and criticisms of animal-assisted therapy as an adjunctive intervention for depression and anxiety in this population. It also provides guidelines for implementing it into psychotherapy practice and research.

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Dedication

This dissertation is dedicated to my parents, Mark and Penny Armour, whose unconditional love and support made enduring graduate school possible. It is also for Bella, who reminds me of the benefits of animal-assisted therapy every day.

Chapter I

Statement of the Problem

According to the National Institute of Disability and Rehabilitation Research (Erickson & Lee; 2003), one in five Americans (approximately 54 million) have physical, sensory, psychiatric, or cognitive disabilities that interfere with daily living. More than half of those individuals (28.6 million) are women. Furthermore, while men outnumber women four to one, in terms of spinal cord injury and traumatic brain injury, women experience a greater prevalence of physically disabling health conditions (National Women's Health Information Center, 2002). Women with physical disabilities face very real challenges in their daily lives, including high rates of unemployment and underemployment, as well as a lack of access to health care resources (Nosek, 2000). More specifically, according to the United States Department of Health and Human Services (2000), women with disabilities ages 21-64 are more than two times more likely to live in poverty than their able-bodied counterparts. Their low socioeconomic status often prevents them from receiving adequate health care, including necessary surgery, prescriptions, and mental health care (Chevarley *et al*., 2006). Finally, women with physical disabilities are more likely than their male counterparts, and able-bodied women, to be victims of intimate partner violence, particularly since they may rely on partners for their personal care needs (Nosek, Foley, Hughes, & Howland, 2001). These factors, along with societal stereotypes about women with disabilities, place women with physical disabilities at higher risk for low self-esteem, social isolation, depression, and

anxiety (Nosek & Hughes, 2003).Olkin (1999) noted that society has often viewed women with disabilities as being helpless, burdensome, asexual, ill, and pitiful. In contrast, when their achievements were considered to exceed their limitations, women with disabilities are viewed as being heroic or inspirational. Such stereotypes can negatively impact the health and psychological well-being of women with physical disabilities as they result in discrimination, social avoidance, and when internalized, ultimately depression and anxiety (Olkin, 1999; Nosek & Hughes, 2003). Neimeier (2008) found that women with disabilities were twice as likely to develop symptoms of depression as men with disabilities. Additionally, they were found to be at greater risk for perceived stress and anxiety disorders. Hughes *et al*. (2005) found that stress may especially impact women with physical disabilities due to them having more secondary health conditions, as well as fewer economic resources and social support, to buffer its effects. Attaining higher levels of education, however, has been found to mediate some of the socioeconomic disadvantage faced by women with physical disabilities (Olkin, 1999).

Thus, depression and anxiety may be especially important to address in college women with physical disabilities. Studies have suggested that depression occurs more frequently during young adulthood compared to childhood and adolescence (e.g., Santrock, 1993). The Americans with Disabilities Act (1990) mandated that college campuses become more accessible for students with disabilities, prompting more of them to pursue post-secondary education. Nonetheless, college students with physical disabilities continue to report that they are treated differently than their able-bodied

counterparts by professors and their peers. For example, Fichten *et al*. (1990) found that college professors were less likely to discuss academic performance with students with physical disabilities than students without disabilities. In addition, Fichten *et al,* (1989) and Gmelch (1998) noted that able-bodied students often avoided students with physical disabilities because they felt uncomfortable or threatened by them. As a result, students with physical disabilities often feel isolated from their classmates. In fact, when college students with visual impairments were interviewed regarding their social involvement on campus, they cited their perceived lack of acceptance by peers as a major barrier to their participation on campus. Conversely, their social integration improved when they identified with a subgroup (Hodges & Keller, 1999). Therefore, interventions aimed at reducing depression and anxiety, as well as building perceived social support, is especially necessary for college women with physical disabilities. Indeed, this particular population is five times less likely to attain a college degree than able-bodied women (Gmelch, 1998). Holcomb (1990) noted, however, that college students experienced less academic distress and were more likely to stay in school when they received adequate support from their peers and their academic institution. In sum, the existing literature has suggested that providing female college students with physical disabilities with access to meaningful psychosocial support may not only decrease social isolation, but also improve their academic performance and mood. Interaction with animals, such as therapy dogs, may be one way to increase perceived social support.

The existing literature has discussed numerous benefits of human-animal interaction in a variety of settings. For example, Folse, Minder, Aycock, & Santana

(1994) found that depression was reduced in college students after they had been in the presence of a therapy dog. In addition, Somervill *et al.* (2008) found that physiological signs of anxiety (i.e., blood pressure and heart rate) decreased in male and female college students soon after they held a cat or dog. Finally, McNicholas and Collis (2000) suggested that cats and dogs can serve as facilitators of social interaction. A discussion of animal-assisted therapy as an adjunctive intervention for reducing depression and anxiety in female college students with physical disabilities, however, is missing the existing literature. This dissertation provides evidence for the benefits of such an intervention, along with the guidelines for implementing animal-assisted therapy into practice and research.

Aim and Purpose

The purpose of this dissertation is to provide conceptual support for the need for psychotherapy interventions aimed at mediating the impact of disability stereotypes (i.e., depression and anxiety) on female college students with physical disabilities via an extensive literature review. In addition, it provides guidelines for implementing animal-assisted therapy into psychotherapy practice and research.

Providing guidelines for implementing animal-assisted therapy into psychotherapy practice and research with female college students with physical disabilities could be important for multiple reasons. First, the widespread stereotypical beliefs about women with disabilities suggest that even mental health professionals could benefit from increased knowledge when working with this population. In addition, interventions aimed at reducing the depression, anxiety, and social isolation that is often

experienced by female college students with physical disabilities may not only improve their academic performance, but also their overall quality of life. Moreover, including a therapy dog as an adjunct to traditional psychotherapy may increase rapport with the clinician, improve the clients' comfort level with therapy, and ultimately facilitate treatment success; much like it has in other populations that are at risk for developing depression and anxiety (e.g., as in substance dependence treatment; Wesley, Minatrea, & Watson, 2009).

Chapter II

Literature Review

Models of disability and disability as a socially constructed experience. Four models of disability have been discussed in the existing literature, namely the moral, medical, environmental, and the social or minority models. Each of these models reflects the various ways disability has been described by society, or the social construction of disability (Olkin, 1999; Smart & Smart, 2006).

The moral model, the oldest model of disability, states that disability is the result of the sins of the individual with a disability or his or her family. As such, the disability is considered to be a test of the family's strength or faith. Moreover, according to this model, it is believed that while one sense has been impaired by disability, another has been "heightened to mythic proportions" (Olkin, 1999, p. 25). In accordance with this model, historically, disability was "treated" with religious education classes or spiritual healings (Smart & Smart, 2006). Similarly, the medical model of disability has viewed disability as a "treatable" condition.

The medical model has perhaps been considered the most popular model of disability, as it is still widely endorsed and taught by medical schools across the nation. According to this model, disability is the result of pathology that is within the individual with a disability (Smart & Smart, 2006). This model is an improvement upon the moral model in that it does not place the blame on the individual, but rather his or her disability.

However, the end result of the medical model is that individuals with disabilities are viewed solely as their condition or the medical category in which their condition falls, and not as individuals. Thus, perhaps without realizing it, the able-bodied members of society legitimize prejudice and discrimination against individuals with disabilities (Smart & Smart, 2006). Furthermore, Liachowitz (1988) described the "Try Harder Syndrome," whereby disability is considered independent of motivation and adaptability. That is, while the medical model does not blame individuals with disabilities for their limitations, there is still an expectation that they will overcome them. Not only does this exclude individuals with disabilities from occupational and educational opportunities, it can also impact the quality of care that individuals with disabilities receive from health care professionals. Physicians are best trained to treat acute conditions, not chronic or life-long disabilities (Smart & Smart, 2006). Furthermore, the medical model does not account for the episodic nature of many mental health concerns, or their responsiveness to contextual and environmental variables (Stefan, 2001).

In contrast to the medical model, proponents of the functional or environmental model of disability do not consider disability to be inside the individual, but instead recognize that the environment, including societal attitudes, can contribute to or exaggerate limitations. That is, disability results from the functional requirements of the environments. Thus, this model posits that treatment should be aimed at adapting the environment to the functional needs of individuals with disabilities. In sum, the functional model of disability is an improvement upon the medical model in that it does not place individuals with disabilities in categories based on their limitations.

Furthermore, it places at least partial responsibility on the inaccessibility of the environment for individuals with disabilities (Smart & Smart, 2006). However, much of the existing literature has found individuals with disabilities do not consider their particular functional limitations to be central to their daily challenges. Instead, they have cited societal attitudes about disability as the main contributor to their main impediments in daily functioning, which is the basic premise of the social model of disability (Olkin, 1999).

The social, or minority model of disability, posits that the largest challenges faced by individuals with disabilities are the disability stereotypes, prejudice, and discrimination endorsed by the greater society (Hahn, 1997). Moreover, this model notes that these stereotypes have been socially constructed and can be socially deconstructed. In addition, the social model proposes that people with disabilities have the right to define their disability, their role, and the outcome of their lives. This is in direct contrast to the idea of the unspoken disabled role – one in which individuals with disabilities are expected to maintain a cheerful disposition, adhere to all medical professionals recommendations, request only those accommodations viewed as necessary by others, and maintain minimal goals and aspirations, so not to exceed others' comfort level (Smart & Smart, 2006). In addition, proponents of the social model of disability discourage categorization of disability recognizing that such distinctions only divides a community, who some believe are the target of more prejudice and discrimination than any other group (Hahn, 1993; ADA, 1990).

Attitudes about disability and disability stereotypes. Olkin (1999) explained that, when other characteristics are unknown, disabilities play a central role in forming impressions of individuals with disabilities. Furthermore, central characteristics can "spread" to explain other attributes (Wright, 1983). That is, when society holds a negative belief disabilities, other negative attributes have also been ascribed to persons with them. For example, individuals with physical disabilities have also been considered cognitively impaired. Ultimately, the end result of these attitudes is that individuals with disabilities become stigmatized, devalued members of society (Goffman, 1963).

Yuker (1994) studied attitudes towards individuals with disabilities. He reported that, while the majority of people feel admiration when encountering individuals with disabilities, they also feel pity and embarrassment toward them. In addition, respondents reported experiencing anger and resentment because they believed that individuals with disabilities caused inconvenience and received special accommodations. Thus, people with disabilities, especially those with visible impairments, have often been avoided and ostracized by their able-bodied counterparts. Olkin (1999) noted that women with disabilities have faced discrimination not only as a result of their disabilities, but also their gender. That is, they have often been judged by cultural, feminine ideals and gender roles. Previously, women with disabilities have been characterized as child-like, a burden, vulnerable, and asexual. Conversely, when they exceed their perceived limitations, they are viewed as being inspirational or super-capable. Evidence of these stereotypes permeate society, from its language, to its media, to its architecture (e.g., separate entrances, separate drinking fountains, and even separate transportation systems;

Olkin, 1999). Regardless of their nature, however, disability stereotypes and the manner in which women with physical disabilities are treated by society frequently have a negative impact on their health and psychological well-being.

Psychosocial impact of disability stereotypes. Feminist theorists have posited that socialization experiences and gender-based roles place women at higher risk for depression (Jordan, Kaplan, Miller, Stiver, & Surrey, 1991). Furthermore, the social isolation and loneliness often experienced by women with physical disabilities places them at greater risk for suffering from depression. In fact, Nosek, Hughes, and Robinson-Whelen (2008) reported that depression is highly prevalent among women with physical disabilities, with some studies finding as many as 59% of the population experiencing some depressive symptoms (e.g., Hughes et al., 2001). Moreover, some have estimated that, due to the significant overlap between disability-related symptoms and depressive symptoms (e.g. fatigue and difficulties sleeping), depression among women with physical disabilities may actually be underreported (Franklin, 2000, cited in Nosek, Hughes, & Robinson-Whelen, 2008). In addition, women with physical disabilities experience high levels of stress and anxiety (Nosek & Hughes, 2003). This finding is not surprising considering the socioeconomic barriers and social stigmatization experienced by women with physical disabilities.

Results from the American Community Survey (2006) found that women with disabilities are at a greater socioeconomic disadvantage than all men with similar limitations. Furthermore, women with physical disabilities are more than twice as likely to live in poverty as their able-bodied counterparts. The financial challenges they face

have likely been exacerbated by fewer job opportunities available to them. Sometimes this may be related to their physical limitations, but more often is due to discrimination as a result of being members of a multiple-minority group (Nosek, Hughes, & Robinson-Whelen, 2008). In fact, Nosek and Hughes (2003) reported that women with physical disabilities were less likely to receive disability benefits than disabled men. In addition, they were less likely to attain higher education and occupations providing adequate pay. Ultimately, these socioeconomic barriers negatively impact the quality of life of women with physical disabilities.

Poverty among women with physical disabilities has been associated with various secondary health conditions, including being overweight, circulatory problems, and breathing difficulties. In addition, lack of funding has often prevented women with physical disabilities from having adequate access to quality health care, including necessary surgery, dental care, and mental health care (Chevelry *et al*., 2006). These health concerns and environmental barriers have often led to increased depression and anxiety among women with physical disabilities (Nosek and Hughes, 2003). Therefore, providing conceptual support for animal-assisted therapy as an adjunctive intervention to address mood disturbances in female college students with physical disabilities is of interest in this dissertation.

To date, depression and anxiety have been studied very little in female college students with physical disabilities. The existing literature regarding mood disorders in college students and those with physical disabilities, however, has suggested that this population may especially be at risk for experiencing such mental health concerns. The

National College Health Assessment (2008) found that 10.2% of college students, and 11.9% of females, interviewed had been diagnosed with depression the previous year. Furthermore, 15.9% of females stated that they had experienced significant depression that impaired their daily functioning. Indeed, Santrock (1993) suggested that depression is experienced more frequently by female, young adult women than their male counterparts or at any other time in their lives. Similarly, 12.2% of female respondents reported that they had been treated for anxiety disorder, and 19.3% said they had experienced overwhelming anxiety within the past 12 months. Furthermore, 47.8% of college women noted that they felt overwhelmed by their academic workload (The National College Health Assessment, 2008). Given that women with physical disabilities experience higher levels of depression and anxiety than able-bodied women, however (Nosek & Hughes, 2003), one might hypothesize that the percentages presented above for depression, anxiety, and academic distress would be even higher for female college students with physical disabilities. This is consistent with the higher rates of depression and anxiety in adult women of all ages with physical disabilities noted above. Furthermore, given that the attrition rate for female college students with disabilities is significantly higher than able-bodied women (Holcomb, 1990); it is particularly worthwhile for mental health professionals and college counseling centers to respond to the needs of this population in order to increase their academic success, and potentially, their socioeconomic status.

Chapter III

Animal-assisted Interventions and Factors that Contribute to their Effectiveness

Important definitions. Animal-assisted interventions, namely animal-assisted therapy and animal-assisted activities, have been identified as helpful for numerous populations. While the existing literature contains numerous definitions of these two terms, the Delta Society (2008), which is a national organization for the certification and registration of therapy animals, has offered an important distinction between two categories of animal assisted interventions (AAI). They have defined animal-assisted therapy (AAT) as "a goal-directed intervention in which an animal that meets specific criteria is an integral part of the treatment process." Animal-assisted therapy is typically performed by a health professional with specialized expertise in his or her profession. In contrast, animal-assisted activities are "opportunities for motivational, educational, recreational, and/or therapeutic benefits to enhance the quality of life" (p. 4), and do not have a specific treatment goal. Examples of animal-assisted activities include visits to nursing homes or other health care facilities. This dissertation will focus specifically on animal-assisted therapy as a possible adjunctive treatment for depression and anxiety in female college students with physical disabilities. While dogs have most commonly been utilized, cats and horses have gained popularity in the field (Delta Society, 2008). Much of the existing literature has discussed the human-animal bond as the impetus for animal-assisted interventions, including animal-assisted therapy.

The American Veterinary Medical Association's Committee on the Human-Animal Bond has defined the term as "a mutually beneficial and dynamic relationship between people and other animals that is influenced by behaviors that are essential to the health and well-being of both. This includes, but is not limited to, emotional, psychological, and physical interactions of people" (cited in the Journal of the American Veterinary Medical Association, 1998). Attachment theory, developed to explain humans' needs to protect and be protected (Bowlby, 1969), has provided support for the intensity of the human-animal bond often described by pet owners and animal lovers. That is, just as parents must care for their children, pet owners must provide for their beloved animals with food, shelter, and veterinary care. More than that, however, humans are often observed talking to and playing with their pets, much like they would with children (Barba, 1995). Similarly, service dogs and companion animals provide their human owners with assistance in carrying out activities of daily living, protection, and affection (Fine & Beck, 2010). Such reciprocal relationships have certainly not only been evident throughout history, but ultimately lead to the development of animal-assisted therapy.

The history of the human-animal bond and the development of animal-assisted therapy. Throughout history, societal attitudes about animals and their impact on human health and well-being have been largely variable and dependent upon the cultural zeitgeist of the time. That is, like disability, the human-animal bond has been socially constructed. According to Serpell (2006), prior to the end of the 17th century, animism, or the idea that all living things possess an independent spirit, was prominent.

According to the animist worldview, which was largely characteristic of hunting and foraging societies, illness occurred when an angry animal spirit attacked an individual. Therefore, in an attempt to avoid such perceived misfortune, animals were treated with tremendous respect. Sometimes this meant that various rituals were performed when hunting and killing animals so not to offend their spirits. Other times, efforts were made to gain the protection of animals as guardian spirits. Large animals, such as bears, bison, and eagles were preferred, as they were considered to have tremendous protective power. For example, in the Ojibwa or Chippewa tribe, at puberty young men were sent to spend days in the woods without food or sleep, until eventually some of them experienced hallucinations and delirium. Such events were thought only to occur for those individuals who were fortunate enough to attain the protection of an animal as his guardian spirit. In turn, these young men became the shaman of their tribe, as it was believed that they could communicate with and control animal spirits, thereby healing illness and disability by summoning guardian spirits and appeasing evil ones (Serpell, 2006).

Animism and shamanism largely permeated the pre-classical, classical, and medieval time periods. As a result, animals, including cats and dogs, were valued not only for their companionship, but also their perceived supernatural abilities to harm others and protect from illness. Near the end of the 17th century, however, the public perception of animals began to change. More and more people began to move from rural areas, where they were directly involved in hunting animals for food, to the city, where they could purchase food from others. In addition, increasing numbers of animals were

being kept as pets (Serpell & Paul, 1994). These seemingly small changes in daily living played a significant role in societal attitudes about animals.

The social benefits of animals were perhaps first documented by John Locke in 1699. He wrote that children could gain a sense of responsibility and sympathy by caring for an animal, such as a dog, bird, or squirrel (Locke, 1699, cited in Serpell, 2006). Moreover, many authors of children's literature during the 18th and 19th centuries stressed the importance of children, especially males, developing kindness and compassion for their pets (Grier, 1999). This change in attitudes towards animals as pets likely facilitated the beginning of animal-assisted interventions.

William Tuke implemented animals into the treatment of the mentally ill for the first time at the end of the 18th century. He founded the York Retreat, an institution that was considered to be very forward-thinking at the time. Patients were encouraged to read books, write, and to interact with the animals in the courtyards, which included rabbits and birds. It was believed that the animals prompted the patients to not only speak to them, but also their peers at the retreat. The success of the experiment at the York Retreat prompted other institutions to allow patients to interact with animals. In fact, it was noted that even Florence Nightingale observed that small animals made excellent companions for those who required extended hospital stays (Serpell, 2006).

Regardless of these observations, however, the discussion of the benefits of including animals in the treatment of the physically and mentally ill subsided for the next several decades. Then, in 1972, Boris Levinson, a New York psychologist began incorporating his dog into his practice with adolescents, and founded what he called pet-

facilitated therapy or companion animal therapy (i.e., animal-assisted therapy; Levinson, 1972; 1984). He agreed with Sigmund Freud's (1959) concept of the id, or the idea that all humans possessed an internal, animalistic nature and that they experienced social isolation because they were ignoring this facet of themselves. In turn, Levinson believed that animals offered unconditional love, which for some individuals, improved how they thought and felt about themselves and their abilities (Levinson, 1984). Others have reported that such improvements in feelings of self-efficacy have been associated with decreases in depression in various populations (e.g., the elderly; Sutton, 1984; Reed, 1987). Despite these results, animal-assisted interventions, including animal-assisted therapy, continued to be criticized for an overall lack of scientific evidence to explain their effectiveness (Serpell, 2006). In turn, researchers were prompted to provide evidence for the field. In fact, perhaps the first study providing support for the benefits of human-animal interactions was one investigating the impact of pet ownership on survival rate in cardiac patients. The results of this study indicated that, compared to non-pet owners, those living with animals survived longer following cardiac events (i.e., heart attack; Friedman *et al.*, 1980). In turn, these results sparked greater interest in the mechanisms behind the health benefits of pet ownership and the human-animal bond.

Chapter IV

The Psychosocial Impact of the Human-Animal Bond

Animals aiding in the reduction of depression. The existing literature has suggested that being in the presence of animals can aid in reduction of feelings of loneliness and sadness that often accompany depression, particularly by increasing perceived social support (McNicholas and Collis, 2006). This is particularly important for female college students with physical disabilities as they are more likely to experience social isolation and depression compared to able-bodied students and males with physical disabilities (Nosek, Hughes, & Robinson-Whelen, 2008).

McNicholas and Collis (2006) defined social support as, "a generic term covering a variety of positive acts, interpersonal transactions, and social provisions that arise from social relationships and which are widely accepted to enhance human health and well-being" (p. 49). Furthermore, Cobb (1976) identified four aspects, or types of social support, including emotional support, esteem support, practical support, and informational support. Emotional support has been described as the expression of concern and caring for others, as well as providing them with a sense of belongingness. Esteem support has been defined as expressing positive regard and reaffirming others, especially when their sense of self-worth has been damaged. Finally, informational support includes providing feedback and necessary information to help others make well-informed decisions. McNicholas and Collis (2006) argued that animals not only

provided individuals with emotional and esteem support, but also tangible support. That is, pet owners often describe feeling loved and accepted after returning home from a challenging day at work. Furthermore, it also has been postulated that animals provide human beings with a sense of unconditional love that can certainly benefit their sense of self-worth. In addition, service dogs often provide individuals with disabilities with tangible support as they help them to perform tasks required to be successful in navigating their everyday environment (e.g., opening doors, retrieving the telephone; McNicholas & Collis, 2006).

Thus, while at best animals have only been considered to provide three of the four types of direct social support, multiple studies have suggested that animals can also serve as catalysts or facilitators of social interaction between people (e.g., Messent, 1983; McNicholas & Collis, 2000). That is, when pet owners were accompanied by a dog on a walk, a significant increase in the number of positive social interactions they experienced occurred. Similar results were demonstrated for cat owners, who were found to interact with others when they were seen with their cat in their gardens, shopping for cat food, or discussing their pet with other cat owners (unpublished research, cited in McNicholas & Collis, 2006). Such increased opportunities for social interaction can provide individuals with increased access to human relationships, and ultimately, all four types of social support. These findings suggest that the presence of a therapy dog may facilitate social interactions during psychotherapy.

Indeed, Kruger and Serpell (2010) proposed that having therapy dogs present during psychotherapy may allow therapists to more quickly establish rapport with their

clients. They suggested that dogs can make therapists appear friendlier, less threatening, and more relaxed; thereby allowing clients to quickly become more comfortable with the psychotherapy process. Therapy dogs serve as transitional attachment objects that would act as bridges between therapists and their clients (Kruger & Serpell, 2010). Certainly, existing research involving breast cancer survivors and bereavement has suggested that animals can facilitate the expression of painful emotions and the discussion of difficult topics with therapists (unpublished research, cited in McNicholas & Collis, 2006). These findings could also apply to psychotherapy with female college students with physical disabilities, who have been subjected to emotionally painful prejudice and discrimination in their daily lives (Olkin, 1999), and could have important implications for successful treatment outcomes with this population.

The existing literature has also provided evidence to suggest that brief exposure to a dog and cat may be helpful in alleviating self-reported depression in college students. Folse, Minder, Aycock, and Santana (1994) assigned participants to control and treatment groups in conjunction with group psychotherapy. They performed a one-way analysis of variance and found that self-reported depression scores were significant differently between the two groups. These findings supported other earlier studies that suggested that implementing a dog or cat in a therapeutic setting can assist in reducing negative emotions, like depression (e.g., George, 1988). Depression, however, is often accompanied by stress and anxiety.

Animals aiding in the reduction of anxiety. Indeed, numerous studies have suggested that dogs and cats can aid in relaxation and the reduction of anxiety. The vast

majority of these have measured physiological signs of anxiety (i.e., blood pressure and heart rate). For example, Allen, Shykoff, and Izzo (2001) studied the impact of cats and dogs on the blood pressure of stock brokers who had been diagnosed with Stage II hypertension (i.e., 160/100+) over the course of six months. Participants were divided into two groups; one group was instructed to take an anti-hypertensive medication alone and the other group was instructed to take the medication and get a pet. Blood pressure was measured at the beginning of the study, after one and six months of pet ownership and after participants had completed a measure of their cognitive abilities in mathematics and reading. The latter was considered to be an anxiety provoking task (Allen, Shykoff, & Izzo, 2001), perhaps much in the same way that some college students experience academic distress. Results suggested that the blood pressure of the stock brokers who owned pets and taken medication was significantly lower than those who had only taken medication. Therefore, owning a cat or a dog likely had an effect in reducing physiological signs of anxiety. The findings of this study are significant to the proposed study in that, like female college students with physical disabilities, stock brokers experience high levels of perceived stress.

Similar to the above study, the impact of being in the presence of a cat or dog has also been studied in college students. Somervill *et al*. (2008) measured blood pressure and heart rate while male and female students were holding a dog or cat and immediately after. They found that both male and female subjects experienced a significant decrease in diastolic blood pressure, one physiological indicator of stress and anxiety, immediately after they had held the animals. While there were no significant differences in change in

blood pressure regardless of gender or type of animal, the women in the group generally experienced greater negative changes in blood pressure than men. These results are relevant to this dissertation because they suggest that even short-term exposure to a dog or cat can be beneficial in reducing stress and anxiety in female college students with physical disabilities. Furthermore, neurobiological research has begun to explain how animals might be beneficial in reducing stress and anxiety.

E. O. Wilson's (1984) biophilia hypothesis has been the most popular explanation for this mechanism. It states that humans are genetically programmed to attend to other living organisms and processes, and in so doing, have historically increased their chances for survival by better understanding environmental cues. Thus, according to the biophilia hypothesis, individuals often experience a calming affect while in the presence of animals because in such settings, they attend to them more than other anxiety-provoking stimuli (Kahn, 1997; Gullone, 2000). This hypothesis has perhaps been especially supported by a study of the neurobiological effects of individuals petting and talking to their dogs (Odendaal & Meintjes, 2003). The results of this study indicated that both the pet owners and dogs experienced almost a twofold increase in their oxytocin levels, an anti-anxiolytic hormone. Similarly, the human participants in the study experienced a significant increase in beta endorphins and dopamine production. These neurotransmitters are largely responsible for positive physiological and emotional experiences. Moreover, the authors of this study reported a decrease in blood pressure (similar to results noted above) and cortisol levels in the blood, following the interaction between the dogs and their owners (Odendaal & Meintjes, 2003). These results provide

support for therapy dogs aiding in the reduction of physiological signs of anxiety in female college students with physical disabilities.

Brickel (1985) offered another explanation for the potential anti-anxiolytic benefits of animals in psychotherapy, namely learning theory. Learning theory posits that a pleasurable activity, such as petting a dog, will be positively reinforced, and therefore, more likely to occur in the future. In contrast, painful or embarrassing events (e.g., attending psychotherapy) may be met with resistance or avoidance. Consequently, such avoidance assures minimal exposure to painful stimuli (i.e., discussing issues in psychotherapy). Brickel (1985) proposed that therapy dogs may divert attention from, and buffer the effects of, anxiety provoking stimuli. For example, adolescent clients may choose to reveal trauma first to the therapy dog, before sharing their stories directly with the therapist. Then, according to learning theory, over time a reduction in anxiety occurs as a result of the dog's attention-diverting properties paired with non-aversive consequences (Brickel, 1985).

Chapter V

Criticisms of Animal-Assisted Interventions

Despite the tremendous amount of anecdotal literature and existing research available regarding the potential benefits of pet ownership and other interactions with animals (i.e., animal-assisted therapy and animal-assisted activities), overall, the field of animal-assisted interventions has been criticized for being lacking in empirical support (Kruger & Serpell, 2010). Skeptics of the field have argued that much of its existing research has been completed by professionals who are solely invested in providing evidence for the benefits of animal-assisted interventions, such as veterinarians and/or rehabilitation specialists. This notion is perhaps supported by the fact that the majority of citations supporting animal-assisted therapy research outcomes come from specialty journals developed within the field; *Anthrozoos* and *Society and Animals* (Katcher & Beck, 2010).

Even those healthcare professionals who recognize the potential benefits of animal-assisted interventions have noted that they are, at best, complimentary to traditional medicine and psychotherapy (Kruger & Serpell, 2010). Some have cited the numerous definitions available for animal-assisted therapy and animal-assisted activities

have not only failed to unify proponents of such research, but have also not provided them with clear guidelines upon which to develop and implement research studies (Fine and Beck, 2010). Others have noted varying methodological approaches to studying the potential benefits of animal-assisted interventions, combined with inconsistent outcomes has weakened the credibility of the field. For example, while some research has suggested that women experienced greater reductions in physiological indicators for anxiety compared to men in the presence of animals (i.e., blood pressure and heart rate; e.g., Miller et al., 1992; 2009), other studies have indicated that interacting with animals was more stressful than reading quietly(e.g., Wilson, 1991). Still more research has posited that pet ownership, not short-term interactions with animals in the therapeutic setting is most beneficial in reducing depression and anxiety (Friedman et al., 2010).

In addition to inconsistent research findings, Serprell (1986) suggested that the theoretical foundations proposed for such interventions are insufficiently convincing. Criticizing the biophilia hypothesis as an explanation for the mechanism through which therapy dogs may reduce anxiety, he noted that any attractive or attention-grabbing stimuli, animals or otherwise, can have a calming effect on individuals. This suggests that animal-assisted therapy may be no more effective than other possible anxiety-reducing interventions.

In addition, critics have expressed concern regarding low cost-effectiveness of the field compared to traditional interventions aimed at reducing depression and anxiety, especially when training, certification, and continuing education fees are considered. Furthermore, proponents and critics of animal-assisted interventions alike have

recognized that neither pets, nor therapy dogs, provide social support like interactions with other people can (Fine & Beck, 2010). Just as the validity of research outcomes of animal-assisted interventions have been questioned, however, so too have the characteristics of the participants that comprise research samples. Indeed, subjects must consent to participating in research involving interactions with animals, suggesting they hold a positive, or at least neutral, view of them.

Indeed, Kahn (1997) argued that culture and individual experiences also shape persons responses to animals. Thus, animal-assisted therapy would likely not be appropriate for individuals who have experienced traumatic events involving animals, or who do not enjoy them. Certainly, much of the existing research on animal-assisted interventions has utilized participants that hold positive opinions of animals, thereby weakening the validity of outcomes supporting the field (Fine and Beck, 2010). Similarly, Katcher and Wilkins (2000) noted that therapists often work with dogs to which they are closely bonded in animal-assisted therapy. This not only can bias research outcomes, but might also create situations in which respective therapists and their therapy dogs are not the best fit for particular clients or therapeutic settings.

Finally, despite extremely low reported incidents of injuries or transmission of zoonotic diseases from therapy animals to humans in the existing literature, they remain a concern for critics of animal-assisted interventions. Friedman et al. (2010) conceded that the minimal number of reports could be due to a lack of such instances, but also could be the result of a lack of centralized guidelines for making such reports, or simply

poor recognition of zoonotic diseases. However, Chandler (2005) noted that transmission of illnesses between humans, and from humans to animals, is more likely to occur.

Regardless of the criticisms of animal-assisted interventions, however, the growing popularity of the field suggests that it deserves continued guidelines for implementation and research. Thus, the second half of this dissertation has provided the reader with guidelines for, and potential barriers to, implementing animal-assisted therapy into psychotherapy practice and research with the specific intention of reducing depression and anxiety in female college students with physical disabilities. In addition, suggestions have been provided for how to measure such treatment outcomes in a college counseling center.

Chapter VI

Guidelines for Implementing Animal-Assisted Therapy into Psychotherapy Practice

Therapy dog selection. Implementing therapy dogs into psychotherapy practice is a relatively new phenomenon. In fact, historically, animal-assisted activities (e.g., recreational activities and socializing with therapy dogs) have been implemented much more frequently in retirement communities and medical settings than including a therapy dog in psychotherapy practice (Fredrickson-MacNamara & Butler, 2006). Moreover, prior to the 1980's, little emphasis was placed on selection criteria for therapy dogs. Instead, health care providers, animal-assisted activities volunteers, and animal welfare professionals provided recommendations for including companion animals that (perhaps rightfully so) continued to focus primarily on the health and safety of the patients (Hines *et al*., 1983). Thus, the minimum selection requirements for potential therapy dogs included a basic medical evaluation, a temperament and behavioral screening (often according to breed standards), and observation over time (New, 1988). As animal-assisted therapy programs with more specific treatment goals and target populations became increasingly popular in the 1990's, however, selection criteria for therapy animals (and especially therapy dogs) became much more detailed, with standard evaluation criteria (Fredrickson-MacNamara and Butler, 2006).

Indeed, the "Standards of Practice for Animal-Assisted Therapy and Animal-Assisted Activities" was published by the Delta Society in 1996 to provide structured guidelines for the development of animal-assisted intervention programs. The primary selection criteria for therapy animals have been categorized to include reliability, predictability, controllability, and suitability. The Delta Society (1996) has provided definitions of these categories which serve as a general framework for animal selection. Reliability refers to the animal's ability to behave similarly in a number of different settings with a variety of individuals. Predictability means that an animal's behavior, in specific circumstances, can be anticipated in advance. Controllability has been defined as "behavior [that] can be interrupted, guided, or managed" (Delta Society, 1996). Finally, suitability refers to the idea that the right therapy animal has been selected for animal-assisted therapy, per the animal's breed and personality, as well as the client's reaction to the animal. Since specific guidelines are not currently available which discuss the appropriateness of certain breeds in certain settings, it is incumbent upon handlers to ensure that their therapy dogs and clients remain comfortable in given settings (Fredrickson-MacNamara and Butler, 2006; 2010). In regards to therapy dogs, Chandler (2005) discussed some of the most common breeds utilized in psychotherapy practice, including Labrador and Golden Retrievers, as well as Cocker Spaniels or similar sporting breeds. These breeds are known for their gentle, obedient nature. Most certification programs, however, do not deny any breed of potential therapy dog from being evaluated for animal-assisted therapy. Some states do not allow breeds traditionally perceived as being aggressive, such as American Pit Bull Terriers.

Moreover, while eligible breeds can vary according to state laws, most national animal-assisted therapy certification agencies only require that potential therapy dogs have resided with their respective handler for a minimum of six months to one year, in an attempt to ensure that handlers have had sufficient opportunity to become familiar with their therapy dogs' temperament prior to engaging in animal-assisted therapy (Delta Society, 2008).

Regardless of the breed selected for animal-assisted therapy, however, the Delta Society and other national animal-assisted therapy certification organizations (e.g. Therapy Dogs, Incorporated) have stressed the importance of ensuring the health and well-being of all therapy animals before beginning animal-assisted therapy in any setting. This is not only to ensure they can effectively perform their intended animal-assisted therapy interventions, but also the health and safety of all participating clients. This dissertation, however, will specifically focus on the health requirements for the certification of therapy dogs, as they are the most commonly utilized therapy animals.

According to the Delta Society (2008), in order for therapy dogs to participate in animal assisted therapy, they must be "free of any signs of ill health." More specifically, this means that they should not interact with potential psychotherapy clients if any of the following conditions are present: skin rashes or wounds; vomiting and/or diarrhea, eye or ear infections; changes in eating and/or elimination habits (e.g., frequent urination); chronic illness; or if they have been exposed to other sick animals. In addition, all potential therapy dogs must be free of internal and external parasites, including fleas, ear mites, lice, skin mites, ticks, and intestinal parasites. Certainly, it can be difficult for

handlers to detect signs of illness or parasites in their dogs. Thus, it is imperative they ensure their dogs be examined by a veterinarian regularly and remain current on all vaccinations. Although various certification agencies may have different requirements for examinations and immunizations, at a minimum, most request annual examinations and rabies vaccinations (per most state law requirements). Furthermore, documentation of this, and negative fecal exam results, must be updated and mailed to the certification agency each year (Delta Society, 2008; Therapy Dogs Incorporated, 2010). Handlers should remain mindful, however, that the specific documentation requirements for respective animal-assisted therapy certification agencies, as well as the certification process, can vary.

Animal-assisted therapy team certification. Training programs for animal-assisted therapy are highly variable in their length and requirements for certification. The content of training programs reviewed by the author of this dissertation were all very similar, but those shorter in length required greater at-home study (e.g., the Delta Society Student Manual; Delta Society, 2008). Most agencies who advocate for animal-assisted therapy provide individuals who are interested in becoming handlers the opportunity to not only practice the aptitude and skills required of therapy dogs, but also to be exposed to potential settings in which animal-assisted therapy might take place (i.e., health care facilities). Training can occur in individual or group settings. That said, training in a group setting may be particularly important for young potential therapy dogs (or those who come from single pet households), as they are less likely to have been socialized in stimulating environments, such as hospitals or nursing homes. In addition, participating

in a group training process can help offset some of the costs associated with the certification process, as many programs receive discounts for registering multiple animal-assisted therapy teams with a national certification agency at once. Furthermore, membership fees for certification agencies are often pooled to cover evaluation costs for all the animal-assisted therapy teams who successfully complete training. Some agencies, however, (i.e., the Delta Society) require training and registration fees for all handlers. Furthermore, most agencies allow a maximum of two handlers for all therapy (Delta Society, 2008).

Nonetheless, training is not a mandatory component of the certification process for animal-assisted therapy. Instead, all potential therapy dogs and therapy dog handlers must be evaluated and observed in various health care settings prior to being registered with a therapy dog certification agency, such as the Delta Society or Therapy Dogs Incorporated. Aside from the aptitude and skills exercises typically required for animal-assisted therapy certification, however, proper evaluation is absolutely necessary as part of the process for implementing animal-assisted therapy in an ethical and legal manner.

Ethical and legal considerations. Upon successful completion of an evaluation and registration with an animal-assisted therapy certification organization, such as the Delta Society or Therapy Dogs Incorporated, all therapy dogs and their respective handlers receive liability insurance (usually $1 million in coverage, per incident). It is important to note, however, that this insurance only protects animal-assisted therapy teams in volunteer settings, as when making visitations in hospital settings. It does not insure therapy dog handlers, such as psychotherapists or social workers, who might

choose to bring their therapy dog into their workplace. Thus, clinicians who wish to implement animal-assisted therapy into their psychotherapy practice must review and/or update their malpractice insurance to allow for legal implementation of animal-assisted therapy (Fine, 2006). In addition, they must comply with any organizational policies and procedures within their workplace, as well as applicable state and federal regulations (Fine, 2006; Delta Society, 2008).

Furthermore, the existing ethical and legal standards for psychotherapy practice must be upheld. For instance, in order to protect client confidentiality, clinicians and handlers are typically synonymous in animal-assisted psychotherapy, even though therapy dogs are allowed up to two handlers (Fine 2006; Delta Society, 2008). In addition, potential clients for animal-assisted psychotherapy must receive informed consent. Aside from items typically included such forms (e.g., fees, length and number of sessions, emergency contact information, and limits to confidentiality), Chandler (2005) provided recommendations for animal-assisted psychotherapy consent forms. First, she noted that clinicians should include a description of their credentials and the risks and benefits of animal-assisted therapy. In addition, information about their therapy dogs' training, credentials, and the types of interactions clients can expect to engage in with them during session (i.e., petting or holding the therapy dogs). Regardless of their initial willingness to consent to animal-assisted psychotherapy, however, clients have the right to revoke their consent at any time during the psychotherapy process. Moreover, clinicians have the responsibility of ensuring that clients are well-suited for animal-assisted therapy.

The existing literature has primarily provided exclusion criteria guidelines for animal-assisted therapy across populations. Given the potential, although minimal, risk for the transmission of zoonotic diseases from animals to humans, individuals whose immune systems are suppressed (e.g., AIDS) should be considered inappropriate for animal-assisted psychotherapy with therapy dogs (Fine, 2010). The same should be considered true for patients in medical settings with open wounds. Moreover, clients who exhibit allergies to, as well as fear or phobias of, dogs should not participate in animal-assisted psychotherapy. In fact, Chandler (2005) emphasized that those individuals who have had any negative life experiences with dogs avoid animal-assisted therapy. Other populations considered inappropriate for this intervention have included those with a significant history of aggression or abuse towards animals or people, as well as those who are actively psychotic (i.e., experiencing hallucinations or delusions).

In contrast, clients should be considered appropriate candidates for animal-assisted therapy when clinical judgment suggests that the expected benefits outweigh the potential risks (Chandler, 2005). In addition to aiding in the reduction of depression and anxiety, animal-assisted psychotherapy may benefit female college students with physical disabilities because therapy dogs can act as surrogates for therapeutic touch for clinicians by providing clients with the opportunity for unconditional positive regard and non-intrusive touch. That is, when therapy dogs respond with affectionate behaviors to clients petting or hugging them, the clients' behavior is reinforced. Moreover, such interactions can facilitate the therapeutic relationship between clinicians and clients (Chandler, 2005). The opportunity for such positive interactions is perhaps particularly important for those

female college students with physical disabilities who have been subjected to intrusive touch as part of physical examinations during medical appointments. Furthermore, such interactions can facilitate participation, as well as motivation for change, in clients who have previously demonstrated poor attendance or investment in psychotherapy (Chandler, 2005).

Even when organizational policies, state and federal laws, and clients participating in animal-assisted therapy condone its practice, other clients or service providers may object to the intervention. This may occur for any number of reasons, such as life experiences with dogs or personal beliefs about implementing animal-assisted therapy in healthcare settings. Thus, clinicians wishing to implement the intervention into their psychotherapy practices must be mindful of the existing treatment milieu in various settings. In most instances, clinicians can take steps to ensure the comfort and safety of not only other employees, but all visitors to the facility (Fine, 2006).

This can be accomplished by providing therapy dogs frequent breaks, as well as allowing them to rest comfortably in designated areas. Furthermore, Fine (2006) suggested that clinicians only bring therapy dogs into their respective treatment settings during animal-assisted therapy sessions. In addition, they should identify separate areas in which to practice psychotherapy that are off- limits to therapy dogs, particularly for clients who are allergic to dogs or are not participating in animal-assisted therapy. Finally, clinicians have often gained the support for implementing animal-assisted psychotherapy in their treatment settings by presenting the benefits of, and rationale behind, the intervention at staff and treatment team meetings. These meetings provide

clinicians opportunities to address any questions or concerns that may arise among staff members and colleagues about animal-assisted therapy (Fine and Beck, 2010). Clinicians who chose to implement animal-assisted therapy into their psychotherapy practice, however, must also be mindful of the health and well-being of their therapy dogs, as well as the relationship they maintain with them.

The dual role of the handler/clinician. According to the Delta Society (2008), regardless of aptitude and skill level, animal-assisted therapy evaluators are most often concerned with the relationship between therapy dogs and their respective handlers. Throughout evaluations, they are assessing handlers' abilities to communicate with their therapy dogs at all times, calmly providing any necessary corrections, as well as verbal praise for good behavior. Handlers must also be mindful that participating in animal-assisted therapy does not present their therapy dogs with undue stress.

When exhibited repeatedly, the following behaviors may be considered signs of stress in dogs: shaking, yawning, and scratching; hiding and disobeying commands; licking lips, drooling, and sneezing; avoiding eye contact, acting shy, or tucking the tail between its legs; barking; or aggressive behavior, such as biting, growling, or snarling. Moreover, while some of these behaviors can also be signs of excitement in dogs (e.g., barking), they should be considered inappropriate for animal-assisted therapy. Instead, therapy dogs should exhibit non-threatening or neutral body posture, regardless of treatment setting. That is, they should show relaxed or friendly, wagging tails; have relaxed faces; and vocalize minimally. Furthermore, they should always be kept close to the clinician, and remain on a four-foot leash (Delta Society, 2008). Given their multiple

responsibilities during animal-assisted psychotherapy sessions, clinicians may want to consider only including their therapy dogs in individual psychotherapy settings, so that the treatment process is not unnecessarily hindered by the presence of therapy dogs in session. This is perhaps particularly true for clinicians with limited psychotherapy experience, animal-assisted or otherwise. Understanding how to effectively include therapy dogs in treatment can assist clinicians in managing their multiple roles during session.

Treatment planning. Chandler (2005) provided several suggestions for how clinicians might implement animal-assisted therapy as an adjunctive intervention to traditional psychotherapy. First, they must consider how animal-assisted therapy might facilitate positive treatment outcomes. In some cases, this might mean including their therapy dogs in the beginning of treatment in order to facilitate rapport building with clients who have reservations about attending psychotherapy. Therapists can convey empathy and build the therapeutic relationship by reflecting, paraphrasing, clarifying, and summarizing the behaviors of their therapy dogs and clients, as well as the interactions between them. As a result of such process moments in psychotherapy, clinicians and clients can gain insight into the clients' thoughts, feelings, values, interpersonal styles (Chandler, 2005). In addition, clinicians might incorporate their therapy dogs into multiple aspects of their treatment planning. In doing so, however, they should determine how the inclusion of their therapy dogs in practice may or may not be consistent with their theoretical orientations, as well as empirically-supported treatment or evidence-based practice.

For example, clinicians working from a cognitive-behavioral perspective might assess the core beliefs or self-esteem of their depressed clients by asking them what them what the therapy dogs might say about them, if the animals could talk. Moreover, with therapy dogs present, clinicians might ask their clients about their own pets. This information can then provide them with insight not only about their clients' physical activity levels (i.e., whether or not they walk their dogs), but also their utilization of available sources of social support (Chandler, 2005). That is, those depressed clients who have access to dogs might walk their dogs as part of a treatment plan including behavioral activation. Even female college students with physical disabilities who are unable to walk their dogs because they are living away from home, or as a result of their physical limitations, can include therapy dogs as part of their treatment for depression by discussing the importance of their own self-care while helping to brush therapy dogs in session (Chandler, 2005). Animals such as therapy dogs can also be easily and effectively implemented in conjunction with more traditional interventions aimed at reducing anxiety in this population.

For instance, clinicians might encourage their anxious clients to practice relaxation techniques, such as deep breathing, while holding or petting therapy dogs in session. They could also practice this intervention, however, at home with their own pets. As Chandler (2005) described, therapy dogs' body language mirrors that of clients. Thus, as clients begin to relax, so do the therapy dogs, which then positively reinforces clients' relaxation. Furthermore, such therapy dog-client interactions can be paired with

biofeedback. Reduced anxiety, however, is just one of many signs that clients are benefiting from animal-assisted therapy (Chandler, 2005).

Indicators of positive and negative animal-assisted therapy interactions. Chandler (2005) identified signs of positive and negative animal-assisted interactions, or possible indications as to whether or not clients are benefiting from animal-assisted therapy as an adjunctive treatment towards their therapy goals. In general, clinicians can most likely feel comfortable implementing animal-assisted therapy when their clients are engaging in treatment, as well as actively working and progressing towards their treatment goals, such as reducing their depression and anxiety. Furthermore, clients should demonstrate insight into the nature of their presenting problems. Finally, in group settings, clients will most likely show continued or increased participation in discussions and the group process.

Clinicians also need to be mindful; however, of potential indicators that animal-assisted therapy could be impeding treatment progress. For instance, in some cases, therapy dogs may become overly distracting to clinicians or clients, such that they take the focus in session away from working toward treatment goals. Other times, therapy dogs may choose not to interact with clients during session, which could cause clients to feel rejected by them, and potentially harm the therapeutic relationship. Similarly, those clients participating in group sessions may become focused on the behaviors of the therapy dogs, and not participate in the group process. Moreover, clients may compete for the therapy dogs' attention, rather than treatment goals. These scenarios should only be considered potential pitfalls, however, and should not necessarily deter clinicians from

considering the benefits that animal-assisted therapy can offer certain clients. That said, Chandler (2005) identified signs of negative interactions occurring between therapy dogs and clients. These primarily included clients being verbally or physically aggressive toward clinicians or therapy dogs. In such instances, clinicians will most likely need to discontinue animal-assisted therapy, at least temporarily, until they can reevaluate its utility with those particular clients. Clinicians should remember, however, that it is always their responsibility anticipate and identify potentially dangerous situations, both for themselves and their therapy dogs (Chandler, 2005). Ideally, however, the psychotherapists would have sufficient opportunities to not only implement animal-assisted therapy into their practices, but also to collect data supporting its therapeutic benefits with specific populations.

Chapter VII

Guidelines for Conducting Animal-Assisted Therapy Research

The current status of animal-assisted therapy research. Johnson, Odendaal, and Meadows (2002) noted that animal-assisted intervention programs have existed in hospitals, long-term care facilities, rehabilitation centers, public schools, and community centers since the early 1960's. As previously noted by numerous authors, however (e.g., Chandler, 2005; Fine, 2006), they are significantly lacking in empirical support, despite seemingly copious amounts of anecdotal evidence supporting its utility. Furthermore, interventions aimed at reducing depression, anxiety, and academic attrition in female college students with physical disabilities are necessary (Nosek & Hughes, 2003; Gmelch, 1998). Therefore, the second aim of this dissertation is to provide clinicians and/or researchers guidelines, as well as a proposed methodology, for studying the impact of animal-assisted therapy of depression and anxiety in this population.

Designing a study and gaining access to clinical settings. Mallon et al. (2010) stressed the importance of collecting data when implementing animal-assisted therapy interventions in order to not only document and evaluate their effectiveness, but also to monitor them for potential improvements. Moreover, Kazdin (2010) proposed that, aside from control and treatment groups, regular data collection with population-specific therapeutic outcome measures is necessary to measure the effectiveness of animal-assisted therapy compared to treatment as usual. Ideally, research should be conducted

by individuals other than the clinicians who also are serving as therapy dog handlers. Such non-participatory observation is necessary in order to appropriately attend to interactions between clients and therapy dogs. In addition, it is imperative that all aspects of animal-assisted therapy research are as homogenous as possible (Kazdin, 2010). Therefore, researchers may want to include participants with a very specific physical disability, such as cerebral palsy. Even individuals with specific diagnoses, however, can present differently, both physically and emotionally.

Furthermore, Kazdin (2010) noted that documented change in animal-assisted therapy studies, or any psychotherapy research, may be explained by the common factors of psychotherapy, whereby the therapeutic relationship, not the presence of therapy dogs, could be the main agent of change. Thus, the most sound animal-assisted psychotherapy research designs will most likely require at least two psychotherapists and two therapy dogs.

By adding additional clinicians and therapy dogs to the study, researchers are better able to study the impact of animal-assisted therapy on therapeutic outcome, rather than the potentially cumulative impact of animal-assisted therapy, the respective therapy dogs, and the two therapists. Furthermore, in some cases, having multiple animal-assisted therapy teams allows researchers to more effectively match clients to clinicians and therapy dogs, thereby limiting the impact that poor therapeutic relationships can have on therapeutic outcome. Researchers should ensure that the therapists and therapy dogs are each as similar to one another as possible. Furthermore, researchers can better control

for extraneous treatment effects by utilizing treatment manuals, whenever possible, when conducting animal-assisted psychotherapy research (Kazdin, 2010).

Fortunately, specific protocols are available for the treatment of depression and anxiety. Kazdin (2010) explained that such treatment manuals provide therapists with training guidelines, facilitate the evaluation of treatment adherence, provide feedback regarding possible ways to improve interventions, and allow interventions to be replicated by others. All of these provisions are likely an integral part to establishing support for the utility of animal-assisted interventions, but do not account for individual differences in clients (e.g., motivation for change), therapists, or therapy dogs.

Once the overall study design has been determined, researchers can begin focus their efforts on gaining access to clinical settings with their population of interest. Thus, researchers would most likely want to illicit support from college counseling center directors in order to study the impact of animal-assisted therapy on depression and anxiety in female college students with physical disabilities. This process would most likely entail contacting directors of multiple college counseling centers ahead of time to begin to promote the potential benefits of animal-assisted therapy with this population, as well as taking the opportunity to allay any of the directors' concerns, particularly regarding the transmission of zoonotic diseases (Johnson, Odendaal, & Meadows, 2002).

Ideally, this would be done through a brief presentation at a scheduled staff meeting, which would give them the opportunity to present examples of successful animal-assisted intervention programs, explain the study design and answer any questions that the directors, clinicians, or staff may have about the implementation of animal-

assisted therapy in college counseling centers. Furthermore, investigators should may every effort to assure all parties involved that their research will not create significant amounts of work for them. Furthermore, they may have the most success implementing research in college counseling centers where existing clinicians have already become, or are interested in becoming, certified therapy dog handlers. Regardless, once researchers have gained the support of directors at college counseling centers where they would like to implement their respective studies, they should concurrently begin to seek institutional board approval.

Institutional review board approval. When seeking to implement animal-assisted therapy research with female college students with physical disabilities, investigators will need to gain the approval of the university institutional review board (IRB) for the university or universities where they will be collecting data. Typically, in addition to a description of the research to be conducted, IRB panel members will require proof of certification and liability insurance for all animal-assisted therapy teams participating in research (Delta Society, 2008).

Furthermore, Johnson, Odendaal, and Meadows (2002) noted that some institutions may require therapy dogs to be evaluated by their respective animal care committees, although this is not always the case. Thus, investigators should be prepared to discuss how the therapy dogs will be cared for during the course of research. In addition, data about the limited possibility of the transmission of zoonotic diseases from animals to humans will most likely need to be included in IRB materials. Finally,

investigators should be prepared to address any potential ethical concerns raised by IRB members.

For instance, Johnson, Odendaal, and Meadows (2002) proposed the ethical issue of how investigators will address discontinuing animal-assisted therapy, particularly when clients have become emotionally attached to the therapy dogs. Some settings have allowed clients to visit with therapy dogs after psychotherapy and/or research has concluded. Therefore, college counseling centers may address this by allowing clients to continue attending animal-assisted psychotherapy sessions, although much less frequently. These subsequent sessions are typically referred to as "check-in" sessions. In addition to potential ethical issues, however, investigators should consider how they will recruit female college students with physical disabilities for their research projects.

Recruiting participants. Like all empirically sound studies, recruiting a completely random sample of female college students with physical disabilities to participate in animal-assisted therapy research is ideal (Johnson, Odendaal, & Meadows, 2002). Thus, investigators may attempt to increase their sample size by recruiting female college students with physical disabilities through multiple means (i.e., email, telephone, and recruitment posters), as well as from multiple universities. The process, however, will entail additional time gaining the support of additional college counseling center directors, conducting meetings with existing staff members, and obtaining IRB approval from multiple universities. Furthermore, additional cost will be incurred, as investigators will need to travel to and from their multiple study locations.

As a result, investigators may be more successful recruiting participants from one college counseling center whose director, clinicians, and staff support their animal-assisted therapy research efforts. They will want to allow sufficient time, however, to recruit enough subjects to conduct their research, despite possible participant attrition. Thus, depending on the availability of female college students with physical disabilities, as well as certified animal-assisted therapy teams, the length of the recruitment phase of research can be highly variable. Given the absence of empirical support for the utility of animal-assisted psychotherapy as an adjunctive intervention to reduce depression and anxiety in this population, however, investigators will most likely want to begin by conducting a pilot study. Such a study should include at least one participant in the control and treatment conditions, respectively. Additional animal-assisted therapy teams and participants, however, are ideal. Most importantly, however, the control and treatment conditions should include equal numbers of participants. In order to gain empirical support for animal-assisted therapy, however, researchers will not only need to consider how their will recruit participants, but also how they will collect data in an organized fashion (Johnson, Odendaal, and Meadows, 2002).

Selecting outcome measurements. When conducting animal-assisted therapy research, investigators should may every effort to streamline their data collection process, so as to minimize the potential burden on existing staff members, clinicians, and clients. Many college counseling centers, however, already collect data on treatment outcomes. Therefore, whenever appropriate, investigators should attempt to implement measures already being utilized at their research sites.

Several college counseling centers are already implementing the use of the Counseling Center Assessment of Psychological Symptoms (CCAPS-62) in order to measure therapeutic outcome (Penn State University, 2009). The CCAPS-62 is typically administered at intake, and every subsequent fourth session, including following termination. Therefore, in order to measure the impact of animal-assisted therapy on depression and anxiety in female college students with physical disabilities, investigators may consider having clinicians administer the depression and anxiety subscales from the CCAPS-62 in a similar manner. The items contained on these subscales have been presented in Appendixes A-D. Investigators should ensure, however, that completing these measurements are not overly taxing to participants. Furthermore, in addition to quantitative measurement of treatment outcome, researchers will most likely want to utilize non-participatory observation of psychotherapy sessions, but only after obtaining clients' informed consent. This will allow researchers to collect important information regarding interactions between therapy dogs and clients.

Additional considerations for implementing animal-assisted therapy research. Finally, Johnson, Odendaal, and Meadows (2002) provided some additional recommendations for conducting animal-assisted therapy research. First, they noted that continuity of all parties involved in the research process (i.e., investigators, research assistants, clinicians, and therapy dogs) is the most effective way to ensure that research protocols are followed and the integrity of data collection is maintained. Furthermore, all investigators and college counseling center staff members should make every effort to ensure that contamination across study groups does not occur. That is, participants in the

control and treatment groups should be carefully scheduled so that they are not provided any opportunities to interact with one another (i.e., before or after session), as such interactions can influence research outcomes.

Furthermore, therapy dogs should be sufficiently exposed to all clinical settings where they will be working long before research studies begin. Additionally, they need to ensure that ample time is provided for clinicians/therapy dog handlers to bring their therapy dogs to and from research sites, especially if the therapy dogs are unable to remain with them throughout the day. Only when investigators consider all of these issues can the field of animal-assisted therapy begin to gain the empirical support it needs and deserves.

Appendix A

Depression subscale of the Counseling Center Assessment of Psychological Symptoms (CCAPS-62; Penn State University, 2009)

I feel disconnected from myself.

I don't enjoy being around people as much as I used to.

I feel isolated and alone.

I lose touch with reality.

I feel worthless.

I feel helpless.

I am enthusiastic about life. (reverse-scored)

I have unwanted thoughts I cannot control.

I feel sad all the time.

I have thoughts of ending my life.

I like myself.

I find that I cry frequently.

I feel that I have no one that understands me.

Appendix B

Generalized Anxiety subscale of the Counseling Center Assessment of Psychological Symptoms (CCAPS-62; Penn State University, 2009)

There are many things that I am afraid of.

My heart races for no good reason.

I am anxious that I might have a panic attack in public.

I have sleep difficulties.

My thoughts are racing.

I have spells of terror or panic.

I feel tense.

I am easily frightened or startled.

I experience nightmares or flashbacks.

Appendix C

Social Anxiety subscale of the Counseling Center Assessment of Psychological Symptoms (CCAPS-62; Penn State University, 2009)

I am shy around others.

I become anxious when I have to speak in front of audiences.

I make friends easily. (reverse-scored)

I am concerned that other people do not like me.

I feel uncomfortable around people I do not know.

I feel self-conscious around others.

I feel comfortable around other people. (reverse-scored)

Appendix D

Academic Distress subscale of the Counseling Center Assessment of Psychological Symptoms (CCAPS-62; Penn State University, 2009)

I enjoy my classes. (reverse-scored)

I feel confident I can succeed academically. (reverse-scored)

I am not able to concentrate as well as usual.

It's hard to stay motivated academically.

I am unable to keep up with my school work.

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