Chapter 10
Animal Companions and Military Veterans: How Dogs Can Help America's Heroes

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The effects of Western socialization on gender role norms and men's psychological development, self-concept, and behaviors have been well documented (e.g., O'Neil 2008). Specifically, traits such as dominance, stoicism, independence, physical prowess, and emotional restriction are heavily emphasized in the United States, and become internalized and valued among men. As strongly ingrained as these expectations are for American men in general, their importance is even more profoundly indoctrinated within our military culture (Brooks 2005; Eisenhart 1975).

In their classic paper, Arkin and Dobrofsky (1978) refer to "secondary socialization," wherein both male and female service personnel become immersed in a culture that reinforces traditional masculine ideology. This is particularly true among men in combat roles, as "the training program for the masculine sex role is operationalized via skills and techniques deemed necessary for a man's survival in combat; combat training and masculine sex-role socialization are never separated from one another" (p. 159). The authors also suggest that men who already place a strong value on stereotypical gender roles may be attracted to the military to aid them in "becoming a man." As such, the relationship between hypermasculinity

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and military service is likely bidirectional; men who endorse traditional gender roles gravitate toward the military and the military training reinforces societal views of masculinity. Indeed, male military personnel tend to report high levels of conformity to these norms (Jakupcak et al. 2006; Kurpius and Lucart 2000). Moreover, troops involved in Operation Enduring Freedom or Operation Iraqi Freedom (OEF/OIF) may be particularly susceptible to these socialization processes, given that their relative youth makes them more vulnerable to this type of indoctrination (Levant and Richmond 2007).

Military Veterans and Attachment

Attachment theory assumes a universal need to form a bond to a specific attachment figure deemed stronger and wiser who can protect and increase one's chances of survival in infancy (Bowlby 1969, 1982). One's attachment orientation or style can be understood as a complex network of cognitive and affective processes and mental representations, including episodic, context-related, relationship-specific, and general attachment representations (Mikulincer and Shaver 2003). Attachment orientations are initially formed in interactions with primary caregivers during childhood. Although there is evidence to suggest that one's orientation can change subtly or dramatically depending on context and recent experiences (e.g., Mikulincer and Shaver 2001), there is ongoing support for the idea that a caregiver's response to the infant's needs shapes the internal working model and ultimately guides the emotional development and choices and behaviors in adult life (e.g., Hazan and Shaver 1987).

Several theorists have postulated that early attachment bonds are affected by gender socialization (e.g., Pollack 1995). Norms and expectations of gendered behavior, characterized as masculine for boys and feminine for girls in Western culture, are learned and reinforced via direct and indirect messages from parents and through observation and imitation of parents (MacNaughton 2006). As such, beginning in infancy, a child is exposed to myriad expectations and attitudes, generally determined by anatomical identification of the infant as a male or a female (Elise 1997). Though no specific research has directly examined attachment styles within military personnel, studies on gender differences within adult attachment styles can provide a useful framework for understanding how emotional attachment may impact men who strongly espouse masculine ideals, such as military personnel.

Hazan and Shaver (1987) were the first to extend attachment theory to the study of adult relationships, finding that individual differences in adult attachment styles mimic Ainworth's observations in infant–caregiver relationships. Contemporary work on adult attachment has altered initially proposed attachment styles into two dimensions: (1) anxious–ambivalence and (2) avoidance (Fraley et al. 2000). Generally, highly anxious–ambivalent people desire closeness and intimacy yet are unable to achieve a stable sense of either. Highly avoidant individuals

on the other hand, have difficulty relying on others and prefer to limit intimacy and interdependence. With respect to gender differences, a recent meta-analysis found that women scored higher than men on anxiety and men scored higher than women on avoidance, particularly within community samples (Del Giudice 2011). Furthermore, gender differences in anxiety were largest in early adulthood, while gender differences in avoidance were relatively small in early adulthood. In another study using a large Internet sample, Chopik et al. (2013) found that women scored slightly higher on attachment anxiety, particularly in early adulthood. These findings suggest that women use anxiety as a secondary coping style when a secure attachment is not available.

Men comprise 84 % of the United States military and modal enlistment age is in early adulthood (Department of Defense 2012). As such, recruits tend to be relatively disinvested in cultivating a sense of closeness and intimacy with others. Superimposed on top of this is military training, which reinforces this predisposition via the promotion of hypermasculine values. The instilment of such values is intentional due to their importance on the battlefield. For example, emotional stoicism promotes survival, hardiness, and mission completion, a sense of dominance over trainees extends to the enemy as well as personal fears and weaknesses, and the embodiment of the "rugged warrior" helps acculturate the individual to violence and risk-taking (Alfred et al. 2014; Arkin and Dobrofsky 1978).

However, this embracement of hypermasculinity is not to say that military personnel do not form relationships with each other during deployment. In fact, loyalties between servicemen, referred to as unit cohesion, are also purposefully instilled during training. King et al. (2003) define unit cohesion as the perception of support and encouragement from leaders and peers. This is thought to be fairly easy to facilitate among service personnel, given that military units share characteristics of primary groups such as personal and affective bonding, reunification or separation by members from other commitments and relationships, formal membership requirements and/or initiation rites, and ideological commitments. It is thought that cohesive bonds begin forming during basic training and grow to be most intense during combat assignments (Morris 1996).

Numerous studies have examined the impact of unit cohesion on the functioning and adjustment of military personnel both during and post deployment (e.g., Brailey et al. 2007; Iversen et al. 2008; McTeague et al. 2004; Whitesell and Owens 2012). In one of the first longitudinal examinations of unit cohesion, Elder and Clipp (1988) found that veterans of the World War II and Korea eras who served in combat were more likely than their noncombat counterparts to maintain enduring interpersonal ties with their fellow servicemen. The authors posited that this relationship was mediated by war trauma, particularly related to the loss of comrades and friends in theater. Oliver et al. (1999) conducted a meta-analysis of military cohesion research and found that group cohesion was positively related to multiple desirable outcomes, including group performance, individual performance, job/military, satisfaction, retention, well-being, readiness, and indiscipline.

Although masculinized traits and relatively low attachment may be beneficial on the battlefield, individuals often have difficulty contextualizing these values to

the war environment, and thus remain indoctrinated even after the transition back to civilian life. Unfortunately, this lack of connectedness often leads to impairments in emotional awareness and expression, including affective flattening (the inability to experience a full range of emotions), interpersonal detachment (feeling distant or cut off from others), and anhedonia (a significant reduction in the enjoyment of activities)—all of which are all symptoms of PTSD and depression. With respect to the aforementioned sense of group solidarity, a war veteran's ability to form bonds and develop trust with nonveteran civilians can be particularly problematic.

Traditional Masculine Ideology as a Barrier to Care

Within the general population, myriad psychological barriers to mental health care exist, such as perceived stigma, distrust of others, and cynicism regarding the efficacy of treatment approaches. These barriers are amplified among men, with research consistently demonstrating that masculinity conflicts and attitudes serve to impede the likelihood of seeking or adhering to mental health treatment. While the ideal therapy client has been described as "emotionally expressive, comfortable with ambiguity and vulnerability, and able to ask for help (p. 628)," the stereotypical male is known to have difficulty admitting a problem exists, asking for help, identifying emotional states, and a fear of intimacy (e.g., Rochlen 2005). Cultural values promoting stoicism, constricted emotionality, and self-reliance among men are incompatible with all stages of seeking help. Furthermore, because men are socialized to ignore and/or minimize their pain (Lisak 2001), they tend to underreport their emotions (Jansz 2000; Pollack 1999). However strong the desire to uphold traditional male ideology, it is clear that sheer denial of problems does not eliminate them as hoped. Rather, men tend to express their inner turmoil via methods that are more consistent with stereotypical male behavior, including anger outbursts, drug or alcohol use, and social isolation. Such methods serve to exacerbate the existing problems, potentially increasing social stressors (e.g., legal problems, marital discord), and can result in a more urgent need for mental health intervention. Therefore, men's socialized adversity toward help-seeking behavior for mental health problems results in a snowball effect, wherein the negative coping behaviors create additional complications that underscore the need for professional intervention.

Given the hypermasculine culture of the military, it is unsurprising that service personnel and veterans are at an even greater risk of not seeking out needed psychological services. Even when veterans do seek clinical care, it may be difficult for them to fully engage in therapy, as their masculine gender roles "create avoidance, rigid emotional control, and can make veterans reluctant or unwilling to experience the emotions they learned to 'turn off'" (Lorber and Garcia 2010, p. 297). Furthermore, the unspoken collusion to conceal any psychological or adjustment difficulties may lead veterans to inaccurately believe that such experiences

are abnormal and that they are alone in their suffering, perpetuating feelings of shame and the pressure to "keep holding it together" (Lorber and Garcia 2010).

OEF/OIF Veterans in particular may be especially reticent to seek treatment due to perceived social stigma, self-stigma, and feelings of shame (Blais and Renshaw 2013; Hoge et al. 2004; Kehle et al. 2010; Seal et al. 2010). Among OEF/OIF Veterans seeking treatment at a VA facility, 21 % are estimated to have a major depressive disorder and 29 % are believed to have PTSD (Vaughan et al. 2014). Unfortunately, treatment utilization rates are staggeringly low; approximately 31–47 % of those with suspected PTSD or depression do not receive psychiatric intervention (Elbogen et al. 2013; Schell and Marshall 2008). Additionally, evidence suggests that OEF/OIF Veterans are more likely than their older counterparts to terminate treatment prematurely and/or miss mental health appointments (Erbes et al. 2009; Schell and Marshall 2008). As such, although individual differences exist that impact incidence and treatment rates of military-related mental health issues (Meredith et al. 2011), many veterans in need of psychological care are not receiving the treatment that they need. Although highly structured and evidence-based treatments exist for a multitude of mental health problems, a treatment is only as good as the extent to which it is deemed acceptable to the individual.

Human–Animal Interaction (HAI) for Military Personnel and Veterans

The symbiotic relationship between humans and animals has endured globally and throughout history (Yeager and Irwin 2012). Throughout modern warfare, animals have played a vital role as both battle comrades and supportive companions. From the essential role of horses in World War I, to the homing pigeons used in World War II, to the utilization of dolphins to detect mines during the Vietnam War, to the many stories of United States grounds troops bonding with (and in some cases, taking home) stray Iraqi dogs, animals have had a stable presence in American military operations. The use of animals as a therapeutic tool for service personnel dates back to 1919, when the US military first endorsed the use of dogs as a therapeutic intervention for psychiatric patients at Saint Elizabeth's Hospital in Washington, DC. The Department of Defense then began facilitating a human–animal bond program in the 1940s at Pawling Army Air Force Convalescent Center in Pawling, New York which integrated farm animals into the treatment milieu for emotionally traumatized veterans (Chumley 2012). Although interest in the use of animals in therapy has increased throughout the past century, empirical evidence supporting its use is still in its infancy.

The many benefits of HAI in diverse patient populations have been well documented. Specifically, interactions with animals, particularly dogs, lowers blood pressure and heart rate below even baseline (resting) levels (Friedmann et al. 1983), and regular human–canine interactions are associated with a 50 % or

greater decrease in physiological response to stress as measured by blood pressure in hypertensive individuals (Allen et al. 2001). With respect to psychological functioning, HAI is related to increased self-reliance, motivation (Cusack 1988), and social interaction (Corson et al. 1977; Messent 1983), and decreased aggressive behavior (Cusack 1988). HAI is also associated with improved overall physical and psychological health (Allen et al. 2001; Sachs-Ericsson et al. 2002), and functions as a buffer against the adverse effects of chronic health and disease (Serpell 2003). Although the evidence unequivocally suggests that animals are beneficial for mental health patients in general, dogs may prove particularly therapeutic for active duty service personnel and veterans of war.

As previously discussed, military service personnel are at risk for developing emotional stoicism and affective constriction even above and beyond that which civilian men have been socialized to embody. As such, displaying empathy, compassion, patience, and affection toward others are socially undesirable in the military and can even result in ridicule or the accusation that one has gone "soft." Interestingly, these expectations do not translate to relationship with dogs. The presence of the eight canines deployed to Afghanistan and Iraq by Combat and Operational Stress Control teams (COSC) reduced negative attitudes associated with participating in stress-relieving activities and enhanced the facilitation of mental health care services (Gregg 2012; Krol 2012). For military personnel, knowing that they could interact with animals during sponsored activities increased the number of people who participated as well as enhanced rapport with COSC teams (Chumley 2012; Gregg 2012).

The fact that dogs are one of the few socially acceptable venues for displaying emotional connections in the military makes HAI a compelling option for ameliorating emotional numbing in veterans and facilitating therapeutic processes reliant on emotional identification and disclosure. Simply stated, dogs can be a nonthreatening, indirect way of loosening some of the constriction around affective experience and expression that has been so deeply ingrained into military culture.

The introduction of animals to individuals with varying needs can occur in multiple modalities. Table 10.1 provides an overview of some of the most relevant terms. It is important to note that these terms are often inconsistently defined in the literature (even within the same field). Therefore, the theoretical definitions are generally at the author's discretion. *Animal Assisted Activities* (AAA) provide opportunities for motivational, educational, recreational, and/or therapeutic benefits to enhance quality of life. AAA are delivered in a variety of environments including nursing homes and hospice care centers, wherein dogs or cats are taken to visit or interact with patients (Mills and Yeager 2012).

Resident/Facility Animals (RA) can be used in a form of AAA or Animal-Assisted Therapy (AAT, described below), wherein the animal may reside in the patient facility. These animals may be part of formal therapeutic activities or present to spontaneously interact with the patients and visit intermittently (Mills and Yeager 2012). In VAs across the country, it is growing increasingly commonplace to have RA. For example, the Orlando Veterans Affairs Medical Center in Orlando, Florida has an aviary in its Community Living Center (CLC), a facility for senior

Table 10.1 Animals used in various settings and situations

Term	Definition
Service (assistance) animals (e.g., guide dogs, hearing dogs, service dogs)	Dogs that are individually trained to do work or perform tasks for people with disabilities. Examples of such work or tasks include guiding people who are blind, alerting people who are deaf, pulling a wheelchair, alerting and protecting a person who is having a seizure, reminding a person with mental illness to take prescribed medications, calming a person with posttraumatic stress disorder (PTSD) during an anxiety attack, or performing other duties. In addition, the Department's revised ADA regulations have a new, separate provision about miniature horses that have been individually trained to do work or perform tasks for people with disabilities (Department of Justice 2011)
Animal-Assisted Activities (AAA)	Provide opportunities for motivational, educational, recreational, and/or therapeutic benefits to enhance quality of life. AAA are delivered in a variety of environments by specially trained professionals, paraprofessionals, and/or volunteers, in association with animals that meet specific criteria (Delta Society n.d.a)
Animal-Assisted Therapy (AAT)	A goal-directed intervention in which an animal that meets specific criteria is an integral part of the treatment process. AAT is directed and/or delivered by a health/human service professional with specialized expertize, and within the scope of practice of his/her profession (Delta Society n.d.b)
Resident/Facility Animals (RA)	Animals are trained to participate in a facility's planned and spontaneous activities and therapies with patients or residents. Resident/Facility Animals can be AAT or AAA animals and are comparable because each works with a volunteer or professional who has been trained by a formal program. Although RA are often personal pets of the handlers and accompany their handlers to the sites they visit, they may also reside at a facility (Mills and Yeager 2012)
Emotional Support Animals (ESA)	A type of companion animal/pet that provides comfort to a person with a psychiatric disability, but does not perform trained tasks to assist their owners. ESA are only legally defined in some states (Mills and Yeager 2012)

citizens in need of residential care. In addition, a golden retriever affectionately named Pal used to live at the CLC and visit with the veterans throughout the day. The residents would feed, groom, and walk Pal and frequently commented how much they enjoyed his presence.

In *Animal-Assisted Therapy* (AAT), the animal is used as a component of a specifically designed treatment intervention. Unlike in AAA, the interaction is formalized and goal-driven, and results are documented. The role of the animal in AAT is typically to aid in traditional therapy by facilitating a sense of comfort, security, and healthy distraction during a psychotherapy session. For instance, a patient might be asked to stroke a dog or a cat to ease his or her distress while talking about emotionally difficult content. The presence of animals in this manner has been demonstrated to positively impact treatment engagement and completion rates. For example, Beck et al. (1986) reported that inclusion of a canine in the therapy process was associated with improved compliance with psychotherapy, such that group members attend more consistently and participate more actively when group treatment involves HAI. More recently, Fournier et al. (2007) reported similar results, such that HAI was associated with greater engagement in existing psychological treatment. Several examples exist demonstrating that the presence of an animal enhances client–clinician rapport and trust building in a number of populations (e.g., Barker et al. 2010; Ritchie and Amaker 2012; Yeager and Irwin 2012). Cole et al. (2007) also argue that dedicated interaction with canines promotes sociability and cushions the negative physiological effects of anxiety. In some forms of AAT, the interaction with the animal constitutes the majority of the therapy, as it is considered to be beneficial in and of itself. As such, AAT may serve a dual purpose, direct improvement of specific mental health symptoms through mere time spent interacting with an animal, and indirect improvement through increased treatment initiation, engagement, and completion.

Unlike AAA, AAT, *Emotional Support Animals* (ESA), *Service* (*Assistance*) *Animals* (SA) are owned by and live with the patient. ESA are a type of Companion Animal/Pet that do not require any specialized training because they do not perform trained tasks to assist the patient. Generally, ESA help the individual cope with his or her mental health symptoms by providing companionship, comfort, and affection. In most jurisdictions, ESA do not have special permission to accompany owners into restaurants, hospitals, and other public places that typically do not allow animals (Mills and Yeager 2012). SA, on the other hand, are individually trained to do work or perform tasks for people with disabilities (Department of Justice 2011). As discussed later in this chapter, much debate surrounds the extent to which mental illness is a permanent disability as opposed to an episodic and modifiable impairment.

One specific type of HAI with dogs that has not been defined into one of the above categories involves patient participation in *Animal Training* or working with the animal to learn simple commands and decrease undesirable behaviors. These types of training-based therapies have been hypothesized to ultimately improve the patient's mental health, either via the interaction with the animal itself, or via improvement on several key features that impact the outcomes of psychotherapy. Specifically, research has found that when individuals learn to train and care for difficult-to-adopt shelter dogs, they demonstrate increased interest and participation in meaningful activities, decreased feelings of detachment/estrangement from others, expanded range of affect, and an increased future-oriented outlook

(Britton and Button 2006; Harkrader et al. 2004; Messent 1983). For example, programs in which individuals experiencing emotional numbing are taught to train difficult-to-adopt shelter dogs (i.e., dogs with behavioral/psychological challenges including anxiety, fear, and hyperactivity) have found positive results for the human participants with respect to increases in social skills (Davis and Bunnell 2007; Fournier et al. 2007; Turner 2007), patience (Britton and Button 2006; Furst 2006), empathy (Strimple 2003), compassion (Harbolt and Ward 2001), and parenting skills (Britton and Button 2006; Turner 2007). Human participants in these studies have also demonstrated decreased social isolation, increased social contact, and increased corrective social interactions (Fournier et al. 2007; Messent 1983; Sachs-Ericsson et al. 2002; Serpell 2003; Strimple 2003). In addition, these programs are associated with decreased anger, violence, and need for medication (Harkrader et al. 2004). Studies are currently underway with combat veterans with PTSD to determine if participation in a shelter dog-training program will improve compliance, engagement, and retention in evidence-based therapies for PTSD.

Current Programs Pairing Dogs and Veterans

Although a wide variety of species of animals have been used in conjunction with therapy (AAT) including cats, birds, and rabbits (Sockalingam et al. 2008), the most common are dogs and horses. After conducting a comprehensive review, there are several types of programs throughout the country that recognize the importance of the human–animal bond for active military personnel and veterans in the United States (see Table 10.2). Specific purposes vary greatly by organization but generally seek to provide, assist, train, and match animals with active duty service members and veterans for one or more of the following purposes: (1) physical support; (2) psychological support; (3) physical disabilities; (4) psychological disabilities; (5) companionship; (6) therapy services at military and VA hospitals; (7) combat stress relief for in-theater deployment; and (8) resources and information for military personnel, veterans and their guide, service, assistance, or therapy dogs (e.g., contact information for individuals throughout the United States willing to board animals while owners attend to service commitments). Some of the more typical accrediting bodies include Assistance Dogs International (ADI) and the International Guide Dog Federation (IGDF).

Several of the above organizations have related affiliations and partnerships. For example, America's VetDogs®, which trains and provides dogs to veterans with disabilities, combat stress relief dogs for in-theater deployment, and therapy dogs to provide physical and emotional therapy services at select military and VA hospitals, maintains cooperative relationships with the military and the Department of Veterans Affairs (VA), sets the standards for measuring Assistance Dog schools, and is involved in reviewing provisional guidelines for the placement of dogs with veterans with PTSD. America's VetDogs® is also currently participating in a study with Western Kentucky University to determine the

Table 10.2 Animal organizations

Organization	Website	Location(s)
Paws for Purple Hearts	http://www.pawsforpurplehearts.org	Headquartered in Rohnert Park, CA, but has programs in Bethesda, MD (2 locations), Menlo Park, CA, and Fort Belvoir, VA
Canine Companions for Independence®	www.cci.org	Operates six regional training centers and four development offices in Santa Rosa, Oceanside, and Los Angeles, CA, Colorado Springs and Denver, CO, Chicago, IL, Irving, TX, Delaware, OH, Medford, NY, and Orlando, FL
Warrior Canine Connection	http://warriorcanineconnection.org	Headquartered in Brookeville, MD with programs in Bethesda, MD (2 locations), Menlo Park, CA, Germantown, MD, and Fort Belvoir, VA as well
America's VetDogs®	www.vetdogs.org	Smithtown, NY
Patriot PAWS	http://www.patriotpaws.org	Rockwall, TX
4 Paws 4 Patriots	http://4paws4patriots.org	Temecula, CA
Patriots and Paws	http://www.patriotsandpaws.org	Huntington Beach, CA
Companions for Heroes	http://companionsforheroes.org	Fairfax Station, VA
Paws for Veterans	www.pawsforveterans.com	Melbourne, FL
New Horizons Service Dogs, Inc.	www.newhorizonsservicedogs.org	Orange City, FL
Operation Freedom Paws	http://operationfreedompaws.org	San Martin, CA
Tower of Hope	www.thetowerofhope.org	New York, NY
Service Dog Project, Inc.	http://www.servicedogproject.org	Ipswich, MA
Freedom Service Dogs, Inc.	http://freedomservicedogs.org	Englewood, CO
Patriot PAWS	http://www.patriotpaws.org	Rockwall, TX
Southeastern Guide Dogs, Inc.-Paws for Patriots™	http://www.guidedogs.org	Palmetto and St. Petersburg, FL
NEADS, Dogs for Deaf and Disabled Americans	www.neads.org	Princeton, MA
Pets for Patriots®	http://petsforpatriots.org	Headquartered in Long Beach, NY but partners with approved shelters and rescues throughout the U.S.
Freedom Paws Assistance Dogs	http://www.freedompaws.org	Marysville, OH
Puppies Behind Bars®	http://www.puppiesbehindbars.com	New York metropolitan area
PACT for Animals	https://pactforanimals.org	Delaware Valley region (eastern PA, southern NJ, and DE)
Prison Pups and Pals, Inc.-Paws of Freedom	http://www.prisonpupsandpals.org	Daytona Beach, FL
Canines for Service, Inc.	http://www.caninesforservice.org	Wilmington, NC
The Sam Simon Foundation-Service Dogs for Veterans	http://www.samsimonfoundation.com	Malibu, CA

(continued)

Table 10.2 (continued)

Organization	Website	Location(s)
K9s for Warriors	http://www.k9sforwarriors.org	Ponte Vedra Beach, FL
Freedom Dogs	http://www.freedomdogs.org	San Diego, CA
Hawaii Fi-Do Service Dogs	http://www.hawaiifido.org	Oahu, HI
Paws and Stripes	http://www.pawsandstripes.org	Rio Rancho/Albuquerque, NM
Sherri's Project: Wounded Warrior Pack	http://www.woundedwarriorpack.org	North County San Diego and surrounding areas
Soldier's Best Friend	http://soldiersbestfriend.org	Headquartered in Peoria, AZ, but has programs in Phoenix, Tucson, Prescott, Flagstaff, and Sierra Vista, AZ
Paws4People®-Paws4Vets Assistance Dog Placement Program	http://paws4people.org	Headquartered in Wilmington, NC with multiple programs throughout the mid-Atlantic and southeast region
Dogs on Deployment	http://dogsondeployment.org	Headquartered in Santee, CA but is an online network that can be used throughout the U.S.
Vets Adopt Pets™	http://www.vetsadoptpets.org	Headquartered in San Francisco, CA, but works with many pet shelters and rescues across the country
Pets for Vets, Inc.	http://pets-for-vets.com	Operates several chapters throughout the U.S.
Dunes Dog-Training Club-Pets N Vets	http://dunesdogtrainingclub.tripod.com	Hebron, IN
Specialty Dog-Training-Shelter to Solider™	http://specialtydogtraining.com	San Diego, CA
The Battle Buddy Program-Service Dog Program	http://tbbf.org	West Chester, OH
Animal Service Animal Society	https://www.dogs4vets.org/index2.php	Chandler, AZ
Guardian Angels for Soldier's Pet©-Warriors' Angels Program	http://guardianangelsforsoldierspet.org	Headquartered in Gatesville, TX, but operates several other programs throughout the state

efficacy of placing service dogs with veterans with PTSD in symptom reduction. Another organization, NEADS, Dogs for Deaf and Disabled Americans, trains dogs for people with physical disabilities. Clients come for two weeks of training before receiving a dog. NEADS' Canine for Combat Veterans program provides dogs at no cost to Veterans whose war injuries resulted in physical disabilities. Interestingly, NEADS was the first Assistance Dog organization invited to Walter Reed Hospital to give an in-service about how Assistance Dogs can help wounded veterans and was the first Assistance Dog organization to develop a program specifically geared to Iraq and Afghanistan war Veterans. Among other organizations, NEADS is partnered with Disabled American Veterans (DAV), the Military Order of the Purple Heart, and the Tower of Hope.

Despite promising potential and growing acceptance, the number of empirical studies on the human–animal bond in therapeutic settings remains low (Walsh 2009). As such, the extent to which HAI may help combat veterans with PTSD or other mental health maladies remains uncertain. However, national funding agencies, such as the Department of Defense and the National Institute of Mental Health, have begun to earmark dollars specifically for HAI studies, and several empirical investigations on the use of HAI with veterans are underway. For example, the authors of this chapter are currently investigating the extent to which an adjunctive, HAI-based intervention improves adherence to current evidence-based treatments for PTSD. The Research Center for Human–Animal Interaction (ReCHAI) at the University of Missouri has been conducting ongoing research examining the impact of shelter dogs living in the homes of combat veterans. Given the momentum of HAI and the emphasis on treating returning war veterans, there should be much data emerging over the next decade.

Considerations in Designing HAI Programs for Veterans

Clearly, the conjectural and antidotal evidence regarding the use of dogs to help veterans with mental health concerns is promising. The literature consistently suggests that veterans (as well as any individual) experiencing transition issues, loneliness, or general life stressors may reap psychological benefits from having a companion animal. However, when psychopathology or a more serious, diagnosable mental health disorder is present, specific considerations must be attended to prior to uniformly suggesting an animal to help with treatment. More broadly, our enthusiasm as a field must be tempered until the scientific evidence: (1) supports the use of canines in mental health treatments as being equal or superior to the well-established evidence-based therapies; and (2) elucidates the specific role and context of the animal in the patient's overall treatment plan.

Regarding the first concern, there have been no randomized controlled trials comparing animal interaction (whether it be AAA, AAT, animal training, or the possession of a SA) with current treatments. These types of direct comparisons are the "gold star" litmus test in the field of psychology. In assessing the value of an intervention, it is necessary to determine if it is as good or better than our current best practices. It may be the case that although an animal makes people feel good, the degree of change or progress in recovering from their disorder is much less than that of existing efficacious treatments. It also may be that current treatments are superior for most, but a subset of the population with particular features may benefit more from an animal-based or adjunctive intervention. Finally, animal interventions may be equally as effective as our current best practices; in this case, questions of parsimony and complexity must be considered.

While most recognize the value in the human–animal bond, an argument the potential for overdependent relationships between humans and companion animals is not without merit. For instance, Stallones et al. (1990) found that individuals

between the ages of 21 and 34 who were strongly attached to their pets were at risk of having fewer human social supports. In the same study, it was found that when strong attachments to pets existed in the absence of human supports for individuals between 35 and 44, the attachment was associated with emotional distress. More recently, the strength of the attachment bond has been recognized as a significant predictor of psychological distress experienced after the animal companion dies (Field et al. 2009). Psychological difficulties following the death of a companion animal include loss of motivation and increased stress levels (Brown 1996), social impairment (Walsh 2009), and depression (Sharkin and Knox 2003). Finally, Peacock et al. (2012) also highlight the psychological vulnerability of individuals reporting a strong bond with their animal companion. Interestingly, unlike the studies described above, strength of attachment to the animal companion did not mediate the impact of social isolation on psychological distress, suggesting that animal companionship may not compensate for a person's limited human social supports.

In addition to establish that incorporating animals into a therapy adds significant value to current gold-standard treatments, a second, related, need is to determine exactly how to integrate dogs into the treatment paradigm. As described throughout this chapter, the pairing of animals with veterans for the purposes of enhancing psychological functioning can take many different forms, from merely visiting with an animal (as in AAT), to dependency on the animal to leave one's house (as with a service dog). Historically, approaches have been somewhat atheoretical in that a particular mechanism of action to justify the introduction of a dog has not been considered. Ensuring that the HAI is aligned with the current knowledge base and scientific underpinnings for a particular problem is paramount. Otherwise, we run the risk of well-intentioned interventions having iatrogenic effects.

Contraindications of Service Animals for Veterans

As it relates to PTSD, experts in the field have raised concerns that AAT, ESA, and SA may do more harm than good. According to the National Center for PTSD,

> Although people with PTSD who have a service dog for a physical disability or emotional support dog may feel comforted by the animal, there is some chance they may continue to believe that they cannot do certain things on their own. For example, if the dog keeps strangers from coming too close, the owner will not have a chance to learn that they can handle this situation without the dog. Becoming dependent on a dog can get in the way of the recovery process for PTSD. Based on what we know from research, evidence-based treatment provides the best chance of recovery from PTSD. (U.S. Department of Veterans Affairs 2014)

Specifically, the treatment for PTSD—a disorder characterized by pathological avoidance—centers on exposure therapy. Although this may come in different forms (e.g., Prolonged Exposure, Trauma Management Therapy, Cognitive Processing Therapy, Eye Movement Desensitization and Reprocessing), the core

component of all effective PTSD treatments is exposure. Exposure involves the individual confronting feared stimuli, either in a graduated approach (systematic desensitization) or all at once (flooding), and is highly effective for any disorder that involves avoidance, including social phobia or panic disorder. Any type of device that allows the individual to engage in avoidance, whether it be watching a TV show to take one's mind off of distressing thoughts (avoidance of internal emotions), an enabling wife that does all the grocery shopping (avoidance of crowds) or drinking a six pack of beer (avoidance of physiological arousal) is referred to as a "safety signal" and is contraindicated for the treatment of PTSD, no matter how well-intentioned it may be. For this reason, the National Center for PTSD treatment guidelines now strongly caution against the use of benzodiazepines for the treatment of PTSD. While it may make it so that a person feels able to go to a restaurant, it is actually prolonging the illness in the long run, as the person is not learning how to go to a restaurant without the medication.

An analogous principle applies to canine companions. For example, programs that train dogs to "clear" a room for a veteran so that he or she feels comfortable to enter are actually covering up a problem, instead of working with the veteran on his or her distorted views on safety and the ability to cope with being in an area which he or she has not "secured." Similarly, a veteran who engages in AAT within a PTSD treatment paradigm will likely experience decreased tension, blood pressure, and pulse rate based on previous literature (Allen et al. 2001; Friedmann et al. 1983). Though on the surface this may seem desirable, the goal of combat trauma treatment is to encourage the veteran to fully confront and subsequently master his or her emotional demons. Anything that artificially promotes a sense of relaxation, whether it a medication, a dog, or a diversion, serves to prolong the problem from being addressed at its root. With depressive and mood disorders, there has been research into the role of experiential avoidance and how this serves to strengthen and prolong depressive episodes (Hayes et al. 2004). Mindfulness and acceptance-based approaches, often termed the "third wave" of psychotherapy, have been garnering strong empirical support in the contemporary literature. These approaches emphasize being able to "sit with," or tolerate, one's emotional experiences without attempting to distract, avoid, or mitigate. The use of "Service Animals" to aid with mental health problems has been an area of much debate in recent policy creation, national listservs, and position statements. Typically, a Service Dog is supplied to an individual with a disability that the dog either compensates for (e.g., a seeing eye dog helping a blind person cross the street) or assists with (e.g., a dog giving a warning that a seizure is imminent). In these cases, the dog is vital to the person improving his or her quality of life due to a permanent disability. However, where mental health problems are concerned, there exists a fine line between validation of a struggle and disempowerment; that is, problems such as PTSD, depression, substance abuse, and other common psychological sequelae of war are not permanent disabilities akin to blindness. This is a notion that the VA and other treatment facilities have worked hard to dispel, and a preponderance of the evidence supports the idea that these problems are highly treatable and, thus, temporary. As such, there is concern that, in addition to the

aforementioned role as a safety signal, giving a veteran a PTSD support dog (or permitting their ESA to accompany them at all times) sends a strong message that they are disabled and, due to their trauma, are incapable of navigating potential triggers without the protection or comfort of the animal. The VA does not currently provide veterinary care for SA secured through other avenues. However, research is currently underway within the VA to determine the extent to which a specially trained SA provides psychological benefit for PTSD above and beyond the general benefits of animal ownership.

Integrating Dogs into PTSD Treatment

This is not to say that there is no place for HAI in PTSD treatment; on the contrary, given that treatment acceptance rates are so low and attrition is so high, there is a vital need to develop palatable alternatives or adjunctive interventions to traditional therapy. Given the aforementioned heightened affective symptoms in male military veterans (e.g., affective flattening, interpersonal detachment), it appears that HAI is a viable option for such modifications, but it must be purposefully planned in a manner that augments, and not detracts from, existing best practices. Dogs may play a vital role in being a conduit for therapeutic rapport and trust, and can be an integral component to exposure therapy. For example, a veteran may first go outside only with his dog, then go outside with his dog for half the time and then alone half the time, eventually graduating going outside alone. Training dogs at a shelter typically relies on the same principles found in exposure therapy, particularly when using behavioral paradigms to decrease fear and increase sociability. For instance, teaching a dog that humans are nothing to be afraid of by coaxing the animal out of his kennel little by little approximates how a veteran might work with a therapist learn that the grocery store is nothing to be afraid of. This parallel process could be very valuable in increasing the veteran's "buy in" for engaging in exposure therapy.

> Dogs may also help with mindfulness-based approaches that emphasize being "present" in the here and now. To accomplish this, a variety of grounding techniques are used to focus the senses on the current moment. AAT may be a compelling option for this, allowing the veteran to practice mindfulness by focusing on the feel of the dog's fur, the sounds he makes when happy, or the visual contrast between the colorings on his coat. With respect to depressive and mood disorders, behavioral activation or getting out and doing activities is a vital component of almost all evidence-informed treatment approaches. Volunteering at a shelter to train dogs, taking a dog on a walk, or simply running errands associated with caring for a dog are all great ways to impel a person to leave the house. Additionally, the removal of a disorder is not the sole goal of psychotherapy; an increased quality of life and enhanced level of functioning must also be attended to (Seligman and Csikszentmihalyi 2000). Canine interaction has a documented positive effect in these areas (Nordgren and Engstrom 2014).
>
> Collectively, many opportunities exist to use dogs in psychotherapy with veterans while maintaining fidelity to the current knowledge base. Though this body of literature is in its

infancy, it is encouraging that no risks to the animals have been systemically identified thus far in AAT programs. In fact, the evidence seems to support the opposite notion, suggesting that such programs are beneficial to the animals, and thus engendering a symbiotic relationship. For example, Odendaal and Lehmann (2000) found that the neurotransmitter phenyl ethylamine is secreted when humans and animals intermingle. The amphetamine-like chemical is mutually produced in the pleasure center of the brain in both species during interactions.

Future Directions

Currently, there appears to be a continuum within the field of psychology anchored by two end camps: those who adhere strictly to empiricism and data-driven tools and interventions, and those who take a holistic approach, highlighting the differences between efficacy and effectiveness that invoke the use of complementary and alternative medicines. In our efforts to expand the use of HAI, we must help to integrate it from its current categorization in the VA as a complementary and alternative medicine toward the direction of empiricism (i.e., medicine) before it can be widely appreciated, implemented, or reimbursed by insurance agencies. As Kruger and Serpell (2006) note, the acceptance of HAI for the treatment of mental health problems has been hampered by a lack of a "unified, widely accepted, or empirically supported theoretical framework for explaining how and why the relationship between humans and animals are potentially therapeutic" (pp. 25–26). As such, it is imperative that future work focuses on the design and evaluation of randomized controlled trials to determine, and subsequently dismantle, the impact of HAI on the mental health of military personnel and veterans.

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