



# The Psychology of Pet Therapy: A Comprehensive Literature Review

**Khwaash Kapoor**

Psychiatric disorders are prevalent worldwide and are associated with high rates of morbidity and mortality (Whiteford et al., 2013). A strong point of consideration in the treatment of psychiatric disorders is that they do not follow a clear-cut textbook linearity, and there are high levels of variability even within a single class of diagnosis (e.g., See Miguel et al., 2005 for variability in obsessive-compulsive disorder phenotypes). Contemporary psychotherapy is based on a model where therapy is tailored to individual needs and requirements. In this model, apart from traditional pharmacological and psychotherapy, alternative therapeutic approaches have gained significant attention. Among these approaches, pet therapy, also known as animal-assisted therapy, has emerged as a compelling and widely explored avenue. The psychological benefits of interacting with animals have been acknowledged across various studies (e.g, Brodie & Biley, 1998; Giaquinto & Valentini, 2009; Cherniack & Cherniack, 2014), shedding light on the potential of animals to contribute positively to mental and physical health outcomes. This comprehensive literature review aims to delve into the various facets of pet therapy, examining its historical roots, methodological approaches, and empirical evidence supporting its efficacy in diverse clinical settings. Understanding the psychological mechanism underlying the positive impact of pet therapy can further inform and enhance the integration of this alternative therapeutic modality into mainstream health practices. We will end the review with some empirically driven suggestions to make animal-assisted therapy more accessible to countries in the global south, especially India. In this, we will also review the socioeconomic considerations of animal-assisted therapy and its implications on community mental health.

## What is pet therapy?

Companion animals provide socio-emotional support that facilitates coping, recovery, and resilience in adversity (Walsh, 2009). Pets' ability to respond to care and provide attention, unconditional love, and non-threatening physical contact satisfy crucial human needs of affection, love, and attachment. Attachment to pets provides psychological and social support (Beck & Madresh, 2008) and acts as a buffer against the aversive effects of stress (Janssens, 2021).

Harnessing this concept, pet therapy or animal-assisted therapy employs animals as supportive agents of recovery in the domains of mental and physical health. Pet therapy or animal-assisted therapy is defined as a “planned and structured therapeutic intervention” in which an animal that meets specific criteria forms an integral part of the treatment process to achieve specific goals such as “enhancing physical, cognitive, behavioral, and/or socio-emotional functioning” (International Association of Human Animal Interaction Organizations [IAHAO], 2014). Pet therapy has been shown to be an effective treatment for mental, behavioral, and neurological disorders across different demographic populations (Bernabei et al., 2013; Kamioka et al., 2014; Maujean et al., 2015; Nimer & Lundahl, 2007).

Pet therapy has been beneficial to patients in intensive care settings, pediatrics, with spinal cord injuries, and the elderly (Cole & Gawlinski, 2000; Giuliano et al., 1999; Gagnon et al., 2004). Pet therapy is documented to elicit positive responses from patients, including enhanced feelings of happiness, increased calmness, and reduced loneliness following a pet visit (Cole & Gawlinski, 1995). Additionally, there has been an observed decrease in anxiety, systolic pulmonary artery pressure, as well as reduced levels of epinephrine and norepinephrine (Cole et al., 2007). In the realm of pediatrics, a study conducted by Sobo et al. (2006) found that pet therapy serves as a distraction for children experiencing pain, potentially triggering comforting thoughts related to companionship and home. In general care units, patients have reported feelings of happiness, comfort, satisfaction, relaxation, attachment, and peace after a visit from a dog (Coackley & Somerville, 2003). The intervention of pet therapy emerges as a means to provide diversion and comfort by establishing a connection to the familiar (Johnson et al., 2008).

## What is the history behind pet therapy?

The animal-human bond has been subject to significant changes over the course of history, with the relationship dating back to more than 50,000 years ago (Hosey & Melfi, 2014). An increase in animal-human interactions over time led to a rise in anthropomorphism (Hyry, 2021) contributing toward the domestication

of animals approximately 15,000 years ago (Ernst, 2014). This domestication allowed the animal species to serve a variety of purposes, with some animals being used as a source of food, some serving as objects of adoration, and others being regarded as noble and being assigned positions of high status (Ernst, 2014, p1).

Florence Nightingale was the first to identify the therapeutic potential of animals in 1860 (Ernst, 2014), when she referenced the potential value of human-animal contact in one of her many writings (Beck et al., 2018). Here, Nightingale describes, “A small pet animal is often an excellent companion for the sick, for long chronic cases especially. A pet bird in a cage is sometimes the only pleasure of an invalid confined for years to the same room. If he can feed and clean the animal himself, he ought always to be encouraged to do so.” (Nightingale, 1860.) Her writings suggest that recovery, specifically in adults and children living in psychiatric institutions, can be facilitated by the presence of small animals, allowing therapy with the use of pets as a treatment for anxiety to begin to grow in popularity (Ernst, 2014).

In the 1930s, further progress was made by Sigmund Freud, who predicted, through observation of his dog Jo-fi during psychotherapy sessions, that dogs had a “special sense” (Ernst, 2014) enabling them to sense tension in a patient and ease anxiety levels, thus allowing patients to relax and confide in Freud (Pai-Dhungat & Verma, 2020).

In the 1960s, Boris Levinson observed that interaction with a dog during therapy sessions was able to facilitate communication in a non-verbal 9-year-old. Upon this realisation Levinson began to find similar benefits of dogs being present during therapy with other children facing similar issues (Ernst, 2014). Boris Levinson's consequent publication of his findings was one of the first to clearly show the benefits of animals for children, both in terms of their development and in therapeutic settings. (Beck et al., 2018).

Finally, in 1964, Levinson first introduced the term ‘pet therapy’ (Pai-Dhungat & Verma, 2020), leading to the subsequent establishment and normalisation of a form of human therapy involving animals.

### **Neuroscience of pet-therapy**

While there is empirical evidence of the benefits of pet therapy on one’s mental and physical health, it is worth examining the neuroscientific basis of the effects of pet therapy. Gocheva et al. (2017) conducted a randomized controlled trial of brain-injured patients. The experimental group was subjected to standard therapy sessions like speech therapy, physiotherapy, and occupational therapy. The control group was subjected to animal-assisted therapy for an equal duration as the experimental group. Post-test results demonstrated that the control group reported higher levels of alertness and concentration during animal-assisted therapy sessions.

This is one of many studies to support the hypothesis that human-animal interactions support human attention and concentration performance. In a self-rating study, children and adolescents in a psychiatric facility reported themselves to be more attentive and concentrated, and less distractible after a half-hour interaction with a dog (Prothman et al., 2006). A sequence of investigations conducted by Gee and colleagues revealed enhanced performance in various tasks for preschool children when a dog was present, suggesting improved concentration (Gee et al., 2012; Gee et al., 2010; Gee et al., 2007). In a separate study, parents of 19 autistic children noted improvements in directed attention, social motivation, reduced inattention, and decreased distractibility after 12 weeks of equine-assisted therapy (Bass et al., 2009). Cipriani and colleagues (2013), in their review, discuss a Japanese study reporting heightened alertness, and activity levels in Alzheimer's patients following 12 sessions of dog therapy (Mano et al., 2003).

Hediger and Turner (2004) discovered that school-age children exhibited a "higher learning effect" in the neuropsychological attention task "Cancellation Screen" when a real dog was present compared to when a robotic dog was present. Moreover, they observed increased brain activity in the frontal lobe, examined through passive infrared hemoencephalography (PIR HEG), during three neuropsychological tests in the presence of a dog (Hediger & Turner, 2014). Finally, Bottger and colleagues (2010) demonstrated heightened cerebral activity in the visual-attentional brain network of healthy individuals while watching moving animals, as opposed to optokinetic computer stimuli.

In the explanation of why humans and animals relate to each other, biologists turn to a four-level approach (Tinbergen, 1963). These are:

1. The potential adaptive value in the relationship
2. The physiological, neurological, and psychological mechanisms behind it,
3. The ontogenetic development of the relationship, particularly during early life histories, and
4. How this relationship has developed over our evolutionary history.

The neuroscientific benefits of pet therapy are based on the adaptive value of human-animal companionship and what this relation entails in the context of survival in the evolutionary sense. The literature overwhelmingly points to the neurological benefits of either having or interacting with a pet for normatively as well as non-normatively developing children. Such interesting insights beg the question of whether there would be any difference in the brain networks of children who grow up with pets versus those who do not,

with particular emphasis on the cortical regions related to attention, concentration, memory, and happiness.

This is an interesting gap in literature that can be addressed by future studies.

### **Psychological theories of pet therapy**

Cognitive theory posits a continuous reciprocal relationship between an individual's cognitions, behavior, and environment. For individuals with an insecure attachment style, their perceptions of the world may be characterized by feelings of shame or rejection. Strong negative emotions become associated with memories of rejection, leading to the formation of a self-image as unlovable and a perception of others as unavailable. This unhealthy cognitive model is then manifested in behavioral patterns (Siegel, 1999). For example, a person who perceives themselves as "bad" may exhibit corresponding "bad" behavior, reinforcing societal treatment of them as such. Psychological disorders, according to Patterson (1986), arise from a mismatch between the internal cognitive processing system and the interpretation of external stimuli related to these distorted representations.

Aaron Beck (1976), a pioneer in cognitive therapy, asserts that psychological problems may result from common processes such as faulty learning, making incorrect inferences based on inadequate information, and insufficiently distinguishing between imagination and reality. Unrealistic thinking, derived from erroneous premises, can lead to self-defeating behavior rooted in unreasonable attitudes (pp. 19–20).

A healthy sense of self, according to cognitive theory, relies on autooiesis or self-knowing within autobiographical memory. Autooiesis is contingent on the critical development of frontal cortical brain regions influenced by social interactions (Siegel, 1999), aligning cognitive theory with attachment theory.

In cognitive theory, individuals react to events based on the meaning they attribute to those events. Patterson (1986) suggests that a person's emotional response or disturbance is contingent on how they perceive events impacting their personal domain. Distorted thoughts, akin to automatic thoughts, are reflexive and plausible to the individual but resistant to change. Observations within the emotional support program reveal that many enrolled students exhibit insecure attachment, struggle to regulate emotions, and perceive themselves as "bad." These students may engage in self-destructive behaviors stemming from self-hate or adopt a tough, uncaring personality. The interconnectedness of physiological, psychological, and cognitive features implies that developments in one area impact the others. Cognitive theory posits that intervening in a student's emotional state through animal-assisted therapy can disrupt the cycle of negative automatic thoughts and contribute to the development of a healthier attachment and self-concept.

## Pet therapy as adjunct psychotherapy

In a study by Kogan et al. (1999), two case studies explored the application of Animal-Assisted Therapy (A-AT) with children having emotional disorders. The participants, aged 12 and 11, were selected from an emotional support classroom with ongoing counselling and an Individualized Education Plan (IEP). Despite the additional support, these students showed no improvement. A-AT sessions, lasting 45–60 minutes each, were conducted for fourteen sessions. Goals were established by the IEP team, and progress was monitored using the ADD-H Comprehensive Teacher Rating Scale, observational notes from educational professionals, and video recordings. Results indicated positive changes in the students' use of positive comments, reduced distractibility, increased eye contact, improved appropriateness of voice tone, and a heightened sense of control. The Achenbach Child Behavior Checklist completed by regular education teachers also demonstrated a significant reduction in behavioral pathology in the A-AT group compared to the control group.

Katcher and Wilkins (1994) conducted an experimental study at Devereux, examining the use of animals with children diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) and Conduct Disorder (CD). The study involved two voluntary experiences, an Outward Bound (OB) course and a Companion Zoo (CZ) program. The CZ program, focusing on nature education, demonstrated higher attendance rates and faster educational progress than the OB program. The Zoo, housing various animals, provided therapeutic benefits, reducing agitated and aggressive behavior, improving cooperation, and enhancing behavioral control within six months. The positive effects were observed in the Zoo environment and generalized into the regular school setting. Katcher and Wilkins (1994) concluded that animal-assisted therapy and education exerted a persistent and broadly distributed therapeutic effect on highly aggressive and emotionally disturbed children and adolescents.

Ainsworth et al. (1991) defined attachment figures with features including proximity maintenance, separation distress, secure base, and safe haven. Dog companionship has been associated with providing proximity maintenance, separation distress, and a secure base. Kurdek (2009) explored whether dogs can serve as attachment figures by studying whether owners turn to their dogs to alleviate stress. Results indicated that participants were more likely to turn to their pet dogs during emotional distress than to their mothers, fathers, siblings, best friends, and children. Hanselman (2001) conducted a study on coping skill interventions with adolescents in an anger management group with therapy dogs. The study, grounded in cognitive-behavioral therapy and attachment theory, demonstrated increased animal bonding, elevated feelings of happiness,

security, and self-worth, and reduced feelings of loneliness, isolation, and stress. Similar studies by Lange et al. (2006/2007) reported that adolescents involved in anger management groups with A-AT felt a calming effect, increased safety, and enhanced motivation to attend group sessions, suggesting increased empathy.

### **The procedure of pet therapy**

The administration of pet therapy within one's treatment is overseen by the designated healthcare professional or therapist. A proficient handler, typically the proprietor of the animal, accompanies the pet to each session and collaborates under the supervision of the healthcare provider to facilitate the attainment of therapeutic objectives. Volunteer handlers are commonly engaged in this capacity. Ensuring the secure handling of both the therapy recipient and the pet necessitates a meticulous discourse on appropriate pet-handling protocols.

The inaugural stage of pet therapy involves the meticulous selection of a suitable animal. Numerous groups and organizations are dedicated to training and pairing volunteer owners and their pets with healthcare providers. Prior to the commencement of pet therapy, the animal-handler dyad must adhere to specified prerequisites. This comprehensive process entails:

1. Subjecting the animal to thorough physical examination to validate its immunization status and ascertain its freedom from diseases
2. Enrolling the animal in regimented obedience training course to ensure optimal control
3. Enrolling the handler in an instructional course designed to impart knowledge on effective interaction with diverse individuals
4. Conducting a comprehensive assessment of the animal's temperament and behavioral dynamics in conjunction with the handler
5. Securing certification from the endorsing organization

Upon the approval of the animal-handler team, the allocation of animals for therapy is contingent upon the specific needs of the individual. Consideration of the animal's type, breed, size, age, and inherent behavior guides the determination of the most suitable therapeutic context.

### **Ethics of Pet therapy**

With pet therapy increasing in popularity, it must be ensured that the involvement of animals in this therapeutic practice is morally justified, with pet therapists working with their animals as opposed to exploiting them for the aforementioned benefits that pet therapy can bring (Zamir, 2006). The ethical considerations of

the practice of pet therapy are best described by the following statement, “At all times, the rights of the animals shall be respected and ensured. This includes humane treatment, protection from undue stress, and availability of water and exercise area” (Grammonley et al., 1997, p.2). One of the most crucial factors is maintaining the safety and well-being of animals, with it being paramount that therapist attention is divided equally between client and animal (Narvekar & Ghani, 2022). Best put by the title of an article published in 2021 by Cox and Day, it is imperative that we are able to distinguish between the use of animals as “therapeutic partners” as opposed to “therapeutic tools”. With the involvement of specific dogs in therapeutic practice potentially exposing them to significant stress, burnout, and fatigue (Collica-Cox & Day, 2021), our primary concern should be to ensure the welfare of the animals involved in pet therapy can be maintained.

### **The consideration of who can afford pet therapy**

The use of pet therapy the WEIRD (Western, Educated, Industrialized, Rich, and Democratic) cultures exhibits some disparities and engenders the perception that it is more accessible to or utilized by affluent individuals. For example, almost all research cited in this review article is contextually based in the global north, with almost no representation of the global south. The global south, with its collectivistic culture has historically shared an organic relation with animals, specifically dogs. Therefore, it is imperative to capture this demographic in subsequent studies of pet therapy as an adjunct psychotherapy for folks in the global south. This potential disparity between the global north and the global south in using pet therapy as an adjunct therapy could arise from several factors:

- Availability of resources: Regions with higher socioeconomic status may have more resources, including trained therapy animals and qualified handlers, making pet therapy more accessible. Affluent areas might have greater infrastructure to support and fund such programs.
- Awareness and education: Affluent communities often have better access to information and educational resources. This could lead to greater awareness of the benefits of pet therapy and a higher likelihood of individuals seeking out or recommending such interventions.
- Urban versus rural disparities: Urban areas, often associated with higher socioeconomic status, may have more facilities, such as hospitals or mental health clinics, offering pet therapy services. Rural areas might face challenges in terms of the availability of trained therapy animals and professional handlers.



- **Cultural factors:** Cultural attitudes and preferences can influence the acceptance and utilization of pet therapy. Affluent regions may be more open to embracing non-traditional therapeutic approaches, including those involving animals.
- **Cost considerations:** Affordability and insurance coverage could impact the accessibility of pet therapy. If the costs associated with maintaining therapy animals and conducting sessions are high, individuals with higher incomes might be more likely to afford such services.

It is essential to recognize, however, that efforts are being made to broaden the availability of pet therapy across diverse communities. Many programs aim to make these interventions inclusive and accessible to individuals from various socioeconomic backgrounds. Additionally, research and advocacy in the field emphasize the therapeutic benefits of animal-assisted interventions for a wide range of populations, encouraging inclusivity.

Misconstruing pet therapy as exclusively for the affluent may overlook its potential benefits for individuals across different economic strata. Efforts to address these disparities involve promoting awareness, advocating for inclusivity, and developing strategies to implement pet therapy programs in diverse regional and cultural contexts.

### **Recommendations for future research**

From a scientific standpoint, it is imperative to conduct more research on pet therapy to understand the exact pathways through which we benefit. The identification of causal pathways through randomized controlled trials with relatively large sample sizes will help explain many phenomena that are currently unanswered. For example, we do not know for certain the trajectory of change in neural accommodation to pet therapy. Does the brain chemistry change as a function of exposure to the pet, or do component cognitive correlates like attention and concentration lead to a healthier neural functioning? We also do not know about the cognitive profile of children and adults who have pets versus those who do not- do pets significantly contribute to a quantifiably healthier life? Research on these questions is an interesting direction for psychology as a whole.

### **Conclusion**

In conclusion, the comprehensive literature review presented here highlights the multifaceted nature of pet therapy, shedding light on its historical roots, psychological theories, neuroscientific underpinnings, and

practical considerations. The therapeutic benefits of interacting with animals, as demonstrated through numerous studies, underscore the potential of pet therapy to positively impact mental and physical health across diverse populations. From Florence Nightingale's early recognition of the therapeutic potential of animals to Sigmund Freud's observations and Boris Levinson's pioneering work in the 1960s, the historical trajectory of pet therapy reveals a continuous evolution toward its acceptance and integration into mainstream therapeutic practices.

The neuroscientific exploration of pet therapy adds another dimension to our understanding, showcasing how human-animal interactions can influence brain functioning, attention, and concentration. The review also delves into psychological theories, emphasizing the role of pet therapy in disrupting negative cognitive patterns and promoting healthier attachments and self-concepts, particularly in individuals with insecure attachment styles.

Practical aspects, such as the procedure of implementing pet therapy, ethical considerations, and the potential socioeconomic disparities in access to pet therapy, are crucial factors that must be carefully addressed. The ethical guidelines underscore the importance of ensuring the well-being of animals involved in therapy, emphasizing their rights and humane treatment.

As we contemplate the future of pet therapy, it is evident that more rigorous research is needed to unravel the specific pathways and mechanisms through which individuals benefit from these interventions. Addressing unanswered questions regarding the cognitive and neural changes associated with exposure to pets, as well as the potential cognitive profiles of individuals with pets, will contribute to a more nuanced understanding of the therapeutic impact of animals.

Furthermore, recognizing the potential socioeconomic disparities in accessing pet therapy highlights the importance of making these interventions inclusive and accessible to diverse communities. Efforts to bridge these gaps should involve promoting awareness, advocating for inclusivity, and developing strategies to implement pet therapy programs in various regional and cultural contexts.

In essence, the literature review presented here underscores the promising role of pet therapy in enhancing mental and physical well-being. By embracing a holistic approach that integrates scientific research, ethical considerations, and practical implementation, we can pave the way for a more comprehensive and inclusive incorporation of pet therapy into the realm of mental health interventions.

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