USING EXPOSURE THERAPY AND SERVICE DOGS TO TREAT PTSD: PRAGMATIC CASE STUDIES

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Abstract

The purpose of this exploratory study is to learn about the experiences of licensed psychotherapists who have provided exposure-based, cognitive-behavioral therapy to U.S. Military Veterans who had a psychiatric service dog (PSD) for posttraumatic stress disorder (PTSD) during treatment. This topic is an important area for research because no prior studies are available regarding the provision of cognitive-behavioral therapy for PTSD to Veterans with a PSD, while the popularity of PSDs is increasing. Further, based on theories regarding the effectiveness of such therapies and concepts of "safety behaviors" and "coping skills," it is unclear how a PSD might affect a Veteran's recovery from PTSD. Thus, the goal of this study was to learn more about if and how therapists integrate PSDs into cognitive-behavioral therapies, any other ways the PSDs were used, and general thoughts or recommendations regarding the use of PSDs for PTSD. Three licensed therapists who provided at least two sessions of an exposure-based, cognitive-behavioral therapy to one or more Veterans with a psychiatric service dog for PTSD during therapy completed an online survey about their experiences. This survey included demographic questions, the Pet Attitude Scale—Modified, and open-ended questions. Descriptive statistics were conducted on the Pet Attitude Scale—Modified and numerical responses to the demographic questions, and Fishman's case study analysis techniques (2005, 2013) were used to analyze qualitative data from the surveys.

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CHAPTER I: INTRODUCTION

Context and goal of the dissertation

The goal of this case study dissertation is to learn about the experiences of therapists who have provided exposure-based cognitive-behavioral psychotherapy to United States military Veterans who had a psychiatric service dog for posttraumatic stress disorder (PTSD). The use of psychiatric service dogs for PTSD has been rising in recent years, particularly in Veteran populations. However, existing research in this area is limited. Exposure therapies for PTSD, on the other hand, have significant empirical support but have high patient dropout rates. The present exploratory study aims to examine whether these two modalities are effective when they are provided concurrently, and to assess how to best integrate these two modalities. The aim of the current study is to learn in-depth information about the experiences of therapists who have provided exposure therapy to Veterans with a psychiatric service dog for PTSD. The pragmatic case study design is used in order to obtain detailed information about participants' experiences and to assess why the integration of these two modalities may be more effective for some individuals than others. Based upon the information gathered, suggestions are provided for therapists, Veterans, and public policy. Directions for future research are also discussed.

Literature review

Companion dogs and human health

It is unclear exactly when people started keeping dogs as companions, but evidence suggests that domesticated dogs have lived with humans for over 10,000 years (Serpell, Sandøe, Corr, & Palmer, 2016). For example, a tomb uncovered in northern Israel showed that about 12,000 years ago, a person was buried with a dog or wolf puppy, suggesting affection for canines (Davis & Valla, 1978). Fast forward to today and domesticated dogs are a common household

pet. The American Veterinary Medical Association (AVMA, 2012) found that in 2011, roughly one third of United States households had one or more companion dog.

While various studies have found physical and psychological health benefits to having a companion dog, it is important to note that other researchers have pointed out various methodological flaws in this line of research. As such, I will first review research findings on the physical and psychological benefits of companion dog ownership, and then I will review critiques of the methodology in such literature.

A number of correlational and quasi-experimental studies have noted improved physical health in individuals with a companion dog. Serpell (1991) found that owners had a decrease in minor ailments after adopting a dog. Other studies noted lower levels of risk factors for coronary heart disease in adult dog owners (Anderson, Reid, & Jennings, 1992) and for heart attacks in senior citizen dog owners (Dembicki & Anderson, 1996). Friedmann and Thomas (1995) found that dog owners were more likely than non-owners to be alive one year after an acute heart attack, independent of other important variables. One suggested mechanism for the improved health in dog owners is the increase in physical activity from walking dogs (Dembicki & Anderson, 1996; Serpell, 1991).

Companion dog ownership is also associated with decreased physiological indicators of stress. Siegel (1993) found that dog owners had fewer doctor contacts after stressful life events as compared to non-pet owners, suggesting that dog ownership may mitigate the impact of stressors. Vormbrock and Grossberg (1988) found that in individuals with neutral or positive attitudes towards dogs, their blood pressure was at or below resting levels when petting a dog. Within a sample of married couples, Allen, Blascovich, and Mendes (2002) found that those with a pet (dog or cat) had significantly lower blood pressure (BP) and heart rate (HR) levels at rest,

significantly smaller increases in HR and BP during stressful tasks, and shorter times for their HR and BP to return to baseline after the stressful tasks. Further, for pet-owning participants, lowest reactivity level and fastest recovery to baseline were observed during the conditions in which their pet was present. Another study found that both systolic and diastolic blood pressure decreased significantly more when subjects pet a known dog as compared to an unknown dog, suggesting that a companion bond may be relevant in the stress-reducing effect of petting a dog (Baun, Bergstrom, Langston, & Thoma, 1984).

Further, ownership of a companion dog may improve psychological health through increasing owners' social interactions with other people. For example, studies have found that individuals have significantly more conversations with strangers when walking a dog versus walking alone (McNicholas & Collis, 2000; Wells, 2004). Other research has found that companion dogs can act as social catalysts by providing a topic of conversation and providing new opportunities to socialize with other dog owners, such as through use of parks (Rogers, Hart, & Boltz, 1993; Wood, Giles-Corti, & Bulsara, 2005).

As mentioned previously, there are a number of methodological flaws in the research documenting the psychological and physical health benefits of owning a companion dog. Most importantly, studies on pet ownership are quasi-experimental, so there could be important *a priori* differences between pet and non-pet owners, or the direction of causality could be the inverse of what this research posits – healthier and happier people may be more likely to have companion dogs (Chur-Hansen, Stern, & Winefield, 2010; Herzog, 2011). While experimental designs with random assignment to "pet" and "non-pet" groups could alleviate these issues, this would be challenging to implement in practice. Further, critics also note that researchers

generally fail to control for non-pet related potential influences on study results (Chur-Hansen et al, 2010).

Service dogs

A service dog is defined as dog that is trained to do work or perform tasks for an individual with a disability (Americans with Disabilities Act, 2010). Under the Americans with Disabilities Act (ADA, 2010), a service dog can go anywhere that members of the public are allowed, including restaurants, public transportation, and stores. Importantly, service dogs are not the same as therapy dogs or emotional support dogs. An emotional support dog's sole function is to provide emotional support for the owner – they are not trained to complete any tasks for their handlers, and in fact do not need to have any specialized training at all. Therapy dogs also do not perform specific tasks for their handlers, but instead are trained to provide affection and comfort to others. They require a certification and are typically taken by their handler to locations such a hospitals, schools, and retirement homes to comfort people.

Two well-known classes of service dogs are guide dogs and hearing dogs. Guide dogs, also called seeing-eye dogs, are trained to assist individuals who are blind or visually impaired by helping them navigate various obstacles. Hearing dogs assist individuals who are deaf or hard of hearing by alerting them to important sounds, such as someone calling their name or a fire alarm going off. Other types of service dogs include diabetic alert dogs, mobility assistance dogs, allergy detection dogs, seizure response dogs, and psychiatric service dogs.

The first service dog training program, Seeing Eye, Inc., was founded in 1929 and trains guide dogs to assist individuals who are blind or visually impaired. Programs to train service dogs for individuals with mobility impairments or who were deaf or hard of hearing began later, in the mid to late 1970s.

Few studies examining the effects of service dogs on their handler's physical disability have been published. A randomized controlled trial found that individuals who used a service dog for severe ambulatory disabilities had significant decreases in the number of paid and unpaid assistance hours as compared to the waitlist control condition, suggesting that service dogs allow for more independent living (Allen & Blascovich, 1996). Vincent and colleagues (2015) found that individuals in wheelchairs travelled faster, longer, and evidenced improved ability to mount a curb with their service dog as compared to without. In a single-subject alternating treatment design study, Crowe and colleagues (2014) found that in four of six functional tasks, use of a service dog decreased time to perform the task, and in five of six tasks, use of a service dog decreased perceived effort. One self-report study found that service dog handlers indicated that their dogs assisted with a variety of activities, including getting around the community (84.2% of participants) and the home (78.2%), communicating with others (71.8%), shopping (75.7%), and retrieving objects that were dropped or are out of reach (99%; Fairman & Huebner, 2001). However, this study was based on qualitative self-reports, and as such should be interpreted with caution.

Research has also assessed the psychosocial benefits of having a service dog. Several observational studies of individuals with disabilities found that the presence of a service dog led to increased friendly contact and communication with strangers (Eddy, Hart, & Boltz, 1988; Mader, Hart, & Bergin, 1989). Similarly, self-report studies have found that individuals endorsed increased social interactions, an increase in friends, an improved social life, and increased overall life satisfaction after being matched with their service dog (Fairman & Huebner, 2001; Hart, Hart, & Bergin, 1987; Lane, McNicholas, & Collis, 1998; Roth, 1992).

However, similar to concerns regarding research on the effects of companion dogs on human health, it is important to note that there are also concerns about the rigor of studies on service dog use. As such, a review by Sachs-Ericsson, Hansen, and Fitzgerald (2002) concluded that due to the small number of studies assessing the effects of service dogs coupled with the methodological design concerns in such studies, no conclusions can be drawn about the effects of service dogs.

It is also important to note that there are some challenges that may come with having a service dog. As discussed previously, individuals with a service dog may be approached more by members of the public, but these interactions may not be perceived as positive or welcome. Strangers may ask handlers questions about the dog that could be uncomfortable, such as asking what disability the handler has that requires use of a service dog. Similarly, some may not like having a service dog as it calls attention to the fact that they have a disability. Additionally, even if an individual is able to receive a service dog at no cost to them, ongoing care for a dog can be expensive. One organization estimates that it costs roughly $2,100 per year to care for a service dog who is in good health (Service Dogs of Virginia).

Psychiatric service dogs for posttraumatic stress disorder

A psychiatric service dog (PSD) is a service dog that performs tasks that assist with symptoms caused by an individual's psychiatric disorder. For example, a psychiatric service dog for a person with posttraumatic stress disorder (PTSD) might help calm the handler during a panic attack triggered by a trauma reminder (ADA, 2010). Like other classes of service dogs, psychiatric service dogs undergo a high level of training before being matched to their handlers. Puppies Behind Bars, an organization that trains psychiatric service dogs, trains their canines in 92 different commands, although they note that handlers typically use only about 20-25 of these

daily (Puppies Behind Bars, 2018). Further, Puppies Behind Bars trains their dogs in ten commands that are designed specifically for individuals with PTSD. One of these commands is "Got my back," in which the dog sits behind the owner and watches for any danger, allowing the handler to feel safe in places where they cannot see what is behind them. Another is "Peekaboo," where the dog sits between the handler's legs, a command that was designed as a grounding exercise as the person can feel the dog. These service dogs are also trained to turn on the light and take off bedsheets if the owner appears to be having a nightmare. Puppies Behind Bars also noted that the owner-service dog relationship evolves over time, and some dogs spontaneously develop additional tasks to assist their owner (2018).

To date, few experimental studies have been published on the effectiveness of psychiatric service dogs (PSDs) for PTSD. O'Haire and Rodriguez (2018) compared symptoms in U.S. Military Veterans matched with a PSD to those on the waitlist and found that those with a PSD evidenced significant decreases in PTSD symptom severity, while those on the waitlist did not. However, although the drops in PTSD symptom severity were statistically significant and clinically meaningful (as determined by the PTSD Checklist), Veterans on average continued to meet diagnostic criteria for PTSD (O'Haire & Rodriguez, 2018). Another study found that Veterans with PSDs for PTSD had statistically significant decreases in PTSD symptoms from one month prior to service dog training to the six-month follow up; however, it is important to note that this study had no control group and the sample size was relatively small (n=12; Kloep, Hunter, & Kertz, 2017). Overall, more research - particularly studies with experimental methodology - is needed to further assess the effects of psychiatric service dogs for PTSD.

In addition, there are a number of non-experimental studies citing that Veterans find their psychiatric service dogs valuable in managing PTSD symptoms. For example, Taylor, Edwards,

and Pooley (2015) found in a content analysis of media coverage in which Veterans discussed their use of a psychiatric service dog for PTSD that Veterans reported finding their service dogs helpful in symptom management and re-engaging with the world. Yarborough and colleagues (2018) found that Veterans reported that nudging and licking from service dogs helped them remain focused in the present moment, distract from trauma memories, and mitigate other PTSD symptoms. In addition, Veterans reported that they appreciated their service dog's ability to act as a physical barrier between them and strangers.

Further, there may be non-specific mental health benefits to service dog (psychiatric or otherwise) partnership, which may further ameliorate symptoms of PTSD and other challenges that these Veterans face. Depression is a common comorbidity with PTSD; one study found that about half of individuals with PTSD also met criteria for major depressive disorder (MDD), and this number may even be higher in Veteran and military samples (Rytwinski, Scur, Feeny, & Youngstrom, 2013). Social isolation is another common problem for Veterans with PTSD (Boscarino, 1995). O'Haire and Rodriguez (2018) found that Veterans with PSDs had larger decreases in depressive symptoms and larger increases in quality of life and social functioning self-report measures than Veterans on a waitlist to receive a PSD. Another study found that Veterans with PSDs reported decreased depressive symptoms, decreased anger, and increased perceived social support and quality of life, although it is important to note that this study had a small sample size and no control group (Kloep, Hunter, & Kertz, 2017). In addition, a randomized controlled trial found that partnership with a service dog led to improvements in self-esteem, psychological well-being, and integration in the community (Allen & Blascovich, 1996).

However, it is important to note some of the limitations of the research on the effects of psychiatric service dogs for PTSD. It is unclear if the benefits ascribed to psychiatric service dogs are due to the tasks that the service dog is trained to complete or due to the general benefits of having a canine. Further, no research is currently available on the long-term effects of psychiatric service dogs for PTSD.

Posttraumatic stress disorder in Veterans

Posttraumatic stress disorder (PTSD) is a mental health condition that some individuals develop after exposure to a dangerous or frightening event. For a person to have a diagnosis of PTSD, they must have experienced or been exposed to a life-threatening event, such as a serious car accident, or an event that threatened bodily autonomy, such as a sexual assault. Individuals must also experience symptoms of the following types: re-experiencing the trauma (such as through flashbacks or nightmares), avoiding reminders of the trauma, negative thoughts and feelings, and increased arousal (American Psychiatric Association, 2013). Some psychologists conceptualize PTSD as a disorder of non-recovery, because nearly all individuals experience some PTSD symptoms following a trauma, but most experience a natural remission of symptoms within the following few months (Resick, Monson, & Chard, 2007).

Unsurprisingly, due to the life-threatening nature of combat, rates of PTSD are elevated in military Veterans. Prevalence rates of PTSD in United States Veterans varies by service era, but rates for all eras are higher than rates for the general population. Tanielian and Jaycox (2008) found that prevalence of PTSD in Veterans deployed during Operation Enduring Freedom and Operation Iraqi Freedom was 13.8%, based on DSM-IV PTSD criteria. PTSD prevalence (based on DSM-III-R) among Gulf War Veterans is estimated to be 10.1% (Kang, Natelson, Mahan, Lee, & Murphy, 2003). A national study estimated that 26.9% of female Veterans and 30.9% of

male Veterans from the Vietnam War will meet criteria for PTSD (based on DSM-III-R) in their lifetimes (Kulka et al, 1990). These prevalence rates are much higher than rate for the general US population, in which 6.8% of adults are estimated to meet criteria for PTSD in their lifetime based on DSM-IV criteria (National Comorbidity Survey, 2005). While these percentages cannot all be directly compared due to different DSM criteria used, data suggests that Veterans do experience PTSD at a higher rate than civilians.

Exposure therapies for PTSD

Since PTSD is so prevalent in U.S. Military Veterans, it is important to determine the most effective treatments for Veterans with PTSD. Exposure therapies are a commonly used type of psychotherapy for PTSD in Veteran populations and are considered a first-line treatment. Exposure therapy for PTSD works by gradually exposing Veterans to trauma-related memories, feelings, and situations that are currently being avoided (National Center for PTSD). Exposure therapies are a type of cognitive-behavioral therapy (CBT). CBT is a type of psychotherapy that aims to change maladaptive thoughts or behaviors based on the theory that thoughts, behaviors, and emotions all affect each other. Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE) are the two primary cognitive-behavioral psychotherapies used to treat PTSD.

Prolonged exposure (PE) is an exposure therapy developed for treatment of PTSD. PE is based on the Emotional Processing Theory of PTSD, which posits that PTSD emerges due to fear eliciting escape and avoidance of stimuli that are related to any reminders of the trauma (Foa, Steketee, & Rothbaum, 1989). This theory also posits that repeated exposure to trauma memories in a safe environment, such as within psychotherapy sessions, will result in habituation of the fear response. Due to habituation, the individual will be less likely to avoid trauma reminders. Further, as the fear response decreases, the theory states that patients' beliefs about the trauma

and about themselves will spontaneously change to become less generalized, reducing the negative impact of the trauma.

Prolonged exposure therapy begins with psychoeducation on PTSD and common reactions to trauma. Then, the patient is taught breathing retraining, which is to be used for general tension and anxiety, and is not to be used during exposures. Next, the patient completes repeated, elongated imaginal exposures to their actual trauma memories across multiple sessions. Out of session, the patient completes exposures to people, places, or objects that are being avoided because they elicit trauma-related distress. PE is typically conducted across eight to fifteen 90-minute sessions (Foa, Hembree, & Rothbaum, 2007).

Cognitive processing therapy (CPT) is a cognitive-behavioral therapy developed to treat PTSD. CPT is based on the Emotional Processing Theory of PTSD as well as social cognitive theories. Social cognitive theories posit that distorted thoughts and beliefs about a trauma leads to maladaptive emotions and behavior in survivors. Further, this theory states that challenging overgeneralized beliefs will lead to decreased negative emotions and decreased intrusive reminders of the trauma (Resick, Monson, & Chard, 2007). CPT is not typically considered an exposure therapy, as the primary focus is on cognitive restructuring. However, CPT may include a written account of the trauma narrative, which can be conceptualized as an exposure. Further, the CPT manual instructs therapists to emphasize experiencing natural emotions in relation to the trauma and reducing avoidance of trauma reminders, both of which embody principles of exposure therapy, albeit without assigning formal exposures (Resick et al, 2007).

Cognitive processing therapy begins with the therapist providing psychoeducation on PTSD. Next, the patient is asked to write an Impact Statement about the impact that the trauma has had on their life. Then, the patient works on identifying and labelling their thoughts and

feelings, and the relationship between them. The patient then writes out an account of their worst traumatic incident (although CPT can be conducted without this part) and subsequently, the therapist begins to challenge stuck points expressed by the patient. This is followed by teaching the client cognitive therapy skills. The remaining sessions focus on the specific topics of safety, trust, power/control, esteem, and intimacy, as these themes are likely to have been affected by PTSD. CPT is designed to be conducted over twelve 60-minute sessions, administered once or twice per week (Resick, Monson, & Chard, 2017).

There is much empirical evidence supporting the effectiveness of cognitive-behavioral therapies for treating PTSD in Veterans. A review of the literature concludes that PE has demonstrated efficacy in treating PTSD and comorbid issues in Veteran populations (Rauch, Eftekhari, & Rizek, 2012). Similarly, CPT has been found to be an effective treatment of Veterans with PTSD related to military sexual trauma (Suris, Link-Malcolm, Chard, Ahn, & North, 2013) and to any trauma experienced in the military (Monson et al, 2006). As such, the U.S. Department of Veteran Affairs, the U.S. Department of Defense, and the American Psychological Association all strongly recommend PE and CPT as treatments for PTSD (American Psychological Association, 2017; US Department of Veteran Affairs, 2017).

Unfortunately, even though cognitive-behavioral therapies for PTSD have significant empirical support, patient dropout rates for these treatments are high. One randomized controlled trial examining the effects of PE for Veterans had a dropout rate of 28%, meaning that just over one out of four participants did not complete the treatment (Eftekhari et al, 2013). Other research notes that completion rates of exposure therapies are even lower in real-world settings (Najavities, 2015), with dropout rates as high as 68% (Garcia, Kelley, Rentx, & Lee, 2011) and 79% (DeViva, 2014) in some studies. This means that a significant number of Veterans who

present to exposure therapy are not receiving optimal relief from their PTSD symptoms. Therefore, it is important to examine 1) alternative treatments to exposure therapy and 2) supplemental modalities that may improve retention in exposure therapy.

Safety behaviors, coping behaviors, and exposure therapy

To date, there is no published research on the integration of exposure therapy and use of a psychiatric service dog for PTSD. However, there is a significant amount of research on the use of behaviors, objects, or living things to cope in the context of stressful events and their effect on treatment responses in exposure therapy. These behaviors are typically classified as either "coping behaviors" or "safety behaviors." Therefore, I will review the literature on the use of safety and coping behaviors in the context of exposure therapy in order to better understand the possible ways that a psychiatric service dog could affect exposure therapy outcomes.

First, I will discuss definitions of safety and coping behaviors. Salkovskis and colleagues, in a study on panic and agoraphobia, defined safety behaviors as behaviors that "are intended to avoid disaster, and these responses have the secondary effect of preventing the disconfirmation that would otherwise take place" (Salkovskis, Clark, Hackmann, Wells & Gelder, 1999, p. 573). Similarly, Clark (1999) stated that safety behaviors are aimed at preventing or minimizing a feared outcome.

So, then, how is a coping behavior different from a safety behavior? Thwaites and Freeston (2005) define a coping behavior as something done by a person "in order to reduce anxiety, which does not maintain or worsen future responses to the same stimulus or stimuli" (p. 179). They add that coping behaviors seek to decrease distress but do not aim to prevent a possible feared outcome from occurring. Further, Hoffman and Chu (2019) state that coping behaviors have often been distinguished from safety behaviors by their intentions and

consequences: coping behaviors are not intended to prevent a feared outcome, and coping behaviors do not have negative long-term effects. In sum, coping behaviors and safety behaviors have been distinguished by one another based on their consequences: safety behaviors interfere with adaptive learning, while coping behaviors do not (Hoffman & Chu, 2019; Thwaites & Freeston, 2005).

Next, I will discuss theories on the effectiveness of exposure therapy and what these models posit regarding the use of safety or coping behaviors in the context of exposures. One such model is Emotional Processing Theory (EPT; Foa & Kozak, 1986). This theory purports that exposure therapy works by first activating the fear structure and then having something occur that is incompatible with it. For example, a person who is afraid of getting bit by a snake might be asked in an exposure to watch a video of a snake (activation of fear structure) while in the safety of the therapeutic office (incompatible information). According to EPT, this allows for changing of the fear structure through integration of new information. Foa and Kozak posit that habituation (meaning a decrease in fear reactions) is the tool that disconnects the stimulus from the fear response, which allows for adaptive long-term learning (1986). In other words, decreased fear reactions are seen as the mechanism of change in exposure therapy according to this theory.

More recently, the Inhibitory Learning Model has been used to explain the effectiveness of exposure therapy (Craske, Kircanski, Zelikowsky, Mystkowski, Chowdury, & Baker, 2008; Craske, Treanor, Conway, Zbozinek, & Vervliet, 2014). This model posits that the primary agent of change in exposure therapy is what is called inhibitory learning, meaning the creation and strengthening of a competing belief. Through exposures, individuals create a new non-threat association with the fear stimulus; this new association does not replace the old one but competes

with it, and thereby inhibits access to it. Unlike Emotional Processing Theory, this model states that habituation does not predict therapeutic outcomes and reductions in fear and physiological arousal are not necessarily evidence for corrective learning (Craske et al, 2008). Further, this model purports the importance of anxiety toleration versus habituation, as oftentimes individuals with anxiety disorders are afraid of the negative emotional responses associated with the feared stimuli (Abramowitz & Arch, 2014; Craske et al, 2008; Craske et al, 2014). Therefore, it is important for these individuals to experience anxiety in order to learn that they are able to tolerate their negative emotions.

Supporters of both emotional processing theory and the inhibitory learning model have suggested that safety behaviors should be removed from exposures, as they may prevent clients from corrective, non-threat learning (Abramowitz & Arch, 2014; Craske et al, 2008; Craske et al, 2014; Foa & Kozak, 1986). Recently, though, the viewpoint that safety behaviors are always detrimental has been challenged (e.g., Hoffman & Chu, 2019). In fact, some have suggested that appropriate use of safety behaviors can have advantages in exposure therapy, especially early in treatment as it may reduce dropout and treatment refusal (Rachman, Radomsky, & Shafran, 2008). However, empirical studies on the use of safety behavior in exposures have obtained mixed findings; Levy and Radomsky (2014) found that those using safety behaviors considered exposures more acceptable and tolerable, while other studies found no difference between conditions in treatment outcomes or exposure acceptability (Deacon, Lickel, Possis, Abramowitz, Mahaffey, & Wolitzky-Taylor, 2012; Deacon, Sy, Lickel, & Nelson, 2010). These studies did not appear to differentiate between safety and coping behaviors in their analyses, as the participants' intentions in using various "safety behaviors" are not discussed. Further

research is needed to differentiate between the effects of these two classes of behaviors in the context of exposure therapy.

Recently, Hoffman and Chu (2019) proposed a model to help determine whether a behavior is functioning as a coping skill or safety behavior. Hoffman and Chu recommend using function rather than topography to determine if a behavior is helpful or not. In other words, they propose that the *outcome* of a behavior is most important – if a behavior allows the individual to approach more feared situations and contributes to non-threat learning, it is considered a beneficial coping skill. In this model, the ultimate outcome is considered more important than the intention of a behavior or its effect on distress. For example, regardless of whether an individual with panic disorder brings benzodiazepines with him on a train with the intent of preventing a panic attack or not, if it allows him to take the train, it would be considered a coping skill in this model.

Further, Hoffman and Chu describe the importance of assessing the impact of behaviors throughout treatment. They note that a behavior can be functional at some points but then unhelpful later on, which is why it is important to continuously re-evaluate. For example, the individual with panic disorder who initially was able to take the train through bringing his benzodiazepines may later find that he is unwilling to take public transportation without this medication. This limits his ability to disconfirm beliefs regarding public transportation use without benzodiazepines, and as such, taking this medication on the train would likely be re-conceptualized as a safety behavior at this time.

Based on this review of the literature, it is unclear how psychiatric service dogs may function within the context of exposure therapy. While the presence of a psychiatric service dog may make some Veterans more willing to complete exposures, it may prevent other Veterans

from gaining optimal learning. In addition, use of a psychiatric service dog may function as a coping behavior at one point in therapy but as a safety behavior at another point. Further research as well as long-term, case-by-base analyses are needed to better understand these processes.

Research design

Recruitment procedures

Initially, the aim of this study was to interview Veterans with a psychiatric service dog who engaged in an exposure-based, cognitive-behavioral therapy for PTSD. As such, a flyer was created and posted in various clinics that provided psychotherapy to Veterans with PTSD. However, after seven months of advertising, not one Veteran contacted the primary investigator (PI) with interest in the study.

At that point, the study was amended to involve interviewing therapists who provided treatment to such Veterans. An updated flyer and email blurb were created and disseminated to clinics where therapists work with Veterans with PTSD. After four months of advertising to the therapist population, the PI did not receive contact from any interested parties. Then, a clinical supervisor of the PI who works in a VA suggested to change the method of data collection from an interview to an online questionnaire with an optional follow-up call. The rationale for this change was that therapists in the VA setting are very busy and may be more likely to participate in a study that they can complete whenever they have free time, versus at a predetermined scheduled interview. As such, updated advertisements were created and disseminated to clinics where therapists provide psychotherapy to Veterans with PTSD as well as professional organization list serves that may capture such therapists. Four months after this final methodology change, nine individuals participated in the study, three of whom fully met inclusion criteria.

Participants

Nine licensed therapists participated in the present study, three of whom met full inclusion criteria. In order to meet criteria for study participation, potential participants needed to 1) be currently licensed to provide psychotherapy in the U.S. and 2) have provided at least two sessions of exposure-based psychotherapy for PTSD to one or more U.S. Military Veterans who had a psychiatric service dog for PTSD during treatment. Individuals who did not meet the above criteria, or were under the age of 18, were not considered for participation in this study. Further, individuals who did not answer at least one study question about a specific psychotherapy case or cases were excluded from analyses. A recruitment email (see Appendix A) and a consent form (see Appendix B) were distributed to potential participants through email list servs.

Procedures

Participants received the consent form via email and were directed to click the link to the online survey if they consented to participate. A waiver of documentation of consent was obtained as the online survey did not obtain identifying information from participants, and as such, consent documentation would be the only link between participants and their responses. The online survey included inclusion/exclusion questions, demographic questions, the Pet Attitude Scale – Modified, and open-ended questions about participants' experiences providing therapy to Veterans with psychiatric service dogs. See Appendix C for a list of questions included in the online survey. At the end of the survey, participants were asked if they consented to an optional follow-up call to discuss their responses. If yes, they were also asked if they consented to have the follow-up call audio recorded.

Measures

The Pet Attitude Scale—Modified is a self-report measure that assesses an individual's attitude towards companion animals (Munsell, Canfield, Templer, Tangan, & Arikawa, 2004). Scores on this measure range from 0-108, with higher scores indicating more positive attitudes towards pets. Statements on this scale are structured so that the measure is appropriate for use with both pet owners and non-owners. The Pet Attitude Scale – Modified has a high internal consistency rating ($\alpha = .92$, Munsell et al, 2004). The original Pet Attitude Scale, which only differs from the Modified version in the wording of three of the eighteen items which were improved in the Modified version to better accommodate non-pet owners, was found to have a two-week test-retest reliability of 0.92 ($p<.001$) and good criterion validity (Templer, Salter, Dickey, Baldwin, & Veleber, 1981). The purpose of the Pet Attitude Scale – Modified in this study was to better understand participants' attitudes towards pets, as this may affect their attitudes towards service dogs.

Case study design

A case study design was chosen as it can provide a more detailed picture as to why some Veterans may have had success in these concurrent modalities while others did not. While group experimental designs have the advantage of a heightened ability to control for error, outcomes only show if an intervention worked for a population on average, not who it worked best for or why it was more successful in some cases than others. Additionally, case study designs are particularly useful for clinical practitioners as clinicians work at the level of a single case. In sum, the case study design was chosen in order to obtain in-depth information about when and how psychiatric service dogs and exposure therapy work well together in treatment of PTSD.

An adaptation of the pragmatic case study method (Fishman, 2005, 2013) was used to obtain in-depth information about the experiences of three clinicians providing therapy to Veterans with PTSD while they had a psychiatric service dog. The pragmatic case study is a mixed-methods comprehensive case study design that is to be an example of best clinical practice (McLeod, 2010, as cited in Fishman, 2013). This method was modified for the current study, as the pragmatic case study method was intended to be used while an intervention is applied, not in analyzing interventions conducted by non-research team members *a posteriori*. As such, in analyzing qualitative data based on the pragmatic case study method, more focus was placed on therapeutic process, course of therapy, and outcomes, and less was placed on case formulation, guiding conception, detailed clinical assessment of the client, and therapy monitoring.

Enhancing rigor in case studies

As discussed previously, case study designs are inherently more limited in their ability to control for various types of experimental error than group designs. However, there are a number of ways that scientific rigor can be increased in case studies.

A list of guidelines to improve rigor, particularly in qualitative research, is described by Elliot and colleagues (1999), which were implemented in the present study. Their first guideline is to own one's perspective, which refers to the need for researchers to describe their background and what they bring to the research in order to reduce bias. The second guideline is to situate the sample, meaning that the researcher should describe the participants and include relevant factors to the study in descriptions. The third guideline is to ground in examples, which indicates that authors should use examples to illustrate how they came to various conclusions from the data. Fourth, Elliot and colleagues suggest providing credibility checks, or ways to check the

credibility of the categories, themes, or accounts posited by the researcher. The fifth guideline is coherence, which states that results should be represented in a coherent way while also preserving individual differences in the data. Sixth is the guideline of accomplishing general versus specific research tasks, which means that authors should specify the limits to which the findings can be generalized. Last is the guideline of resonating with readers, meaning that the text should be construed as an accurate, clear representation of the subject matter by readers.

Elliot and colleagues' guidelines were utilized in the current study in the following ways. First, I will specify my perspective on the topic at hand. I am a U.S. graduate student studying clinical psychology in a doctoral program, and I have never served the military. My theoretical orientation in clinical practice is best described as cognitive-behavioral and I volunteer at two dog rescues in my free time. I am currently working at a VA hospital as a psychology intern and I am providing CPT to Veterans with PTSD. I have never seen a Veteran with a PSD for individual therapy. In reference to the remaining guidelines, participants are described with relevant information in the text, and dissertation chairs reviewed qualitative analyses as a credibility check. The generalizability of findings is specified appropriately based on the size and heterogeneity of the sample, and findings are described coherently with examples provided throughout. This text aims to be judged as an accurate account of the experiences of the clinicians who completed the survey, and also aims to provide readers with expanded information about exposure-based treatment of PTSD for Veterans with a psychiatric service dog.

Additionally, techniques described by Kazdin (1981) were utilized to reduce threats to internal validity in the present study. As his article was written for case studies being conducted while clinicians are providing an intervention, not all of his suggestions were able to be applied

in the current design. However, a number of his techniques are applicable to the present study. For one, Kazdin suggests using objective data, which will be accomplished through the Pet Attitude Scale – Modified scores and numerical demographic data. Additionally, inferences about the effectiveness of psychiatric service dogs and exposure therapy in treating PTSD were informed by sample size, heterogeneity of cases, type of data obtained, and typical course of PTSD as compared to the course demonstrated by participants. Further, a goal sample size of five was chosen over a smaller number in order to improve the generalizability of results while still obtaining detailed responses.

Proposed Analyses

A mixed methods design was used to analyze data; that is, both qualitative and quantitative analysis were conducted. Descriptive analyses were conducted on the Pet Attitude Scale-Modified scores and the numerical demographic questions (e.g., years licensed). The goal of these analyses was to learn more about the demographics of participants in this study and their attitudes towards pets.

The case study analysis techniques described in Fishman's 2005 and 2013 articles were used to analyze qualitative data obtained from survey responses. The case data was analyzed individually as well as compared across common topics. Such common topics were determined after data collection in order to select themes that most appropriately fit the data. Both themes and analyses were checked by dissertation chairs in order to decrease effects of personal bias.

CHAPTER II: RESULTS

Quantitative Results

Table 1

Data on the Three Therapists

Therapist	Pet Attitude Scale—Modified [a]	Age	Years licensed	Participate owns their own dog
Rebecca	82	42	15	Unknown
Abigail	105	37	7	Yes
Natalie	82	39	6	Yes

[a] The range of the scale is 0-108. A higher score indicates a more positive attitude towards pets.

The Case of "Rebecca"

Overview

"Rebecca" is a Caucasian married female in her early 40s. She has a master's degree in the mental health field and has been a licensed therapist for 15 years. She is trained in multiple therapies for PTSD including CPT, PE, Eye Movement Desensitization and Reprocessing (EMDR), Skills Training for Affective and Interpersonal Regulation (STAIR), and Acceptance and Commitment Therapy (ACT).

Opinion on dogs

On the Pet Attitude Scale – Modified, Rebecca received a score of 82. Qualitatively, she stated that she is very fond of dogs/companion dogs. Regarding emotional support dogs, Rebecca said she thinks they are helpful, but wishes there was a clearer distinction between emotional support and service dogs. Specifically, she believes that some people obtain a "Service Dog" vest online and do not have an actual service dog. As such, Rebecca expressed that she wishes laws

would allow for verification of service dogs, which is not currently allowed per the ADA. When asked about therapy dogs, Rebecca stated that she believes they are helpful for visiting settings such as a school or hospital. When asked about her opinion on integrating dogs into mental health care, she stated that she has observed them being helpful. As an example, she discussed how in a therapy group, a Veteran who often dissociated was able to open up about his trauma while another Veteran's service dog was sitting next to him. Rebecca felt that this Veteran was using the dog as a grounding element, but did not further describe this example in her responses.

Psychotherapy training and experience

Rebecca identifies as a cognitive-behavioral clinician. She stated that in deciding which therapy to use with a Veteran, she utilizes a collaborative approach but also considers which treatment may be more appropriate. In making this determination, Rebecca considers avoidance as a factor; for example, more avoidance symptoms and interest in PE suggests that PE may be a good fit. She has received formal training in PE through a local university. Rebecca works in a residential PTSD program for Veterans and has treated about 150 Veterans for PTSD. She utilized exposure therapy with about 20 of those Veterans, two of whom had a PSD at the time of treatment.

Case description

Rebecca described one specific case in which she provided PE to a Veteran with PTSD who had a psychiatric service dog during therapy. This Veteran was a 35 year old male who served in Operation Iraqi Freedom (OIF), with a diagnosis of PTSD related to combat trauma. He had PTSD symptoms for about 8-9 years prior to this treatment and did not have any psychiatric comorbidities. His PTSD symptoms were described as "moderately severe" and some specific symptoms Rebecca recalls him endorsing at the start of treatment were intrusive

distressing memories and nightmares, avoidance of trauma reminders, blame, guilt, shame, depression, anxiety, poor sleep, irritability, and hypervigilance. Prior to this round of therapy, he had seen Rebecca for CPT. He was also on ongoing psychiatric medications.

Prior to starting PE, the Veteran had his psychiatric service dog for 2-3 years. Rebecca recalls that he obtained the dog to reduce PTSD symptoms, particularly anxiety. Rebecca reported that the service dog helped the Veteran by decreasing avoidance via engaging with others in public, waking him up before or during nightmares, and "blocking" by standing in front of the Veteran when others approached. One challenge of having a PSD that the Veteran expressed to Rebecca was that people would approach the Veteran and pet his dog without asking.

Course of therapy

This course of therapy involved 8-9 sessions of PE, and Rebecca reported that she adhered closely to the PE protocol. In vivo exposures the Veteran completed included going out in public, changing where he sits, sharing feelings with his wife, and talking about his trauma in group therapy. Rebecca left it up to the Veteran whether he chose to bring his service dog to therapy sessions, and the Veteran chose to bring him. In sessions, the service dog would initially greet Rebecca and then would lay on the floor for the duration of the session. The dog was not integrated into exposures.

In addition to individual therapy, this Veteran attended various groups at his residential program. Group topics included mindfulness, grounding, and breathing exercises. These tools were not incorporated into PE as Rebecca wanted to challenge avoidance and anxiety and allow emotions to come down on their own, versus using a tool to bring emotions down in the moment unless they were very extreme.

Individual therapy ended when the PE protocol was completed. Rebecca noted that at the end of treatment, the Veteran evidenced decreased avoidance, decreased anxiety, improved sleep, and increased positive emotions.

Final thoughts

While this service dog was not integrated into treatment, Rebecca felt that having a PSD could help individuals in exposure therapy through having a companion to try to reduce avoidance and challenge anxiety. Rebecca recommended that Veterans with PTSD engage in exposure therapy and felt that she would recommend PSDs for some Veterans with PTSD, but not all. She did not elaborate on which Veterans she thought would be a better fit for a service dog. Similarly, she stated that she would "possibly" recommend that Veterans engage in exposure therapy with PTSD when they have a PTSD service dog, but did not elaborate further. In terms of recommendations for therapists, Rebecca suggested making sure the service dog does not comfort the Veteran too much during exposures.

The Case of "Abigail"

Overview

"Abigail" is a Caucasian married female in her late 30's. She has a master's degree in social work and has been a licensed social worker for 7 years. She has treated Veterans with PTSD using the following therapies: CPT, PE, and Cognitive-Behavioral Therapy for Substance Use Disorders (CBT-SUD).

Opinion on dogs

On the Pet Attitude Scale – Modified, Abigail received a score of 105. Qualitatively, she stated that she likes dogs and has one, but added that they are "a lot of work, like children." She said that she thinks the integration of dogs into mental health care could be helpful, but on the individual level, there are cases of fraud or use of dogs to increase avoidance. Abigail feels that emotional support dogs are not valid, as people may pass them off as service dogs and try to take them into the community. She feels that therapy dogs in a group setting can be very beneficial. Regarding psychiatric service dogs, Abigail's opinion varies depending on the tasks the dog performs. She believes that they can increase quality of life for handlers, but feels that there is a significant problem of non-trained dogs being called service dogs.

On the follow-up phone call, when asked more about her thoughts on psychiatric service dogs, Abigail added that individuals who appear to have fraudulent service dogs have made her more "jaded," which may be harmful to Veterans who have true psychiatric service dogs. She also stated that she wishes there was some type of national certification for psychiatric service dogs in order to reduce cases of fraud. In addition, Abigail expressed that for some people who try to obtain a PSD, she feels that they "work harder at being disabled than helping themselves recover." She explained that for some Veterans who obtain a PSD, they see it as an ongoing necessity to help combat PTSD symptoms versus using the dog to help them process the trauma and recover.

Psychotherapy training and experience

Abigail described her theoretical orientation as strengths-based and Veteran-centered. She chooses which PTSD treatment approach to use by giving the Veteran the options and letting them share in the decision. Regarding training in evidence-based therapies for PTSD, she has

completed formal CPT and PE trainings, including 6 months consultation for each. Abigail has treated about 30 Veterans for PTSD, 4-5 of which were using exposure therapy, and 2 of which had a psychiatric service dog at the time of treatment.

Case description

The Veteran described by Abigail is a 38 year old male OIF Veteran. He was an officer in the military and was married with three children, but separated from his wife shortly after treatment ended. His PTSD was related to combat deaths of other soldiers and he had been struggling with symptoms for about 10-12 years before this treatment. Abigail described his symptoms as "mild" and recalls that at the outset of treatment, he struggled with symptoms such as guilt, shame, nightmares, and depression. She also noted that he would sometimes shake when discussing his index trauma. He obtained his psychiatric service dog during treatment and hoped that this dog would increase joy and allow him to work with decreased shaking.

This Veteran's service dog was trained put her head in the Veteran's lap when she noticed him getting nervous, and to put her body weight on the Veteran when he would shake. Abigail also believes that the dog was trained to lick the Veteran during nightmares. The Veteran reported that he found the dog very helpful, especially in decreasing isolation and decreasing avoidance of public places. In terms of challenges, Abigail recalls that the Veteran's employer wanted verification of the dog from her, which she did not provide as she was not sure that this was legal as per the ADA. Further, she did not feel familiar enough with the dog's commands or training to provide any verification.

On the follow-up phone call, Abigail expressed that she did not think a psychiatric service dog was needed for this Veteran. She explained that he was doing well in the program prior to obtaining the service dog and felt that obtaining the dog was a "step back." Specifically,

she felt that by getting this service dog he was telling himself that he needed the dog, and then relied more on her versus experiencing his feelings and going through the natural recovery process. Further, she believed that the Veteran was getting the dog more so for companionship than assistance with PTSD symptoms.

Course of therapy

This Veteran engaged in CPT with Abigail and treatment lasted 12 sessions. Abigail felt that she was very adherent to the protocol and does not recall making any deviations. The Veteran brought his service dog to sessions but she was not involved in the therapy. The Veteran also attended weekly meditation and yoga groups on the residential unit. After completion of CPT, Abigail noted that the Veteran reported decreased depression, increased confidence in managing symptoms, and increased awareness of what he could control.

Final thoughts

Overall, Abigail would recommend that Veterans with PTSD engage in exposure therapy, but does not recommend that Veterans try to obtain a service dog as they allow for too much avoidance that prevents natural healing from the trauma. She did not have any recommendations for therapists who are providing exposure therapy to Veterans with psychiatric service dogs.

The Case of "Natalie"

Overview

"Natalie" is a Caucasian married female in her late 30s. She has a doctorate degree in clinical psychology and has been a licensed psychologist for 6 years. She has treated Veterans with PTSD using the following therapies: CPT, PE, Eye Movement Desensitization and Reprocessing (EMDR), Cognitive Behavioral Conjoint Therapy for PTSD (CBCT), and Present-Centered Therapy (PCT).

Opinion on dogs

On the Pet Attitude Scale – Modified, Natalie received a score of 82. Qualitatively, Natalie stated that she loves dogs and feels that they are good for her as well as her children. Regarding the integration of dogs into mental health care (including emotional support, therapy, and psychiatric service dogs), she believes that they can be useful when promoting behavioral activation, but can be iatrogenic for PTSD. Specifically, she stated that psychiatric service dogs are an external signal that the Veteran is suffering and are a safety behavior that tells the Veteran that they cannot handle stressors without their service dog.

Psychotherapy training and experience

Natalie described her theoretical orientation as "CBT." In deciding which psychotherapy to use with a Veteran with PTSD, she provides the rationale for each therapy and then asks the Veteran to assist her in choosing a treatment. Natalie has received formal training and consultation in PE, CPT, and CBCT; in addition, she is a trainer and consultant in CPT. She has treated more than 200 Veterans with PTSD, all utilizing an exposure therapy, and about ten of whom had a psychiatric service dog during therapy.

Case description

Natalie described a summary of the cases she has seen in which she has provided an EBP (typically CPT or PE) to a Veteran with PTSD and a PSD. She reported that Veterans typically had index traumas of combat or military sexual trauma, typically struggled with symptoms for about 10 years prior to treatment, and had "intense" PTSD symptoms at the outset of therapy. Natalie stated that symptoms reported by Veterans often included nightmares, anger, isolation, and substance use disorders. She reported that Veterans typically obtained PSDs to assist with managing hypervigilance, waking them up from nightmares, and "being there" when the handler

is highly emotional. Veterans typically had their service dog for 1-2 years prior to starting therapy and described feeling safe as a benefit to having their service dog. In terms of challenges, Natalie stated that Veterans noticed that the VA did not accommodate the dogs with things such as a dog park.

Course of therapy

Natalie reported that sessions would typically start with the Veteran coming in and giving the PSD a command to lie down. The dog would often fall asleep while the trauma processing occurred. At the end of session, the Veteran would give the PSD a command to get up and they would leave. Natalie stated that therapy with these Veterans generally lasted for 12-16 sessions, and she generally adhered 85-100% to the treatment protocol (either CPT or PE). For in-vivo exposures, the Veteran would sometimes be asked to complete the exposure without their dog. The PSDs were never integrated into exposures or otherwise used in the therapy. Natalie stated that this was because she feels that using the service dog in exposures is a safety behavior—"it's the same thing as taking one's spouse to the grocery store to help keep them calm."

Final thoughts

Natalie recommended that Veterans with PTSD receive exposure therapy, but did not recommend that Veterans with PTSD try to obtain a psychiatric service dog unless they are depressed and isolated, as dogs can be a protective factor for suicide. When asked if has any suggestions for therapists who conduct exposure therapy with Veterans who have a PSD, she stated "No. There is no standardized training of service dogs and most people get their vest on-line. Thus, therapist are not seeing consistency in training, thus cannot incorporate dogs into therapy. I believe many of the places giving Veterans dogs are selling snake oil."

CHAPTER III: DISCUSSION

Case Comparison

Cognitive-behavioral therapy training and manual adherence

All respondents had formal training in at least one exposure-based, cognitive-behavioral therapy for PTSD. All three were formally trained in PE and two were formally trained in CPT, one of whom is a VA CPT trainer. Further, all of the respondents felt that they mostly adhered to therapy protocols in their treatment of the Veterans discussed in survey responses.

Service dog training and laws

All respondents expressed concerns about possible high rates of fraudulent service dogs. Multiple respondents stated that they believe some Veterans buy "Service Dog" vests online and do not have an actual service dog. One respondent stated that she believes seeing these potentially fraudulent service dogs have made her more "jaded," which may be harmful to Veterans who have a true psychiatric service dog. Two respondents reported that they wished there was some type of certification process for service dogs in order to decrease the possibility of fraudulent service animals. Natalie also stated that because there is no "standardized training" for PSDs, therapists do not see consistency in service dogs, which prevents them from incorporating the dogs into therapy.

Service dogs, safety behaviors, and coping skills

Two respondents mentioned that psychiatric service dogs could be used as a safety behavior that increases avoidance and prevents optimal exposures. Abigail expressed a belief that this avoidance prevents "natural healing from the trauma." However, the third therapist stated that she felt service dogs could help some individuals in exposures through "reducing

avoidance and challenging the anxiety." She added that she would caution therapists to make sure the service dog does not comfort the handler too much during exposures.

In addition, one respondent stated that she observed a service dog being helpful for "opening up" on one occasion, in which a Veteran appeared to use another Vet's service dog as a "grounding element" while discussing his trauma.

Respondents also discussed service dogs, ongoing PTSD symptomology, and recovery. One therapist reported that for some Veterans who obtain a service dog for PTSD, she feels that they see it as an "ongoing necessity" to cope with symptoms, interfering with the Veteran's ability to go through the natural recovery process. Similarly, another therapist stated that she feels that PSDs can be iatrogenic for PTSD. Specifically, she stated that psychiatric service dogs are an external signal that the Veteran is suffering and are a safety behavior that tells Veterans that they cannot handle stressors without their service dog.

Integration with psychotherapy

None of the respondents integrated the psychiatric service dogs into psychotherapy. The therapists described the service dogs as laying on the floor or even sleeping during sessions. One respondent stated that she encouraged her Veteran to leave his dog at home when completing some in-vivo exposures.

Psychiatric service dogs and nonspecific mental health benefits

Some respondents discussed potential non-specific mental health benefits for Veterans who have a psychiatric service dog. One respondent stated that having a PSD may decrease the likelihood of suicide attempts for some Veterans, especially those who are isolated with few supports, as dogs in general are a protective factor for suicide. She also stated that PSDs may

help with behavioral activation. Another participant reported that she believes service dogs could improve the handler's quality of life.

Benefits of having a psychiatric service dog – Veterans' perspectives

Respondents described benefits that Veterans expressed in relation to their PSDs. One participant reported that her Veteran found the service dog to be particularly helpful in decreasing avoidance of public places and reducing isolation. Another participant also stated that the Veteran described their PSD as assisting in decreasing avoidance. The third respondent's Veterans reported "feeling safe" as a benefit.

Challenges of having a psychiatric service dog – Veterans' perspectives

Respondents also reported that Veterans experienced some challenges in relation to their service dog. One respondent stated that her Veteran was frustrated by individuals coming up and petting his service dog without asking. Another respondent reported that her Veteran's employer requested verification of the service dog, which is not legal as per the ADA. A third respondent stated that multiple Veterans expressed displeasure that the VA did not accommodate service dogs with provisions such as a dog park.

Relationship between therapist views of PSDs and therapist's own attitude towards dogs, as measured by the Pet Attitude Scale—Modified

Qualitatively, all respondents reported positive opinions of companion dogs, and two respondents stated that they currently have a pet dog. On the Pet Attitude Scale – Modified, a measure in which scores range from of 0-108 with a higher score indicating more positive feelings towards companion animals, two respondents had scores of 82 and the third respondent had a score of 105. Interestingly, the respondent with the most positive score on the Pet Attitude Scale-Modified (Abigail) actually had perhaps the most negative views on psychiatric service

dogs for PTSD. Abigail indicated that she would never recommend that a Veteran with PTSD try to obtain a PSD as they "allow for too much avoidance that prevents natural healing from the trauma," whereas the other two therapists indicated that they would recommend a PSD to some Veterans with PTSD. Further, both Abigail and Natalie had significant concerns about PSDs, including increased avoidance, use of the PSD as a safety behavior in exposures, and viewing oneself as unable to cope with PTSD symptoms on their own. Rebecca also had concerns about PSDs comforting Veterans too much in exposures, but noted that service dogs could assist as a grounding tool and a partner in confronting anxiety. Overall, a clear relationship between attitudes towards companion animals (as measured by the Pet Attitude Scale-Modified) and attitudes towards PSDs for PTSD was not evidenced.

Overall thoughts and recommendations

All three of the respondents recommended that Veterans with PTSD engage in an exposure therapy. Two of the respondents said that they would recommend a psychiatric service dog for PTSD for certain Veterans, and the third responded that she would not recommend a PSD. One therapist stated that she would only recommend a PSD if the Veteran was depressed and isolated, as dogs can be a protective factor for suicide. The therapist who would not recommend a PSD indicated that this is because "they allow for too much avoidance that prevents natural healing from the trauma."

Only one respondent provided a recommendation for therapists providing exposure therapy to Veterans with PSDs. She suggested that providers make sure that the dog is not comforting the Veteran too much during exposures. Another participant stated that she was unable to give recommendations for therapists, as "there is no standardized training of service

dogs and most people get their vest on-line. Thus, therapists are not seeing consistency in training, [and] thus cannot incorporate dogs into therapy."

Challenges

As discussed previously, a number of challenges were encountered in obtaining participants for this study, which eventually led to the decision to collect data through an online survey. Although the online survey methodology led to increased responses, it was associated with its own challenges. For individuals who did not consent to the follow-up call, written responses that may have been unclear in meaning were not able to be clarified. Out of the three individuals who completed the survey and met inclusion criteria, one consented to the follow-up call. This call lasted approximately 10 minutes, and the respondent was friendly and cooperative during the call. Further, responses on the survey were likely briefer in nature than responses that would have been obtained in an in-person or phone interview. Last, a significant percentage of respondents started but did not complete the online survey. Out of nine total respondents, only three individuals answered at least one question about one or more cases in which they provided cognitive-behavioral therapy to a Veteran with a PSD. Because the study questions were created with the intention of being discussed via an in-person interview over the course of 2-3 hours, the list of questions was relatively lengthy (see Appendix C). It is possible that the majority of respondents did not complete the survey as they found it to be too long. As such, it may be that an online questionnaire is not the optimal method for obtaining in-depth, case study data.

Another challenge involved difficulty advertising to potential participants within the VA. At one VA that was contacted, it is policy that a study must be reviewed by the research department before an individual can send out an advertisement to VA staff. This requirement delayed the author's ability to advertise at this site, as the VA research department requested that

a few small changes were made to the protocol, which necessitated a modification to be submitted and approved by the Rutgers Institutional Review Board (IRB). Further, if a researcher who is employed at a VA would like to conduct a study using their work time, work email, and/or the time of other employees, they must go through the IRB approval process for that VA, a process which is reported to be lengthy. It is possible that VA therapists may have been more willing to engage in the study and/or the optional follow-up call if they were approved to do so during work hours.

These difficulties illustrate the challenges of conducting case study interview-based research, particularly with VA employees when the research is not being conducted through the VA. Future research efforts may be more successful through partnering with the VA so that therapists are able to utilize work time to participate. While this may take more time up-front in getting VA IRB approval, it may pay off through an increased ability to engage participants in research.

Limitations of the Present Study

There were a number of limitations to the present study. As this was an exploratory study, only three individuals participated. While the case study design necessitated a small sample size in order to obtain in-depth information about therapists' individual experiences, the goal of this study was to obtain responses from at least five participants, which was unsuccessful due to challenges with participant recruitment (as discussed above). As such, the sample size was clearly not sufficient to generalize results to the large number of therapists who provide cognitive-behavioral therapy to Veterans for PTSD who have a psychiatric service dog. Further, all participants were female, Caucasian, married, aged in their late 30's to early 40's, and provided therapy in the cases discussed in residential treatment settings. Therefore, the data

obtained may not be representative of therapists of other ages, genders, racial identities, marital statuses, or those who work in other treatment settings. In addition, all therapists in this study had formal training in at least one exposure-based cognitive-behavioral therapy for PTSD, and described mostly adhering to the protocol during treatment. It may be that therapists with less formal CBT training, or who are more flexible in how they provide CPT or PE, have different perspectives on the use of psychiatric service dogs for PTSD. Future research might include larger-scale, quantitative studies to provide more generalizable results as a complement to the results of the present study.

Last, the nature of the survey method for data collection limited the author's ability to clarify participant responses when unclear. While an optional follow-up call was implemented to attempt to resolve this issue, only one participant consented to be called. This method of data collection also prevented further discussion of unanticipated themes that were found in responses. One such finding was that all respondents had positive opinions regarding companion dogs, but had generally negative opinions regarding PSDs. It would have been beneficial to discuss this with respondents in order to better understand the reasoning for these differences in opinions. For example, it may be that the respondents felt that the possible safety functions of service dogs superseded potential nonspecific mental health benefits of dogs. Or, it may be that respondents were not primed to think about the nonspecific benefits of dogs as applied to psychiatric service dogs. Future research may choose to further investigate why some therapists have different opinions regarding companion dogs and psychiatric service dogs for PTSD. It would be also interesting to assess whether therapists who would not recommend that Veterans obtain a PSD feel similarly about Veterans obtaining a companion dog.

Even with these limitations, this study provided promising results that encourage future research into this area.

Implications

For providers: When to recommend a psychiatric service dog

In considering whether a Veteran with PTSD is a good fit for a psychiatric service dog, it may be important to consider the full range of the Veteran's symptoms and social support network. While a PSD may function as a safety behavior during PTSD exposures, other potential benefits of the PSD may outweigh this concern. For example, a therapist might recommend a PSD for a Veteran in order to decrease risk of a suicide attempt, to decrease isolation, or to increase behavioral activation.

For Veterans: How to recover from PTSD with a psychiatric service dog

For Veterans who have a PSD, it will be important to consider how the dog is being conceptualized. Seeing the dog as a necessity to cope with triggers and symptoms may prevent optimal recovery from PTSD. It may be more helpful to think of the psychiatric service dog as a partner in confronting PTSD-related anxiety. For example, after walking through a crowded store while experiencing PTSD symptoms, a Veteran with a PSD may benefit more from telling him or herself "I was not in imminent danger in this crowd, and my service dog's presence assisted me in getting outside and learning this," versus "I was in imminent danger in this crowd, but thankfully I had my service dog to keep me safe and calm."

For policy: Certification and training of service dogs

As there is no national certification body for psychiatric service dogs, therapists have no way of knowing 1) whether a dog is a true PSD or 2) the quality and specifics of training provided to the PSD. Further, while ADA policies are likely intended to prevent intrusive

questioning, an unfortunate consequence is that it is very easy to pass off an untrained dog as a service dog, which may negatively impact handlers with a true service dog. As such, it may be worth considering on a broad policy level whether it would provide a greater benefit to service dog handlers to 1) have some type of documentation for verified service dogs, and 2) create a national set of standards or a certification for service dogs. In considering how to best implement such policies, it will be important to consider how to respect handlers' needs for privacy as well as the direct and indirect effects of policies on service dog handlers.

Conclusions

This study investigated the perspectives of therapists regarding the use of cognitive-behavioral therapies for PTSD with Veterans who have a psychiatric service dog. Results showed that therapists tend to not integrate psychiatric service dogs into therapy, and further, therapists are unlikely to recommend PSDs for Veterans with PTSD. Recommendations are provided for providers, Veterans, and public policy. This study should encourage further research to expand understanding the effectiveness of exposure therapy and use of a psychiatric service dog for Veterans with PTSD.

REFERENCES

Abramowitz, J.S. & Arch, J.J. (2014). Strategies for Improving Long-Term Outcomes in Cognitive-Behavioral Therapy for Obsessive-Compulsive Disorder: Insights from Learning Theory. *Cognitive and Behavioral Practice, 21*(1): 20-31.

Allen, K. & Blascovich, J. (1996). The value of service dogs for people with severe ambulatory disabilities – A randomized controlled trial. The Journal of the American Medical Association, 275(13): 1001-1006.

Allen, K., Blascovich, J., & Mendes, W.B. (2002). Cardiovascular reactivity and the presence of pets, friends, and spouses: the truth about cats and dogs. *Psychosomatic Medicine, 64*(5): 727-739.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

Americans with Disabilities Act of 1990, 2010 Revised requirements: Service animals. (2010). Retrieved from http://www.ada.gov/service_animals_2010.htm

American Veterinary Medical Association (2012). *U.S. Pet Ownership & Demographics Sourcebook* (2012 ed.). Schaumburg, IL, American Veterinary Medicine Association.

Anderson, W.P., Reid, C.M., & Jennings, G.L. (1992). Pet ownership and risk factors for cardiovascular disease. *Medical Journal of Australia, 157*(5): 298-301.

Armour, C., Tsai, J., Durham, T. A., Charak, R., Biehn, T. L., Elhai, J. D., & Pietrzak, R. H. (2015). Dimensional structure of DSM–5 posttraumatic stress symptoms: Support for a hybrid Anhedonia and Externalizing Behaviors model. *Journal of Psychiatric Research, 61*: 106 –113.

Baun, M.M., Bergstrom, N., Langston, N.F., & Thoma, L. (1984). Physiological effects of

human/companion animal bonding. *Nursing Research, 33*(3): 126-129.

Blakey, S.M. & Abramowitz, J.S. (2016). The effects of safety behaviors during exposure therapy for anxiety: Critical analysis from an inhibitory learning perspective. *Clinical Psychology Review, 49*: 1-15.

Boscarino, J.A. (1995). Post-traumatic stress and associated disorders among Vietnam Veterans: the significance of combat exposure and social support. *Journal of Traumatic Stress, 8*(2): 317-336.

Chur-Hansen, A., Stern, C., & Winefield, H. (2010). Gaps in the evidence about companion animals and human health: some suggestions for progress. *International Journal of Evidence-Based Healthcare, 8*(3): 140-146.

Clark, D. M. (1999). Anxiety disorders: why they persist and how to treat them. *Behaviour Research and Therapy*, 37, S5–S27.

Craske, M.G., Treanor, M., Conway, C., Zbozinek, T, & Vervliet, B. (2014). Maximizing Exposure Therapy: An Inhibitory Learning Approach. *Behaviour Research and Therapy, 58*: 10-23.

Craske, M.G., Kircanski, K., Zelikowsky, M., Mystkowski, J., Chowdhury, N., & Baker, A. (2008). Optimizing inhibitory learning during exposure therapy. *Behaviour Research and Therapy, 46*: 5-27.

Crowe, T.K., Perea-Burns, S., Sedillo, J.S., Hendrix, I.C., Winkle, M., & Deitz, J. (2014). Effects of partnerships between people with mobility challenges and service dogs. *American Journal of Occupational Therapy, 68*(2): 194–202.

Davis, S.J.M. & Valla, F.R. (1978). Evidence for domestication of the dog 12,000 years ago in the Natufian of Israel. *Nature, 276*; 608–610.

Deacon, B.J., Lickel, J.J., Possis, E.A., Abramowitz, J.S., Mahaffey, B., & Wolitzky-Taylor, K. (2012). Do Cognitive Reappraisal and Diaphragmatic Breathing Augment Interoceptive Exposure for Anxiety Sensitivity? *Journal of Cognitive Psychotherapy, 26*(3): 257-269.

Deacon, B.J., Sy, J.T., Lickel, J.J., & Nelson, E.A. (2010). Does the judicious use of safety behaviors improve the efficacy and acceptability of exposure therapy for claustrophobic fear? *Journal of Behavior Therapy and Experimental Psychiatry, 41*: 71-80.

Dembicki, D., & Anderson, J. (1996). Pet Ownership May Be a Factor in Improved Health of the Elderly. *Journal of Nutrition for the Elderly, 15*(3): 15-31.

DeViva, J.C. (2014). Treatment utilization among OEF/OIF Veterans referred for psychotherapy for PTSD. *Psychological Services, 11*(2), 179-184.

Eddy, J., Hart, L.A., & Boltz, R.P. (1988). The effects of service dogs on social acknowledgements of people in wheelchairs. *Journal of Psychology, 122*(1): 39-45.

Eftekhari, A., Ruzek, J.I., Crowley, J.J., Rosen, C.S., Greenbaum, M.A., & Karlin, B.E. (2013). Effectiveness of National Implementation Of Prolonged Exposure Therapy in Veterans Affairs Care. *JAMA Psychiatry, 70*(9): 949-955.

Elliot, R., Fischer, C.T., & Rennie, D.L. (1999). Evolving guidelines for publication of qualitative research studies in psychology and related fields. *British Journal of Clinical Psychology, 38*: 215-229.

Fairman, S.K. & Huebner, R.A. (2001). Service Dogs: A Compensatory Resource to Improve Function. *Occupational Therapy in Health Care, 13*(2): 41-52.

Fishman, D.B. (2005). Editor's Introduction to PCSP – From Single Case to Database: A New Method for Enhancing Psychotherapy Practice. *Pragmatic Case Studies in Psychotherapy, 1*(1): 1-50.

Fishman, D.B. (2013). The Pragmatic Case Study Method for Creating Rigorous and Systematic, Practitioner-Friendly Research. *Pragmatic Case Studies in Psychotherapy, 9*(4): 403-425.

Foa, Hembree, & Rothbaum (2007). *Treatments that Work Prolonged Exposure Therapy for PTSD: Emotional Processing of Traumatic Memories, Therapist Guide*. New York, NY: Oxford University Press.

Foa, E.B., & Kozak, M.J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin, 99*(1): 20-35

Foa, E. B., Steketee, G. S., & Rothbaum, B. O. (1989). Behavioral/cognitive conceptualizations of posttraumatic stress disorder. *Behavior Therapy*, *20*: 155–176.

Friedmann, E., & Thomas, S.A. (1995). Pet Ownership, Social Support, and One-Year Survival after Acute Myocardial Infarction in the Cardiac Arrhythmia Suppression Trial (CAST). *American Journal of Cardiology, 76*: 1213-1217.

Garcia, H.A., Kelley, L.P., Rentz, T.O., & Lee, S. (2011). Pretreatment Predictors of Dropout From Cognitive Behavioral Therapy for PTSD in Iraq and Afghanistan War Veterans. *Psychological Services, 8*(1): 1–11.

Gilbey, A., McNicholas, J., & Collis, G.M. (2007) A Longitudinal Test of the Belief that Companion Animal Ownership Can Help Reduce Loneliness. *Anthrozoös, 20*(4): 345-353.

Gilbey, A. & Tani, K. (2015). Companion Animals and Loneliness: A Systematic Review of Quantitative Studies. *Anthrozoös, 28*(2): 181-197.

Handlin, L., Nilsson, A., Ejdebäck, M., Hydbring-Sandberg, E., & Uvnäs-Moberg K. (2012). Associations between the Psychological Characteristics of the Human–Dog Relationship and Oxytocin and Cortisol Levels. *Anthrozoös, 25*(2): 215-228.

Hart, L.A., Hart, B.L., & Bergin, B. (1987). Socializing effects of service dogs for people with disabilities. *Anthrozoos, 1*(1): 41-44.

Herzog, H. (2011). The impact of pets on human health and psychological well-being: fact, fiction, or hypothesis? *Current Directions in Psychological Science, 20*: 236–239.

Hoffman, L.J. & Chu, B.C. (2019). When Is Seeking Safety Functional? Taking a Pragmatic Approach to Distinguishing Coping From Safety. *Cognitive and Behavioral Practice, 26*(1): 176-185.

Jorm, A.F., Jacomb, P.A., Christensen, H., Henderson, S., Korten, A.E, & Rodgers, B. (1997). Impact of pet ownership on elderly Australians' use of medical services: an analysis using Medicare data. *Medical Journal of Australia, 166:* 376–377.

Kang, H.K., Natelson, B.H., Mahan, C.M., Lee, K.Y., & Murphy, F.M. (2003). Post-Traumatic Stress Disorder and Chronic Fatigue Syndrome-like illness among Gulf War Veterans: A population-based survey of 30,000 Veterans. *American Journal of Epidemiology, 157*(2): 141-148.

Kazdin, A.E (1981). Drawing Valid Inferences from Case Studies. *Journal of Consulting and Clinical Psychology, 49*(2): 183-192.

Kloep, M.L., Hunter, R.H., & Kertz, S.J. (2017). Examining the Effects of a Novel Training Program and Use of Psychiatric Service Dogs for Military-Related PTSD and Associated Symptoms. *American Journal of Orthopsychiatry, 87*(4): 425-433.

Koivusilta, L.K. & Ojanlatva, A. (2006). To have or not to have a pet for better health? *PLoS One, 1*(1): e109.

Kulka, R.A., Schlenger, W.A., Fairbanks, J.A., Hough, R.L., Jordan, B.K., Marmar, C.R., ... Cranston, A.S. (1990). *Trauma and the Vietnam War generation: Report of findings from*

the National Vietnam Veterans Readjustment Study. New York: Brunner/Mazel.

Lane, D. R., McNicholas, J., & Collis, G. M. (1998). Dogs for the disabled: benefits to recipients and welfare of the dog. *Applied Animal Behavior Science, 59*, 49–60.

Levy, H.C. & Radomsky, A.S. (2014). Safety Behaviour Enhances the Acceptability of Exposure. *Cognitive Behaviour Therapy, 43*(1): 83-92.

Mader, B., Hart, L.A., & Bergin, B. (1989). Social Acknowledgements for Children with Disabilities: Effects of Service Dogs. *Child Development, 60*(6): 1529-1534.

McNicholas, J., & Collis, G.M. (2000). Dogs as catalysts for social interactions: Robustness of the effect. *British Journal of Psychology, 91*: 61-70.

Monson, C.M., Schnurr, P.P., Resick, P.A., Friedman, M.J., Young-Xu, Y., & Stevens, S.P. (2006). Cognitive Processing Therapy for Veterans With Military-Related Posttraumatic Stress Disorder. *Journal of Consulting and Clinical Psychology*, *74*(5): 898-907.

Munsell, K.L., Canfield, M., Templer, D.I., Tangan, K., & Arikawa, H. (2004). Modification of the Pet Attitude Scale. *Society & Animals, 12*(2): 137-142.

Najavitis, L.M. (2015). The problem of dropout from "gold standard" PTSD therapies. *F1000Prime Reports*, *7*: 43.

National Comorbidity Survey (2005). NCS-R appendix tables: Table 1. Lifetime prevalence of DSM-IV/WMH-CIDI disorders by sex and cohort. Table 2. Twelve-month prevalence of DSM-IV/WMH-CIDI disorders by sex and cohort. Accessed at: http://www.hcp.med.harvard.edu/ncs/publications.php

O'Haire, M.E. & Rodriguez, K.E. (2018). Preliminary efficacy of service dogs as a complementary treatment for posttraumatic stress disorder in military members and Veterans. *Journal of Consulting and Clinical Psychology*, *86*(2): 179-188.

Parker, G.B., Gayed, A., Owen, C.A., Hyett, M.P., Hilton, T.M., & Heruc, G.A. (2010). Survival following an acute coronary syndrome: a pet theory put to the test. *Acta Psychiatrica Scandinavica, 121*: 65–70.

Parslow, R.A., Jorm, A.F., Christensen, H., Rodgers, B., & Jacomb, P. (2005). Pet ownership and health in older adults: findings from a survey of 2,551 community-based Australians aged 60–64. *Gerontology, 51*:40–47.

Pietrzak, R. H., Tsai, J., Armour, C., Mota, N., Harpaz-Rotem, I., & Southwick, S. M. (2015). Functional significance of a novel 7-factor model of DSM–5 PTSD symptoms: Results from the National Health and Resilience in Veterans study. *Journal of Affective Disorders, 174*: 522–526.

Powers, M.B., Smits, J.A.J., & Telch, M.J. (2004). Disentangling the Effects of Safety-Behavior Utilization and Safety-Behavior Availability During Exposure-Based Treatment: A Placebo-Controlled Trial. *Journal of Consulting and Clinical Psychology, 72*(3): 448–454.

Puppies Behind Bars. (2018, April). *Service Dog & PTSD Workshop*. Presentation, United States.

Rachman, S., Radomsky, A.S., & Shafran, R. (2008). Safety behavior: A reconsideration. *Behaviour Research and Therapy, 46*(2): 163-173.

Rauch, S.A.M., Eftekhari, A., & Ruzek, J.I. (2012). Review of exposure therapy: A gold standard for PTSD treatment. *Journal of Rehabilitation Research & Development, 49*(5): 679-688.

Resick, P.A., Monson, C.M., & Chard, K.M. (2007). Cognitive processing therapy: Veteran/military version. Washington, DC: Department of Veterans' Affairs.

Resick, P.A., Monson, C.M., & Chard, K.M. (2017). Cognitive processing therapy: A comprehensive manual. New York, NY: Guilford Press.

Rogers, J., Hart, L.A., & Boltz, R.P. (1993). The Role of Per Dogs in Casual Conversations of Elderly Adults. *The Journal of Social Psychology, 113*(3): 265-277.

Roth, S. (1992). *The effects of service dogs on the occupational performance and life satisfaction of individuals with spinal cord injuries.* Unpublished master's thesis, Rush College.

Rytwinski, N.K., Scur, M.D., Feeny, N.C., & Youngstrom, E.A. (2013). The Co-Occurrence of Major Depressive Disorder Among Individuals With Posttraumatic Stress Disorder: A Meta-Analysis. *Journal of Traumatic Stress*, *26*(3): 299-309.

Sachs-Ericsson, N., Merbitz, N.K., & Fitzgerald, S. (2002). Benefits of assistance dogs: A review. *Rehabilitation Psychology, 47*(3): 251-277.

Salkovskis, P.M. (1991). The Importance of Behaviour in the Maintenance of Anxiety and Panic: A Cognitive Account. *Behavioural Psychotherapy*, *19*: 6-19.

Salkovskis, P. M., Clark, D. M., Hackmann, A., Wells, A. and Gelder, M. G. (1999). An experimental investigation of the role of safety-seeking behaviours in the maintenance of panic disorder with agoraphobia. *Behaviour Research and Therapy*, *37*: 559–574.

Serpell, J. (1991). Beneficial effects of pet ownership on some aspects of human health and behavior. *Journal of the Royal Society of Medicine, 84*: 717-720.

Serpell, J., Sandøe, P., Corr, S., & Palmer, C., (2016). History of Companion Animals and the Companion Animal Sector. In Sandøe, P., Corr, S., & Palmer, C., *Companion Animal Ethics* (1st ed.) (pp. 8-23). West Sussex: John Wiley and Sons, Ltd.

Service Dogs of Virginia. Estimate of Expenses. Retrieved from: https://www.servicedogsva.org/apply/estimate_of_expenses/

Siegel, J.M. (1993). Companion Animals: In Sickness and in Health. *Journal of Social Issues, 49*(1): 157-167.

Suris, A., Link-Malcolm, J., Chard, K., Ahn, C., & North, C. (2013). A Randomized Clinical Trial of Cognitive Processing Therapy for Veterans With PTSD Related to Military Sexual Trauma. *Journal of Traumatic Stress, 26*: 1-10.

Tanielian, T. & Jaycox, L. (2008). *Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery*. Santa Monica, CA: RAND Corporation.

Taylor, M.F., Edwards, M.E., & Pooley, J.A. (2015). "Nudging Them Back to Reality": Toward a Growing Public Acceptance of the Role Dogs Fulfill in Ameliorating Contemporary Veterans' PTSD Symptoms. *Anthrozoös, 26*(4): 593-611.

Templer, D.I., Salter, C.A., Dickey, S., Baldwin, R., & Veleber, D.M. (1981). The Construction of a Pet Attitude Scale. *The Psychological Record, 31*: 343-348.

Thwaites, R. & Freeston, M.H. (2005). Safety-Seeking Behaviours: Fact or Function? How Can We Clinically Differentiate Between Safety Behaviours and Adaptive Coping Strategies Across Anxiety Disorders? *Behavioural and Cognitive Psychotherapy, 33*: 177-188.

Vincent, C., Gagnon, D., Routhier, F., Leblond, J., Boucher, P. … & the ADMI group (2015). Service dogs in the province of Quebec: sociodemographic profile of users and the dogs' impact on functional ability. *Disability and Rehabilitation Assistance and Technology, 10*(2): 132-140.

Vormbrock, J.K. & Grossberg, J.M. (1988). Cardiovascular effects of human-pet dog interactions. *Journal of Behavioral Medicine,11*(5): 509-517.

Wells, D.L. (2004). The facilitation of social interactions by domestic dogs. *Anthrozoös, 17*(4):

340– 352.

Wood, L., Giles-Corti, B., & Bulsara, M. (2005). The pet connection: pets as a conduit for social capital? *Social Science and Medicine, 61*: 1159–1173.

Yarborough, B. J. H., Stumbo, S. P., Yarborough, M. T., Owen-Smith, A., & Green, C. A. (2018). Benefits and challenges of using service dogs for veterans with posttraumatic stress disorder. *Psychiatric Rehabilitation Journal, 41*(2), 118-124.

Zasloff, R.L. & Kidd, A.H. (1994). Loneliness and Pet Ownership Among Single Women. Psychological Reports, *75*: 747-752.

Table 1

Data on the Three Therapists

Therapist	Pet Attitude Scale—Modified [a]	Age	Years licensed	Participate owns their own dog
Rebecca	82	42	15	Unknown
Abigail	105	37	7	Yes
Natalie	82	39	6	Yes

[a] The range of the scale is 0-108. A higher score indicates a more positive attitude towards pets.

Appendix A: Recruitment Email

To Whom It May Concern:

I am a doctoral student at the Graduate School of Applied and Professional Psychology (GSAPP) at Rutgers University, and my dissertation seeks to explore the experiences of psychotherapists who have provided exposure-based psychotherapy to U.S. Military Veterans who have a psychiatric service dog for PTSD. I am writing to ask that you please post and share the attached form (with the link to the online study) with any licensed therapists who have provided exposure based therapy for PTSD to Veteran(s) who also had a psychiatric service dog for PTSD during treatment. Participants will be asked to complete an online open-ended questionnaire which will take approximately one hour to complete. Participants will be asked if they would be willing to be contacted for a follow-up call to discuss their answers, which is optional and will take approximately 30 additional minutes. Identifying information will not be collected from participants unless contact information is provided for a follow-up call. The researcher will keep all personal, identifying information that is collected confidential. Participants may discontinue their participation in the study at any time. If you or anyone you know is interested in participating, or if you have any questions pertaining to this study, please contact me at cara.genbauffe@gsapp.rutgers.edu or (732) 354-1721. Please note, you will not be compensated if you decide to participate.

Thank you!

Sincerely,

Cara Genbauffe, Psy.M.
cara.genbauffe@gsapp.rutgers.edu
(732) 354-1721

Disclaimer: This announcement is being provided for information only. This research is not conducted by the VA, is not endorsed by the VA, and has not been reviewed by the VA's Institutional Review Board. The VA is not responsible for any costs incurred by any Veteran.

Appendix B: Consent form

CONSENT TO TAKE PART IN A RESEARCH STUDY

TITLE OF STUDY: USING EXPOSURE THERAPY AND SERVICE DOGS TO TREAT PTSD, PRAGMATIC CASE STUDIES

Principal Investigator: Cara Genbauffe, Psy.M.

This consent form is part of an informed consent process for a research study and it will provide information that will help you decide whether you want to take part in this study. It is your choice to take part or not. After all of your questions have been answered and you wish to take part in the research study, you will be asked to sign this consent form. You will be given a copy of the signed form to keep. Your alternative to taking part in the research is not to take part in it.

Who is conducting this research study and what is it about?

You are being asked to take part in research conducted by Cara Genbauffe who is a Rutgers graduate student in the Graduate School of Applied and Professional Psychology. The purpose of this study is to better understand experiences of psychotherapists who have provided exposure therapy to Veterans with psychiatric service dogs. We anticipate 5 subjects will take part in the research.

What will I be asked to do if I take part?

The online survey will take about one hour to complete.

At the end of the survey, you will be asked if you would be comfortable being contacted by the PI for an optional follow-up call to discuss your responses. This call will take approximately 30 minutes. If you consent to the follow-up call, you will also be asked if you consent to having the call audio-recorded and transcribed. You can participate in the follow-up call whether or not you consent to audio-recording.

What are the risks and/or discomforts I might experience if I take part in the study?

Breach of confidentiality is a risk of harm but a data security plan is in place to minimize such a risk.

The interview asks you to describe your experiences providing exposure-based psychotherapy to Veterans with PTSD and a psychiatric service dog. It is possible that you may experience some discomfort when asked questions about your client's traumas and psychological symptoms.

If you feel uncomfortable, you can skip questions or withdraw from the study altogether. If you decide to quit at any time before you have finished the survey, your answers will NOT be recorded.

Are there any benefits to me if I choose to take part in this study?

There no direct benefits to you for taking part in this research. You will be contributing to knowledge about how use of a psychiatric service dogs affects the effectiveness of exposure-based therapy for PTSD.

Will I be paid to take part in this study?

You will not be paid to take part in this study.

How will information about me be kept private or confidential?

All efforts will be made to keep your responses confidential, but total confidentiality cannot be guaranteed.

- We will use Survey Monkey to collect and forward your anonymous responses to us. We will not receive any information that can identify you or other subjects, unless you choose to provide your phone number for a follow-up call. We will download your responses to a secure file that requires a password to access. Only study staff will have access to the password. Responses will be deleted from the file three years after analysis is complete and study findings are professionally presented or published.
- If you provide your phone number for the optional follow-up call, your phone number will be stored separately from your responses. Your responses will be assigned a subject #. The document connecting your contact information with your subject # will be stored separately from your responses so others will not know which responses are yours. We will securely store the key code linking your responses to your identifiable information in a separate password protected file which will be destroyed after data analysis is complete and study findings are professionally presented or published.

No information that can identify you will appear in any professional presentation or publication.

What will happen to information I provide in the research after the study is over?

- The information collected about you for this research will not be used by or distributed to investigators for other research.

What will happen if I do not want to take part or decide later not to stay in the study?

Your participation is voluntary. If you choose to take part now, you may change your mind and withdraw later. In addition, you can choose to skip questions that you do not wish to answer. If you do not click on the 'submit' button after completing the form, your responses will not be recorded. However, once you click the 'submit' button at the end of the form, your responses cannot be withdrawn as we will not know which ones yours are.

Who can I call if I have questions?

If you have questions about taking part in this study, you can contact the Principal Investigator:

Cara Genbauffe, Psy.M.
Principal Investigator
Rutgers University, GSAPP
152 Frelinghuysen Road
Piscataway, NJ 08854-8085
Telephone: (732) 354-1721
Email: cara.genbauffe@gsapp.rutgers.edu

You can also contact my faculty advisor:

Dan Fishman, Ph.D.
Faculty Advisor
Rutgers University, GSAPP
152 Frelinghuysen Road
Piscataway, NJ 08854-8085
Telephone: 914-815-1298
Email: dfishman.rutgers@gmail.com

If you have questions about your rights as a research subject, you can contact the IRB Director at: Arts and Sciences IRB (732) 235-2866 or the Rutgers Human Subjects Protection Program at (973) 972-1149 or email us at humansubjects@ored.rutgers.edu.

Please print out this consent form if you would like a copy of it for your files.

If you wish take part in the research, follow the directions below:

By beginning this research, I acknowledge that I am 18 years of age or older and have read and understand the information. I agree to take part in the research, with the knowledge that I am free to withdraw my participation in the research without penalty. Clicking on the link that will take you to the survey:

https://www.surveymonkey.com/r/exposures_servicedog

Appendix C: Online study questionnaire

Demographic questions

Are you a licensed psychotherapist/psychologist in the United States?

If so, how many years have you held licensure (in any state)?

Have you provided exposure-based therapy for PTSD to one of more US Military Veterans who had a psychiatric service dog during this treatment?

Did you see at least one such Veteran for at least three sessions of exposure therapy?

What is your age?

What is your gender?

What is your ethnicity?

What is your marital status?

What is your highest degree level? (i.e., Ph.D., Psy.D., MSW, M.A.)?

How many years have you had this degree?

Please note any treatments you have used with Veterans to treat PTSD (i.e., CPT, PE, EMDR, NET, etc.)?

Pet Attitudes Scale - Modified

Munsell, K.L., Canfield, M., Templet, D.I., Tangan, K., & Arikawa, H. (2004). Modification of the Pet Attitude Scale. *Society & Animals, 12*(2): 137-142.

Directions: Please read each statement and select the response option that best describes how much you agree or disagree with it.

1. I really like seeing pets enjoy their food.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
2. My pet means more to me than any of my friends (or would if I had one).	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
3. I would like a pet in my home.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
4. Having pets is a waste of money.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
5. House pets add happiness to my life (or would if I had one)	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree ☐	Slightly agree	Agree	Strongly agree

	☐	☐	☐		☐	☐	☐
6. I feel that pets should always be kept outside	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
7. I spend time every day playing with my pet (or I would if I had one)	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
8. I have occasionally communicated with a pet and understood what it was trying to express (or would if I had one).	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
9. The world would be a better place if people would stop spending so much time caring for their pets and started caring more for other human beings instead.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
10. I like to feed animals out of my hand.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
11. I love pets.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
12. Animals belong in the wild or zoos, but not in the home.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
13. If you keep pets in the house you can expect a lot of damage to furniture.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
14. I like house pets.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
15. Pets are fun but it's not worth the trouble of owning one.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
16. I frequently talk to my pet (or would if I had one).	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐
17. I hate animals.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐

18. You should treat your house pets with as much respect as you would a human member of your family.	Strongly disagree ☐	Disagree ☐	Slightly disagree ☐	Neither agree nor disagree ☐	Slightly agree ☐	Agree ☐	Strongly agree ☐

Open-ended questions

Please answer the following questions. As a reminder, you may ask to skip any questions you do not feel comfortable answering or you can choose to end the survey at any time. The goal in this study is to gain detailed information about your experiences, so I am looking for answers with a lot of detail from you. I would also appreciate any examples you can give to illustrate your answers. Specifically, my focus in this survey is on your experience in seeing particular Veterans in exposure therapy who also had service dogs, and your clinical perceptions of how these two elements - exposure therapy and having a service dog - impacted one another.

- How would you describe your theoretical orientation as a therapist? For example, you might say "cognitive-behavioral," "psychodynamic," "Veteran-centered," "emotion-focused," "integrative," or something else.

- How do you typically decide which PTSD treatment approach to use with a Veteran?

- Have you received any formal training in any exposure therapy for PTSD? If yes, please describe the therapy and your training.

- In general, what is your opinion on dogs?

- What about companion dogs, i.e., pet dogs?

- What is your opinion on integrating dogs into mental health care in general?

- What is your opinion on psychiatric service dogs (PSDs)?

- Did this change through having a therapy Veteran with a PSD?

- About how many individuals have you treated for PTSD? About how many of them were Veterans?

- How many of those have you treated with an exposure therapy?

- About how many Veterans have you seen who had a psychiatric service dog for PTSD, and you treated their PTSD with an exposure-based therapy?

- Could you tell me a little bit about one such Veteran? Approximate age, era of service, gender identity? **Note: Please do not provide the Veteran's name or any other PHI in answering this question or any other survey questions.**

- What type of trauma was their PTSD related to?

- About how long did they suffer from PTSD symptoms?

- How would you describe the severity of their PTSD?

- What were some of their PTSD symptoms at the start of treatment, as best as you can remember?

- Did they receive any other treatments for PTSD before seeing you, or were they receiving any concurrent treatments? This could include psychiatric medication.

- Did they have any other mental health diagnoses besides PTSD?

- Do you know what they were hoping to gain through use of a PSD?

- How long has this Veteran had their PSD?
- What are some of the commands that this PSD does for your Veteran?
- What are some of the benefits of having a PSD that your Veteran expressed?
- What about any challenges?
- What therapy did you use with this Veteran?
- About how many sessions was this treatment?
- Did you use a manualized protocol? If so, which one?
- If so, how much would you say you adhered to the protocol?
- If you made any changes from the protocol, what were they? How did you come to the decision to make these changes?
- Could you tell me more what your therapy was like? For example, what did you do in sessions? Did this change over time?
- Was there anything you asked your Veteran to do outside of sessions?
- Did you do any imaginal exposures with this Veteran? If yes, please give any examples that come to mind.
- How about in vivo exposures? Examples?
- Did your Veteran bring their psychiatric service dog (PSD) to your exposure therapy sessions? Did you tell them to bring, or to not bring, their dog to sessions?

- Overall, how integrated was the PSD in therapy? Could you give me some examples to illustrate this?

- Was the service dog integrated into the exposures? If so, how? Did this vary by type of exposure (imaginal vs in vivo)?

- How did you decide on this level of integration?

- Was the service dog used in the therapy in any other way? If so, how?

- How did you feel about how the service dog was used in the exposure therapy? Would you have liked to change this in any way?

- What do feel that the effect(s) were of the PSD in the context of exposures (if used in exposures)? Could you give some examples to illustrate this?

- Did you use anything outside of standard exposure therapy with your Veteran to manage their PTSD symptoms? (i.e., mindfulness, breathing exercises, cognitive restructuring)

- If yes, how did you integrate each technique with the exposures and/or the PSD?

- About how long was this therapy, either in treatment sessions, weeks, or months?

- (if not ongoing) Why did this therapy end?

- Did you see any change in your Veteran's PTSD symptoms over the course of treatment? If so, how did they change?

- What about symptoms of any other mental illness the Veteran may have had?

- Did the Veteran seem to obtain any benefits from this therapy? If so, what were they?

- Were there things that the Veteran seemed to dislike about the therapy? If so, what were they?

- Would you do anything different in this treatment if you could do it again?

- Based on your experiences, would you recommend Veterans with PTSD try to obtain a psychiatric service dog?

- Would you recommend Veterans with PTSD engage in exposure therapy?

- Would you recommend that Veterans with PTSD and a PSD engage in exposure therapy? If not, would you recommend a different psychotherapy?

- Do you think there is anything that therapists can do better when conducting exposure therapy with Veterans who have a service dog?

- Do you think there is anything important for other therapists to know who are administering exposure therapy for PTSD to a Veteran who has a psychiatric service dog?

- Those are all the questions I have for you. Thank you for taking part in this survey! Is there anything else you would like to share about your experience that I did not ask about, or anything you would like to elaborate on?

- Do you consent to engage in a follow-up call to discuss your responses, for approximately 30 minutes? If yes, please provide a contact number.

- If yes to the above question, do you consent to have the phone call audio recorded and transcribed?