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**Pet Therapy:**

**Benefits and Educational Strategies for Implementing Animal-Assisted  
Interventions**

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## INTRODUCTION

Pet therapy, or Animal-Assisted Therapy (AAT), is becoming more recognized as a healthcare field that involves therapeutic interventions based on human-animal interaction to achieve emotional and physical improvements. Although it was once considered to be somewhat novel and unusual, it is now gaining more attention in therapeutic settings, as well as by a growing number of interdisciplinary scientists and practitioners who are interested in studying and utilizing AAT ( Fine, Beck and Zenithson, 2019).

Specially trained animals, including dogs and cats (but also horses, farm animals, and others), are employed to interact with individuals who are struggling with a wide range of health-related problems.

However, from an operational point of view, there is a need to clarify the different definitions concerning this particular field, considering the evolution of animal activities, which nowadays extends into different non-therapeutic areas, such as educational, social, and lifestyle-related fields. We can distinguish between Animal-Assisted Activities (AAA) and Therapies (AAT), based on their methodological and operational differences.

Animal-Assisted Activities' main objective is to enhance the psychological and physiological well-being of people with special needs, like elderly people, hospitalized patients, and disabled individuals. The meetings, whether held alone or in a group, do not require specific goals and instead emphasize spontaneous interactions with the animals. Benefits such as improvement of mood and socialization have been observed in different contexts where AAA has been implemented, such as pediatric wards or nursing homes.

AAA can also comprehend Animal-Assisted Education (AAE), which uses animals to

stimulate the cognitive and social skills of children and adolescents, and Human-Animal Support Services (HASS), which promote a healthier relationship between humans, animals and nature, without direct therapeutic purposes.

Animal-Assisted Therapy (AAT) is an actual therapy that has predefined objectives, like enhancing physical, cognitive, or psychosocial abilities, and is integrated into traditional therapies to treat diseases such as psychomotor disorders, Autism, multiple sclerosis and other conditions. Unlike AAA, AATs are Monitored continuously, with documented targets and results.

The distinction between AAA and AAT is not only conceptually important, but also practically relevant, since it requires different methodologies and professionals (C. Scheggi, 2006)

Therefore, the term Animal Assisted Interventions (AAI) will be used to refer to the therapeutic area of this topic. These interventions can be carried out in many different environments and therapeutic settings, but they require the expertise of trained professionals. There are many advantages to be gained from the presence of the co-therapist animal and the interaction with it, both visually and tactile.

Even in situations where verbal expression is difficult, animal-assisted practices have been proven to be very effective, allowing patients to communicate and express themselves without fear of judgment or prejudice. The presence of the trained animal creates a comfort zone of unconditional acceptance, where the individual feels protected and understood, helping to reduce communication barriers and facilitate emotional expression.

In situations like neurological illnesses and psychiatric issues, where animals can supplement or replace traditional therapeutic models, these activities are highly effective,

but they are also useful in related physical and psychological pathologies. This thesis presents the fundamentals of AAI and their therapeutic value, and describes the necessary methodologies to train professionals on its application.

In Italy, according to the Decree of the President of the Council of Ministers of February 28, 2003, the use of pets for therapy is officially recognized as a cure. For the first time in the history of the country, such a Decree has clarified the role that an animal can play in the emotional life of a person, as well as the therapeutic value of animals (Istituto Superiore Sanità, Cirulli-Alleva, 2007- ISTISAN 07/35).

Currently, there is no specific law in Italy regarding this topic, but there have been some initiatives at the regional level. The absence of legislation has led to a flourishing of initiatives using animals for therapeutic purposes. To protect both human health and the welfare of animals used in therapy, all professional categories working in this field should adopt standardized methodological tools and guidelines. It should be noted that the elderly or children are the most frequent stakeholders, which are particularly vulnerable and require targeted action, especially when it comes to specific diseases (ISTISAN).

## **CHAPTER 1**

### **HISTORY, THEORETICAL FRAMEWORK AND SCIENTIFIC PRINCIPLES**

#### **1.1 Origins and Historical Development**

The therapeutic interest in Animal-Assisted Interventions began at Yeshiva University, when Boris Levinson (a child psychologist practicing since the 1950s) brought his dog Jingles to work. With the pet in the room, Levinson was finally able to communicate with patients who had previously been unreachable. Levinson wasn't the first specialist to bring an animal as an active actor of his therapy, but he was the first to provide a thorough and compelling account of it by publishing "Pet-Oriented Child Psychotherapy" in 1969 (Meers - Samuel, 2007)

Levinson actually witnessed a young patient, who was typically nonverbal and severely withdrawn during treatment, interacting and talking with the dog, Jingles, in an unplanned interaction (Fine, 2015). This fact led the therapist to consider the possible benefits of incorporating a dog into his psychotherapy sessions (Levinson, Mallon, 1996). In 1964, Levinson coined the term "Pet Therapy" - According to Levinson and Mallon's early lectures about his impressions of this new therapy, Levinson was ridiculed and belittled by his colleagues. But when he learned about Freud's experiences with his own dog, it seemed like a form of validation. Freud's Chow Chow, Jofi, was frequently present in his office with him during psychotherapy sessions, as evidenced by various sources. The dog was originally in the room as a comfort to the psychoanalyst, who claimed that he was more relaxed when the dog was nearby. However, Freud soon began to notice that the presence of the dog seemed to help patients during their therapy sessions as well. This difference was most marked when Freud was dealing with children or adolescents. It

seemed to him that the patients seemed more willing to talk openly when the dog was in the room. They were also more willing to talk about painful issues. The positive results were not limited only to children, but also were seen in adults. Thus it became clear that Freud had observed very much the same phenomena that Levinson described. The evidence that Freud was open to the use of animal helpers in psychotherapy brought about a shift in the climate, prompting the laughter to stop and serious work to begin.

While other cultures used animals for healing, the ancient Greeks were the first to provide written records of this practice. Occasionally, in Greece, horseback rides through the countryside were suggested as a therapy for terminally ill patients.

Dogs were believed by the Greeks to have a connection with the medicine demigod Asklepios, and they were allowed to help the sick in various settings. In his book “Greek Hero Cults and Ideas of Immortality” (1921), Lewis Farnell mentions that certain temples allowed holy dogs to roam among the healing worshipers, licking their injuries. Even though dog saliva has some bactericidal properties, the dogs likely provided the most benefit just by offering companionship and solidarity.

Anne and Alan Bowd propose that the earliest systematic application of Animal Assisted Interventions was established in the 9th century in Gheel, Belgium. The families in Gheel showed empathy towards individuals with mental and/or physical disabilities. One of the ways the residents assisted those under their care was through natural therapy, which included teaching them how to take care of pets (Bowd & Bowd, 1989).

Nevertheless, their method did not become widespread. Books from the 17th century talk about utilizing horseback riding as a treatment for low spirits, anxiety disorders, and even gout (Wilson & Turner, 1997) .

At the Retreat, a modern psychiatric facility in York, England founded by Quaker

William Turk in 1796, small domestic animals were employed in certain treatments (Digby, 1985).

According to Levinson (1969), the American Red Cross created a program in 1944 to assist animals in providing emotional support to distressed airmen at the American Air Force Convalescent Center in New York. However, this form of treatment was not actively promoted.

Another contribution was brought in the 1970s by the Nobel-winning specialist in Medicine and Physiology, Konrad Lorenz, who definitely changed the human view and perception of animals. His research, in fact, established the role of animals as “cultural beings and animal-persons”, acknowledging them as capable of experiencing emotions and feelings in the same way that humans do (Fine, Aubrey, 2019).

Later in 1978, the first Animal Protection Law passed in Switzerland, followed by a regulatory ordinance in 1981. Later, in the 1990s, Animal Assisted Therapy gained popularity throughout Europe, leading to a growing interest in Anthrozoology, the field that studies human-animal relationships and interactions.

In Italy, the “State Regions Arrangement on Companion Animal Welfare and Pet Therapy”, which was officially adopted by the Council of Ministers in February 2003, set the basis of the regulation of men’s relationship with their companion animals. Its main objective is to foster and regulate a more harmonious relationship between them, prevent any mistreatment, and safeguard the animal's dignity, particularly through innovative therapeutic practices that involve them as active actors. Additionally, this Act acknowledges the obligations previously established by the WECA (World Organisation for Animal Health) for Animal Handlers, defining their duties for the health and well-

being of the animal (Journal of Animal Law, Vol IV, April 2008).

A significant turning point was achieved on March 25, 2015, when the National Guidelines for Animal-Assisted Interventions were approved by the State-Regions and Autonomous Provinces Agreement, which officially changed the term “Pet Therapy” to “Animal-Assisted Interventions”. This change highlights the structured approach of these interventions and the critical role of trained professionals. Thus, the law in Italy now recognizes that pet therapy extends beyond simple companionship, admitting it as a structured therapeutic process that requires professionalism and serious preparation.

## **1.2 Theoretical Framework**

Pet therapy relies on a handful of psychological theories that explain how our interactions with animals can bring about healing and emotional comfort.

### ***Attachment Theory***

Attachment Theory (1969) was developed by John Bowlby, which contends that the relationships we develop with our primary caregivers as children have a substantial impact on how we perceive and construct emotional and relational realities. Bowlby acknowledged the importance of secure attachments in the development of a sense of safety, self-worth, and emotional contagion. Pets frequently serve as “secure attachments” in pet therapy for individuals who may not respond positively to more traditional human relationships (Bowlby, 1969).

Pets often provide companionship that is not based on judgments and is unconditional, which allows individuals to experience love and support properly. For those who are experiencing internal mental health issues, a pet's secure attachment bond can help them feel secure and stable, among other emotional benefits, and teach them how to self-soothe

during stressful times.

It has been proven that interaction with therapy animals can lower the levels of stress and anxiety. In part, this is because animals are comforting and have been shown to increase the release of oxytocin, a hormone related to bonding and inhibition of aggression, as demonstrated by Beetz et al. (2021). Emotional support from these relationships can reduce feelings of loneliness and contribute to overall mental well-being.

### ***Biophilia Hypothesis***

Edward O. Wilson proposed the Biophilia Hypothesis (1986) as a supplement to Attachment Theory. It argues that humans have a natural tendency toward nature and other living creatures (Cirulli & Borgi, 2011). This theory suggests that our relationship to nature is not only beneficial, but critical for better health of body and mind. This biophilic relationship, expressed in the context of pet therapy, is a therapeutic bond between humans and animals that helps cope with daily pressures due to sensations like happiness, comfort or peace evoked by having creatures at our side.

According to Wilson's theory, animals help reduce stress and increase emotional stability as well as satisfaction with life. Through companionship, pets can provide access to the natural benefits of nature. They can help generate physical activity, social interaction, and emotional expression.

Additionally, the combination of attachment theory and Biophilia hypothesis into pet therapy may also help provide appropriate support to therapists in their work, benefitting both client-animal relationships and interventions. For instance, understanding how pets can form secure attachments could then direct practitioners to use animal-assisted interventions in order to build trust and emotional security with their clients.

With the recognition of humanity's intrinsic biophilic tendencies, therapists can create more effective therapeutic environments by integrating animals into their practice. The presence of these pets can create a friendly and warm environment that gives an immense boost to open communication and the ability to convey emotions or feelings, creating interpersonal connections among the members and leading to more effective therapy sessions.

These theoretical frameworks of Attachment Theory and the Biophilia Hypothesis offer significant insights into what is going on at a more intra-personal level when using Animal Assisted Interventions: these theories not only help understand the emotional and psychological benefits of human-animal interactions, but they also provide insights into successful therapeutic practices for clinicians to improve their practice outcomes.

As research in this area grows, more investigation into these theories will deepen our understanding of how pets contribute to emotional and physical health, further substantiating the importance of pet therapy as a benefit for well-being.

### **1.3 Scientific principles behind the Human-Animal Interactions**

The therapeutic benefits of human-animal interactions (HAI) have recently been established in a growing body of psychological and physiological research. For instance, Beetz highlighted the psychosocial and physiological effects of these interactions, which are suggested to contribute, at least in part, towards the release of oxytocin, a hormone that promotes bonding and regulates emotions. This release of neurochemicals underscores the value that animals bring not just as life companions, but also as active agents in our healing process. The benefits of pet therapy in reducing anxiety, depression and stress-related symptoms have been proven particularly meaningful for individuals with psychiatric diseases, especially PTSD (Post-Traumatic Stress Disorder) and ASD

(Autistic spectrum Disorder) patients, but other fields, such as Alzheimer's and eating disorders related diseases, have shown relevant results. (Beetz et al., 2021)

Nowadays, Pet therapy has become a popular addition to many social and healthcare settings, where each animal is trained for a specific purpose. This resulted in a distinction between the types of animals that will be used in Pet therapy, the so-called "Companion Animals", and the other types. In the Agreement between the Regions and the Ministry of Health (2003), was stated that "Companion Animals" are animals belonging to the domestic species, kept by men for companionship or affection, with no purpose of production or feeding, including animals that perform useful activities for men, like for example assistance dogs for people with disabilities, therapy animals, and rehabilitation animals.

The "Journal of animal law" (Vol. IV, April 2008) offered a detailed explanation of the animals considered in Animal-Assisted Activities with the specific tasks or function of the animal related to the type of intervention in which it is involved:

- ***Familiar Animal***: these are animals that are considered to be owned by humans, as they usually live with humans and they eventually create a special emotional relationship through living together.
- ***Service Animal***: they have a single person who may use the Service Animal for a long time and they stay at home with the person who the animal is meant to assist (which usually means serious and physical limitations, such as blindness or severe physical impairments). These creatures serve as an extension of the individual, helping with activities that would otherwise be difficult or even impossible for that individual. Service Animals are most commonly dogs. Only after extensive training from professionals in animal behaviour and canine

psychology, they are placed with humans in need.

- ***Social Animal (or Pet Partner)***: trained animals that go to Animal-Assisted Therapy programs, and get prepared for therapeutic purposes.

In 2015, the American Humane Organization conducted scientific research in five pediatric hospitals to ensure the well-being of animals. Their purpose was to monitor the levels of cortisol (informally known as the “stress hormone”, since it rises following mental or physical stress) in 26 social animals during their visits to the patients. The evidence suggested that not only the pets didn't present stress responses, but their happiness was enhanced when children focused their attention on them, talked to them, petted them, or interacted with their toys, reaffirming that Animal-Assisted Interventions are advantageous for humans, while making the animals happy and lively as well.

**CHAPTER 2**  
**BENEFITS, METHODOLOGY, CHALLENGES AND IMPLEMENTATION**  
**OF ANIMAL-ASSISTED INTERVENTIONS**

**2.1 Therapeutic and Social Benefits**

Animal-Assisted Interventions are, as previously mentioned, a highly effective approach in the field of mental health and well-being. The growing evidence of the benefits that animals provide in therapy, suggests their strong impact on patients' health, and in the creation of an inclusive and innovative therapeutic setting.

We can distinguish the advantages derived from:

***Physical Benefits***

A large variety of studies demonstrated that HAI (Human-Animal Interaction) can positively affect our physical health, and AAI (Animal-Assisted Intervention) can help reduce blood pressure, lower cholesterol levels and improve cardiovascular health (Fine, 2018). Moreover, the presence of a companion animal can encourage physical exercise and personal health-care. In fact Friedmann et al. (1980) demonstrated that domestic animal owners present a lower mortality rate from heart-related diseases, suggesting a positive link between pet companionship and cardiovascular health.

Dog ownership has been shown to reduce mortality risk by 27% in stroke survivors. The therapeutic benefits of dogs for stroke patients include emotional support and encouragement for physical activity (leading to an improvement in blood pressure, lipid levels and blood glucose), and improvements in speech and language skills, especially among individuals with aphasia. Furthermore, post-stroke recovery can be aided by dogs in creating a calming rehabilitation environment that promotes independence and self-

sufficiency (Boldig, Butala, 2021).

Animals' positive impact on cardiovascular health, has led to the assumption that dogs may also improve neurological health. Research on dog ownership has shown reduced mortality rates and faster recovery from conditions like stroke. Although the relationship between AAI and neurological diseases has not been extensively researched, Animal-Assisted Therapy (AAT) has demonstrated improvements in motor, cognitive, and emotional function for people with various neurological conditions (Boldig, Butala, 2021).

Besides, support animals, especially trained service dogs, have the remarkable ability to detect specific physiological changes in their owners, such as impending epileptic seizure, hypoglycemic attacks or other medical events, often before these changes are noticeable to humans. Research indicates that these animals may pick up on subtle shifts in body chemistry, such as changes in scent or variations in behaviour and movement patterns, that occur prior to seizures or episodes like hypoglycemic events in people with diabetes. This early detection enables the animal to alert its owner, often through nudging, barking, or displaying specific learned behaviours, providing the individual with time to find a safe place or take preventive measures. This skill is particularly beneficial for those with unpredictable conditions, improving their safety and independence in everyday life (Goodavage, 2019). Moreover, Pet therapy has been shown to help reduce pain perception. Studies suggest that the presence of animals can act as a distraction from chronic pain or the pain associated with medical procedures. For example, therapy dogs are often used in hospitals to help patients undergoing painful treatments or surgeries, providing a calming effect and a sense of relief. In physical therapy contexts, animals can be integrated to encourage physical movement and exercise. Pet therapy can motivate

individuals to participate in physical rehabilitation by making exercises more engaging and less monotonous, and it can help improve motor coordination, mobility and strength, especially for people with disabilities, stroke survivors, or patients recovering from surgery.

### ***Neurological Disorders Benefits***

The results of employing horses, donkeys, fish, and dogs in therapy for cerebral palsy, autism, spasticity-related disease, dementia, and intellectual disability have been compiled by Muñoz et al.'s research (2011), which highlighted how support animals can help people with various neurological illnesses improve their motor, verbal, social, and emotional skills. Although using multiple animals has its merits, the study focused on dog ownership and dog-assisted treatment to see if there are still advantages for neurological conditions. The study examined and proved the effect of endurance exercise on the progression of neurological illnesses, as animal ownership is frequently associated with more movement and exercise.

### ***Parkinson's Disease***

Dog ownership in Parkinson's patients can reduce medication use and improve physical symptoms. The increased physical activity associated with walking a dog helps reduce fatigue and enhance cognitive function. The psychological benefits of dogs include confidence boost and safety improvement, particularly for patients who experience freezing episodes or falls. Service dogs trained for Parkinson's patients have been shown to assist with mobility and prevent injuries. (Boldig, Butala, 2021)

### ***Multiple Sclerosis (MS)***

Previously, exercise was thought to be detrimental for MS patients, but recent studies suggest it can reduce the number of disease relapses and even reverse brain damage

caused by the disease. Regular physical activity, such as walking a dog, has been linked to an increase in brain volume and an improvement of the cognitive functions like processing speed, attention and mental flexibility. The use of assistance dogs can also enhance the mobility, safety, and independence of Multiple Sclerosis patients.

### *Dementia*

Despite the lack of a specific cure for dementia, animal-assisted therapy has demonstrated promise in improving patients' mood, reducing agitation, and even enhancing cognitive function. Studies have found that dementia patients who interact with animals are less depressed and exhibit more social interaction (Dabelko-Schoeny, Phillips, Darrough, DeAnna, Jarden, Johnson et al., 2014). The responsibility of caring for a dog also provides patients with a sense of purpose, which is crucial for those suffering from progressive cognitive decline.

In addition, according to studies concerning patients with cognitive impairments that cause Dementia or Alzheimer 's disease, it was possible to increase the level of cognitive functions and emotional status through Pet Therapy Interventions. According to Raina et al. (1999), a systematic review of literature suggests that interactions with therapy animals could decrease agitation and aggression among elderly patients, leading to an improved atmosphere.

### ***Psychological Benefits***

The strong positive impact that therapeutic interventions through animals have on our psychological well-being is well-known, since the presence of a trained animal (and occasionally, even if not trained), can lower anxiety and depression related symptoms and provide emotional support. Fine (2010) found that interacting with therapy animals can lower cortisol, a stress hormone. Similarly, a meta-analysis conducted by O'Haire in 2013

found that individuals with anxiety and depression were less anxious following pet therapy sessions. Furthermore, AAI stimulates oxytocin production, which is the hormone associated with feelings of affection and relationships (Barker, Dawson, 1998).

In addition, animals can even facilitate human interactions, creating a comfort zone and a sense of protection that can maximize interpersonal relationships. For example, Pet therapy is a powerful method of healing for patients who suffer from PTSD (Post-Traumatic Stress Disorder). A study conducted by Gibbons et al. (2017) found that Veterans diagnosed with PTSD experienced improvements in symptom severity including hyperarousal and avoidance after Animal-Assisted Therapies. The presence of animals in these facilities made a significant difference in providing support and stability to the patients.

Pet therapy has also demonstrated the potential improvements in individuals with ASD (Autism Spectrum Disorder). A study by Altschiller (2011) reported improved social interactions and communication skills in children with ASD considered almost non-verbal, during programs where they interacted with therapy animals. The presence of a pet can strongly boost the quality of their social lives and decrease anxiety in the presence of new people and interactions — something many individuals on the Spectrum find very challenging.

This demonstrates the social benefits that AAI can bring to patients with poor social skills, including developmental disorders. Interactions with the animal can help the development of Empathy, Responsibility and Communication abilities, especially in children and elderly people (McNicholas, Collins, 2010).

A study conducted by Colognesi et al. (2017), proved that visits from animals in hospitals and nursing homes enhance the social atmosphere and overall well-being. The

same applies in job environments and educational contexts, where animals can provide more comfortable and cohesive surroundings, promoting team-building and group work. In fact, AAI are particularly effective in academic context; the presence of trained pets helps children and adolescents in the development of emotional and communicative skills. According to a report by Pet Partners (2016), kids involved in AAI projects showed a visible reduction of aggressive behaviours, and an improvement in self-efficacy and self-esteem.

### ***Social and cognitive benefits***

Pet therapy can facilitate social interaction, particularly for people who struggle with communication or social skills. In group therapy, animals can serve as icebreakers to encourage people who may feel isolated to interact, for example. It has also been proven that pet therapy can increase attention span and focus, especially in children with ADHD or learning disabilities. By providing emotional support and reducing distractions or stress, a therapy animal can assist individuals in concentrating better and staying engaged in therapeutic tasks. Taking care of a pet or participating in structured activities like training a dog can require attention and consistency, which can help ADHD patients practice and improve their ability to focus. As a matter of facts, caring for a pet involves following a regular routine - feeding, walking, playing, grooming - which can help establish a more predictable and structured day, encouraging attention and reducing distractions. Playing with a pet, especially a dog, requires sustained attention and engagement. Whether it is fetching, training, or playing games, the interaction can offer individuals the chance to practice staying focused on a task or activity for a set period. ("The Power of Pets: How Animals Affect Our Health and Wellbeing" published by the Human-Animal Bond Research Institute - HABRI). According to Messent (1983),

interpersonal contacts can be encouraged by interaction with an animal, not only as a means of replacing missing or lacking affections, but also as a means of encouraging interpersonal relationships, by offering conversation, play and the opportunity to interact with others. In situations of intense stress, having contact with animals acts as a buffer, preventing conflicts, and is highly valuable for patients with social relationship issues. Additionally, caring for an animal fosters a sense of responsibility and commitment, which can be crucial to the recovery of patients who are addicted to drugs. Through the care of the pet, patients develop a positive routine and learn to focus on tasks that are not related to addiction. Animals can be a source of motivation and desire to improve, which is something to consider. This has the potential to boost the patient's determination to continue with the rehabilitation path and maintain a healthier lifestyle (Klemetsen, Lindstrøm, 2017). The development of social skills that help establish trust in relationships is another important consideration in pet therapy. By acting as “social facilitators”, animals improve communication and promote positive interactions with both other patients and the therapeutic staff. Pet therapy is therefore a valuable complement to rehabilitation pathways, offering long-term support and helping to build habits and relationships that facilitate recovery and emotional stability.

## **2.2 Methodology**

To investigate and comprehend the impact, benefits, and effectiveness of pet therapy, both qualitative and quantitative methodologies are employed. These methods offer a complete view of how animals impact human well-being, particularly in therapeutic settings (Pandey et al. 2024). Here's a breakdown of both methodologies and how they

can be employed in pet therapy research.

### ***Qualitative Methodology***

Its primary objective is to comprehend the experiences, perceptions, and the deeper significance of the phenomena. The aim of qualitative research in pet therapy is to examine how individuals experience the therapeutic relationship with animals, their perceived benefits, and how these experiences impact their emotional, psychological, and physical states.

Key features of qualitative research in pet therapy include:

- Interviews with participants (patients, therapists, pet handlers);
- Focus Group: they are useful to generate discussions around shared experiences with animals in therapeutic settings;
- Case Studies: detailed studies of individual patients can provide a rich description of the therapeutic process and outcomes;
- Participant Observation: researchers may observe therapy sessions to understand the interactions between humans and animals, and how they influence participants' moods, behaviours, or symptoms;
- Thematic Analysis: after collecting data, researchers can identify recurring themes or patterns.

### ***Quantitative Methodology***

Quantitative research involves collecting numerical data and using statistical analysis to quantify the effects of pet therapy. This method is designed to measure specific outcomes in a more structured and objective way, frequently relying on pre- and post-

treatment assessments, control groups, and statistical significance.

Key features of quantitative research in Pet therapy include:

- Surveys and Questionnaires: standardized tools can be used to measure variables such as stress levels, anxiety, depression, or social engagement before and after Pet therapy;
- Pre- and Post-Assessments: researches can conduct assessments before and after Pet therapy sessions to quantify changes in specific outcomes;
- Controlled Experimental Designs: Randomized Controlled Trials (RCTs) can be used to compare the effects of Pet therapy with other forms of treatment or with a control group;
- Physiological Measurements: physiological measures might also be involved to assess the effect of Pet therapy, such as heart rate, blood pressure, cortisol (stress hormone) levels, brainwave activity;
- Statistical Analysis: data from surveys, assessments and physiological measurements can be analyzed using statistical methods.

The researcher's choice between methods depends on the research questions and data they want to collect. A Mixed-Methods Approach, which is a combination of the two methodologies, can provide a more complete picture of how animals contribute to therapeutic settings and human well-being.

### **2.3 Challenges and weaknesses**

Though Pet therapy offers many proven benefits, there can also be weaknesses or limitations that need to be considered. These are some of the major challenges and weaknesses that need to be taken into account when utilizing this approach in therapeutic

settings.

***Inconsistent animal behaviour:*** Not all animals are suitable for therapy work. Certain environments may cause some animals to become easily stressed or overwhelmed. For example, if a therapy animal becomes frightened or aggressive, it could cause harm to the client or even create a negative experience that undermines the therapeutic process.

***Mismatch between animal and patient:*** The success of Pet therapy also depends on the compatibility between the animal and the patient. Not all patients will give positive responses to all animals. For instance, some people may have a sensitivity to certain animal species, while others may have a phobia of animals (zoophobia) that may worsen with therapy.

***Animal welfare concerns:*** extensive therapy work can cause animals to experience stress, fatigue, or behavioral issues if they are overused or not properly cared for.

***Allergic reactions:*** Pet therapy may not be suitable for individuals with allergies to animal fur, saliva or dander, especially in group settings like schools or hospitals.

***Bites or injuries:*** Despite animals being trained to be gentle and calm, there is still a risk of injury, especially when an animal is startled or feels threatened. Unexpected reactions by even well-trained animals can result in bites or scratches.

***Transmission of diseases:*** infectious diseases or parasites can be carried by animals, particularly those in public therapy programs, which could pose a risk to vulnerable individuals, such as those with weakened immune systems (e.g. cancer patients or those with HIV/AIDS). Though rare, zoonotic diseases (diseases that can be transmitted from animals to humans) must be managed carefully in pet therapy programs.

***Limited accessibility:*** not all therapeutic environments (e.g. hospitals, schools, private therapy offices) are equipped to host animals. Concerns about cleanliness, allergies, space

limitations and safety can limit the settings where Pet therapy can be introduced. Animals may not be allowed in certain healthcare facilities or homes, reducing the accessibility of this form of therapy.

***Lack of standardized protocols:*** Pet therapy programs don't always follow strict, standardized protocols, and practices can vary greatly between different therapists, facilities, and animal training organizations. This lack of consistency can result in variations in the quality of care and the effectiveness of the therapy.

***Limited high-quality research:*** while there is a growing body of evidence supporting the benefits of Pet therapy, more rigorous scientific research is needed to establish standardized guidelines for its practice and to identify which conditions, settings, or populations benefit most from AAT. Much of the research is still exploratory, and more controlled studies are needed to understand the mechanisms behind Pet therapy and the best practices for its implementation. If implemented correctly, AAIs can provide low-cost, holistic treatments for a wide range of conditions. (History of Animal-Assisted Interventions By Lieve Meers, Debbie Coultis, and William Ellery Samuels)

## **2.4 Implementation and Standardization of Animal-Assisted Interventions**

A complete pedagogic framework is necessary for training professionals involved in animal-assisted interventions that encompasses not only the skills components but also all ethical aspects of practice. Most importantly, the ultimate control for ensuring that those with both technical skills and a commitment to animal welfare inherit veterinary medicine remains within our power: Integrating ethical consideration into instruction as an addition to understanding (Rollin, 2006). By employing basic psychological theories, like Bowlby's attachment theory, we can gain a better understanding of the powerful

impact of human-animal connections (1969). These links help educate professionals about the psychological benefits of certain experiences, such as increased emotional support and stronger social connections. (Beetz, Uvnäs-Moberg, Julius, & Kotrschal, 2021).

According to the 2015 National Guidelines, an activity leader is required to plan and coordinate sessions for Animal-Assisted Activities (AAA) intended for recreational, social, or engagement objectives. Depending on the goals of the activity, professionals like nurses or others with the necessary training and experience may fill this position.

A project manager is necessary for Animal-Assisted Therapies (AAT), which are therapeutic and customized for each patient. This position, which is best suited for a skilled physician or psychologist-psychotherapist, manages the multidisciplinary team, establishes educational or therapeutic objectives, specifies implementation strategies, and assesses results. An intervention coordinator is also required to supervise the individual sessions and guarantee that the project's goals are fulfilled. This healthcare professional, often a nurse or another experienced health professional, must possess skills and experience relevant to the project's goals.

A survey was carried out by the Department of Behavioral Neuroscience and the Department of Cellular Biology and Neuroscience (Cirulli, Alleva, Istituto Superiore di Sanità, Rome) to evaluate the state of Animal-Assisted Interventions because of the absence of central coordination and legislative frameworks in Italy. Many impromptu projects were discovered by the study, most of which adhered to guidelines provided by international groups like the American Delta Society, which establishes methodological and ethical guidelines for such endeavors.

The survey highlighted that AAT is the most widespread service, with numerous

projects in schools, focusing on recreational and educational activities. The dog is the most commonly involved species, and there is a wide variety of professionals engaged in these projects, although the role of ethologists is notably absent despite the existence of excellent canine behaviour schools.

When it comes to training, pet therapy operators usually possess credentials from classes taught by veterinary specialists. Depending on the health of the patients undergoing therapy, a team approach is essential for both AAA and AAT, involving a range of experts such as educators and medical personnel.

### ***Training for Operators***

To ensure the safety and effectiveness of Animal-Assisted Interventions (AAI), operators must receive adequate training. A comprehensive training program must not only cover animal management and group dynamics, but also human psychology.

Courses that prepare workers to work in therapeutic and educational settings can be found in organizations like Delta Society (now known as Pet Partners). These courses include modules on how to read animal behavioural signals, manage interactions safely and understand the emotional needs of participants. (IAHAIO – International Association of Human-Animal Interactions Organization, 2014)

In addition, it is crucial that training includes ethical aspects. Animal welfare should always be a top priority, and operators should be aware of the responsibilities involved in using animals in therapeutic settings, as stated by Scheggi (2006).

Lack of proper training can lead to stressful situations for the animals and participants, compromising the effectiveness of interventions.

A multidisciplinary team is crucial for success, especially in AAT, which requires professional collaboration across fields, including medical staff when treating patients

with established conditions.

### ***Selection of Animals***

The success of AAI is determined by the selection of animals. It is important for animals to have a suitable temperament, be trained, and be able to interact positively with people.

Kruger and Serpell (2006) research has identified specific behavioral traits like sociability and tranquility that make certain animals more suitable for AAI.

To ensure safe and positive interactions, animals must also have the ability to remain calm in potentially stressful situations.

It is crucial to also take into account the needs of the animals themselves. As highlighted by Enders-Slegers (2019), respect for animal welfare must be at the heart of every AAI programme. This includes ensuring that the animals are not stressed during the sessions, giving them adequate breaks and assessing their health and happiness.

A positive experience for the human participants can also be achieved through a welcoming environment for the animals.

### ***Interventions on Environment***

The AAI can be utilized in various settings, such as hospitals, schools, nursing homes, and rehabilitation centres. The success of these interventions is determined by the creation of a safe and welcoming environment.

Chandler (2011) suggests that spaces should be designed to minimize stress for both animals and participants. This involves the use of soft materials, good lighting and adequate acoustics, creating a quiet atmosphere that encourages positive interactions.

It is also useful to have a plan for managing the spaces, so that animals and participants can move freely without risk of accidents or stress. To encourage interaction, it is

important to have designated areas for animal activity and quiet spaces for users to relax (Barker et al., 2019)

### ***Community Involvement***

Active community involvement is a key factor in the success of AAI. By partnering with schools, hospitals, and non-profit organizations, interventions can be broader and access to services can be improved. Local communities can benefit from the integration of AI into their care services, which increases social support and overall well-being (Barker, 2019).

It is also important to raise awareness of the benefits of AAI in the community. Activities such as awareness raising events, seminars and demonstrations can help educate the public and promote participation.

According to research by Chur-Hansen et al. (2014), community involvement not only increases the effectiveness of AAI but also strengthens the link between people and animals, creating a wider support network.

### ***Monitoring and evaluation***

Continuous evaluation of AAI is essential to guarantee positive results and continuously improve programs.

Measurement tools, such as self-assessment questionnaires, behavioural observations and interviews, can provide valuable data on the progress of participants. Kogan et al. (2016) stress the importance of systematic monitoring to tailor interventions to participants with specific needs, thus increasing the overall effectiveness of programmes.

### ***Scientific Validation***

In order to ensure the health and safety of both humans and animals, current AAT practices should be subjected to rigorous scientific testing, and national oversight bodies

should be established to evaluate protocols and research projects

It's crucial to have an evidence-based approach. Using both quantitative and qualitative measures can help understand the impact of AAI and make timely adjustments. In addition, participant and practitioner feedback can provide valuable insights into what is functioning and what needs improvement (Pandey et al., 2024).

### ***Professional requirements***

Professionals are responsible for making ethical choices, a practice that requires them not only to possess intervention skills but also the capacity of critical judgment in which they have ability to reflect on their approaches and recognise how appropriate these interventions will be considerate or helpful towards clients.

Moreover, the emphasis on interdisciplinary teamwork can improve training programs. We have the potential to learn through psychology, veterinary science and social work how we can build a more comprehensive education framework.

In addition to these roles, every Animal-Assisted Intervention (AAI) team must include:

- ***A veterinarian with AAI expertise***: this expert provides guidance on choosing animal species and pairing handler and animal, evaluates the animal's health and behavioral suitability, and gives guidance on proper care.

- ***A dog, or any other animal capable of forming social bonds with humans***: the animal's suitability, health, and behaviour are continually monitored by the veterinarian, with updates recorded in an individualized medical file. Behavioural assessments ensure that the animal interacts with humans in a way that respects its well-being, without the use of any coercive methods.

- ***An animal handler***: responsible for the animal's care, health, and well-being, this

individual must be experienced in managing the specific animal species involved in AAI.

According to Raina et al. (1999), there is a growing body of evidence that emphasizes the potential significance of companion animals in the health of older adults. To provide holistic care, professionals who have expertise and their own body of practice must collaborate with other experts synergistically. Using an interdisciplinary approach in this study may result in better therapeutic outcomes for clients and a better understanding of the factors that affect human-animal relationships. Lastly, the concept of biophilia, perhaps best articulated by Wilson, should be incorporated into training programs. When animals are used in human practice, the intrinsic bond with life has profound emotional and psychological consequences, giving practitioners a philosophical basis on which to stand. Education that promotes understanding of this bond may motivate professionals to work effectively in the therapeutic relationship that is inherently therapeutic, and can enhance the therapeutic potential of animal-assisted interventions. To sum up, establishing standardized training programs for professionals in animal-assisted interventions necessitates a holistic approach that considers both skills and ethics in human-animal interaction. Educators should help practitioners to understand their roles by blending theoretical foundations and empirical research. Focusing on animal welfare as well as the householder approach, whilst promoting an ethic of interprofessional cooperation and encouraging a culture of reflexivity, will not only make complex interventions more effective but also ensure that an ethical posture is maintained between clients or animals involved. It is more important now than ever to establish a standardized approach in this field because of the growing acceptance of the value that pet therapy brings to health care support for those suffering psychological trauma and distress. It's worth reconsidering what people think they know about therapy animals. Current research

suggests that updating educational resources and curricula that reflect best practices is necessary to ensure that both the therapy animals involved and individuals receiving interventions are safe from harm. As the demand for more animal-assisted interventions increases, this comprehensive framework is essential. Beetz et al. provided evidence that interaction with animals can have profound psychosocial and even psycho-physiological effects. Eisenberger and Cole (2012) also suggested a role for oxytocin involved in beneficial exchanges. Finally, this acknowledgment of the biological basis for therapy animals highlights how much higher we must set the bar in terms of qualification and regulation to ensure that animal-assisted therapies are successful — which they clearly can be when proper requirements and protocols all come together.

Within this context, we have emphasized the need to include theoretical foundations and specific recommendations derived from practices in animal-assisted therapy when planning educational curricula. This is where Fine (2010) offers a useful tool, as he has provided the theoretical foundations of animal-assisted therapy and capitalized on most intervention guides. These guidelines protect the welfare of therapy animals who can be exposed to a lot of stress in therapeutic settings. In addition, following best practice guidelines ensures that the therapy being offered is effective in patient care overall. Using these competencies in educational resources ensures a standard for the preparation of practitioners and demonstrates commitment to knowledge about human-animal relationship dynamics.

The need for clear guidelines also appears when looking at certain groups of people who best respond to pet therapy, including PTSD veterans or children with Autism spectrum disorder (Gibbons et al.). Moreover, animal-assisted therapy can enhance emotional well-being. Research like this emphasizes the opportunity for intervention with

therapy animals when used appropriately and underscores a need to standardize future work in order to limit risks. In the absence of complete guidelines, particularly for species other than rats and mice, there is a risk that this will lead to inconsistent results leading to both patient progress and animal welfare being at risk.

In fact, the Companion Animal literature shows that their benefits instead are not limited to specific therapy contexts. This and similar evidence of the beneficial role companion animals play in older adults' physical and psychological health (Jorgenson, 1997) prompts us to venture that this therapeutic effect is universal. This holistic view of the human-animal bond also aligns with the previously mentioned notion of biophilia, which was coined by Wilson in 1984, and which suggests that humans are innately attracted to other species. Consequently, standardizing pet therapy practices not only improves oriented interventions but also acknowledges a basic human need for contact with animals.

These results suggest that any movement towards standardization in pet therapy should also provide clear guidelines on the education and training of therapists, handlers and carers. Professional development opportunities, in accordance with the best evidence practices that are based on research-informed practice, can help bridge gaps and build knowledge necessary for those working in the therapy realm with some maintenance of animals. Also, using a certification or accreditation process for therapy animal organizations can help maintain the field's credibility by ensuring that only qualified practitioners are participating in this sensitive work.

Finally, in order to establish a foothold in professional bodies and regulatory agencies that play a major role in prescribing benchmarks regarding animal-assisted therapy, efforts that call for the standardization of practice should be forced out. Applying these

guidelines requires concerted, multi-stakeholder initiatives with assistance from veterinarians, mental health specialists, and animal welfare groups. We see how pet therapy grows more and more applicable within therapeutic contexts over time by creating a model that demonstrates the purpose of ethical treatment, ongoing education, and care for all individuals involved (psychologically and physically).

To sum up, the Central Control of Pet Therapy Revising is a logical progression that ensures the safety of both therapy animals and patients.

## CONCLUSION

Taking into account the limitations that must be carefully considered before implementing Pet therapy as a therapeutic intervention, there is a growing body of research that supports its therapeutic value and demonstrates its broad applicability in many domains of health care and mental health. Pet therapy provides physical, emotional, and psychological benefits by promoting relaxation, improving mood, fostering social connections, and enhancing overall well-being. The connection between humans and animals has been proven to enhance healing and resilience, which makes it a valuable addition to traditional therapies and an effective means of elevating quality of life.

Collaboration between practitioners across disciplines can help the field raise standards for educational resources and protocols that align with best practices, leading to increased therapeutic benefits from human-animal interactions.

Animal welfare organizations should work toward establishing universal standards for the care and welfare of therapy animals, including guidelines for the amount of therapy work an animal can perform, as well as protocols for their health, well-being, and behavior.

Healthcare institutions should provide funding and support for more training programs for therapy animals and their handlers. It will be a challenge to achieve a balance between dogs and humans that allows us to live longer and happier lives, but by collaborating as educators for both species and continuing learning, it is achievable.

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