



A Reflection on the Current Status of Animal-Assisted Therapy in India

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Received: 23 June 2021 / Revised: 2 September 2021 / Accepted: 8 September 2021
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Abstract

The field of animal-assisted therapy is advancing quickly throughout the world gaining popularity as a complementary therapy. Several countries, especially in the East, are still in their nascent phase in utilizing animal-assisted therapy and a more realistic presentation of their status should drive them towards effective initiatives to promote the field. The primary objective of this paper is to throw light on the current scenario of animal-assisted therapy in India. The relevant databases such as Scopus, Google Scholar, Proquest, PubMed, and JSTOR were searched to identify the research literature. The organizational websites, news, and blog articles, as well as institutional repositories, were explored to maximize the evidence. A total of 24 articles were found which included published research articles as well as unpublished conference papers. Results found a dearth of practice and research throughout the country indicating an urgent need to direct steps in promoting the growth of the field. The contemporary issues in the implementation of animal-assisted therapy such as cultural and religious beliefs, lack of awareness, lack of practising organizations and therapists warrant immediate attention. Reducing the research and practice gap alongside focusing on creating awareness, changing public perception, introducing coursework in educational institutions, the publication of evidence-based research will help in the acceptance and growth of this novel therapeutic field.

Keywords Animal-assisted interventions · Pet therapy · Human-animal bond · Therapy dogs · Mental health · Review

Introduction

The field of animal-assisted therapy (AAT) is continuously growing in popularity across the years. Animal-assisted therapy is being used in multiple areas and by multidisciplinary professionals throughout the world. AAT developed as a novel and unusual alternative therapy. But because of its evident benefits, it attained the status of complementary therapy. Animal-assisted therapy is being increasingly used in health

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care, education as well as in service sectors. Most of the major work and developments in animal-assisted therapy are limited to the Western world. Eastern countries such as China, Japan, Sri Lanka, and India are still in their infancy phase in animal-assisted therapy (Fine, 2019a, b; Nammalwar and Rangeeth, 2018).

In India, animals are considered sacred and a lot of beliefs exist around them. For instance, animals such as cows, elephants, and dogs are expressions of Hindu culture. Animals are given importance based on the role they perform with the Hindu deity. Other prominent religions of India including Christianity, Islam, Buddhism, Jainism, and Sikhism are also found to have certain attached values to animals considering them an important aspect of nature and the universe. Such existing religious belief systems, depending on their nature, are certainly important predictors of the practice of animal-assisted therapy in these groups.

Hence, it becomes important to reflect on these regions and areas to understand the current status of animal-assisted therapy. This paper will offer a comprehensive overview of animal-assisted therapy in India understanding its cultural concerns and genesis. The paper will further discuss the important developments and research that has been undertaken so far in the country. The shortcomings and major challenges in this field of human-animal interactions in the Indian context will also be elaborated. The paper will end with a brief discussion on developing this novel field of animal-assisted therapy in India.

Animals in Indian Culture

Indians regard animals as part of their existence. The significant value animals have in India can be very well established from the cultural and religious symbolism showcased in different religious texts, scriptures, and paintings as well as from their day-to-day living. Although over the generations, the perception of animals has kept on changing, animals are still considered symbols of power, auspiciousness, beauty, wisdom, treasure, and dignity. Animals such as elephants, cows, monkeys, peacocks, and even snakes are provided with divine status in India. It is thus very evident that animals form an integral part of the religious and spiritual world of Indians. These attached beliefs and significance of the animals give rise to different forms of treatment to different species of animals. While some animals are believed to be sacred and protected, others are even considered unclean and evil (Krishna, 2014). Incorporating animals in therapy settings, thus, comes up with its own challenges around such belief systems.

Where animals were already a part of Indian culture, agriculture, and tourism, the growing urbanization and influence of the Western world have given rise to a lot of pet owners in recent times. Some of the other reasons for this increase are parenthood delay, the humanization of pets, and an environment of sensitization (Khare, 2015). Hence, animals especially pet animals such as dogs, cats, and rabbits are increasingly finding their place in the household areas in India. This provides an enriching environment for the prospects of practising animal-assisted therapy. Although the animals are considered valuable for comfort and leisure, the increased quality and quantity of human-animal interactions help acceptance of animal-assisted therapy to a greater extent.

The History and Development of Animal-Assisted Therapy in India

The records of the animal-assisted therapy program in India dates back to 1996. Blue Cross of India collaborated with the Saraswathi Kendra Learning Centre for children with special needs and started the first animal-assisted therapy program in 1996 in the city of Chennai, India. Later in the year 2001, the Animals Asia Foundation (AAF) introduced the Dr Dog program to provide services to children with special needs and old-aged people in Chennai. Krishna (2015) reports the practice of this program in certain other parts of the countries too such as Ludhiana, Tirupati, Bangalore, and Visakhapatnam.

Animal-assisted therapy got the name in India from the work of a popular organization developed thereafter known as Animal Angels Foundation which has its branches in Pune and Mumbai. Animal Angels Foundation is a member of the International Association of Human-Animal Interaction Organizations (IAHAIO) and the therapists providing services in this field were certified by the University of North Texas. Founder of this organization, Minal Kavishwar along with her therapy dog Kutty, registered therapy-dog handler team by Pet Partners were the first team from the country to win the Delta Society's Beyond Limits Award in 2008. The organization had actively participated in the Green Chimneys conference, the IAHAIO International Conference in 2011, and the NIH-Waltham workshop in 2015 to discuss the varying attitudes towards animal-assisted therapy in India (Animal Angels Foundation, 2020).

In 2000, a PATH International certified equine therapist, Pushpa Bopaiah, started the first equine centre—Healing Horses in Bengaluru—to provide services to children with disabilities (Nair, 2008). In 2012 in Hyderabad, a second equine therapy park was also established under her guidance (The Hindu, 2012). The Indian Cancer Society has been lately utilizing equine therapy for helping cancer patients deal with negative emotions of fear and loss of control which the diagnosis usually accompanies (Shelar, 2017).

Manav Foundation was founded in 2004 as a Public Charitable Trust in Mumbai to care for and support people having mental illness and emotional disorders. Part of their group rehabilitation services also included animal-assisted therapy. In 2005, Clinical psychologists Rohini Fernandes and Radhika Nair who are also certified animal-assisted therapists and professional dog trainers established Animal Angels Foundation in Mumbai (Animal Angels Foundation, 2021). It started working with children and adults to improve skills and the recovery process.

Hands and Paws Foundation founded by Brijesh Dash in 2013 in Bhubaneswar started working with slum children, children with autism, drug users, and elderly clients incorporating a therapy dog called Magic (Sahu, 2014). Recently in 2015, Donkey sanctuary in Ahmedabad trained two donkeys to help children with special needs using donkey riding therapy (Naik, 2015). This short history of animal-assisted therapy programs reveals the slow development of the field in India.

A Brief Overview of Organizations Providing Animal-Assisted Therapy in India

Currently, several organizations are actively working to promote the field of animal-assisted therapy in India. As previously discussed, the Animal Angels Foundation from Pune and Mumbai is one of the first names that show up when we talk about this field in India. The other Animal Angels Foundation, Mumbai works in kindergarten and school providing therapy for children with disabilities and various other emotional/behavioural

problems. It also runs a course in animal-assisted therapy for people who have a master's degree in the Mental Health field.

Wag-Ville, a boarding and day-care centre for dogs in Bangalore, provides canine-assisted therapy and equine-assisted therapy for people with special needs with a certified team of physiotherapists, psychologists, special educators, and trained dogs and horses. It also conducts sessions in schools, hospitals, and corporate workplaces.

Therapeutic Paws founded by Unnati Hunjan is also active in providing animal-assisted services in and around Bangalore. The team is regularly conducting workshops and played a significant role in starting the comfort dog program as well as certificate course at CHRIST University, Bangalore. CHRIST University is the solitary higher education institution in India that is offering animal-assisted therapy as an elective subject for a degree in psychology (Education World, 2020).

The Healing Horses, Bangalore started by Pushpa Bopaiah offers equine therapy to patients suffering from various ailments. A holistic healing and wellness centre named Swakaya in Pune has also started offering animal-assisted interventions using cats, rabbits, and dogs to people of all ages in the current pandemic time. Hands and Paws Foundation (Bhubaneswar), Donkey sanctuary (Ahmedabad), Manav Foundation (Mumbai), DogSide (Bangalore), and Tales with Tails 269 (Chennai) are also contributing their bit to popularize animal-assisted therapy in India.

Research on Animal-Assisted Therapy in India

Research is an important forecaster of the development of any domain. Thus, scientific literature in the field becomes important in analyzing the growth of the particular arena. In order to explore literature about animal-assisted therapy in India, a search was conducted through various databases such as Scopus, Google Scholar, Proquest, PubMed, and JSTOR. The author explored HABRI Central as well which is a database resource only for human-animal bond studies. However, no research article could be found. Furthermore, various websites of the organization working for animal-assisted therapy were looked into for further exploring the research conducted. Thesis and dissertations written by Indian authors were also investigated in digital repositories available. In addition, the profiles of significant people in India working in this direction were explored in academic social networks such as ResearchGate and Academia to gain more information of any other publications related to animal-assisted therapy. The key terms used for the literature search such as 'animal-assisted activities', 'animal-assisted interventions', 'animal-assisted therapy', 'animal-assisted education', 'pet therapy', and 'human-animal interactions' were combined with the search term India to obtain the most relevant research. The articles written by Indian authors as well as work conducted in India alone were taken into account for this paper.

The search returned 24 articles consisting of 7 research studies, 4 review articles, 2 conceptual papers, 2 theses, 5 unpublished conference papers, and 4 other categories of published literature (Letter to Editors, Correspondence & Perspective). The summary of the retrieved research literature in India is given in Table 1. The literature discussed in the paper is up to 31 July 2021.

It is evident from the table that the primary research studies by utilizing animal-assisted therapy are a handful ($n=7$). Kavishwar (2007a, b) presented two conference papers around the topic of animal-assisted therapy for the mentally challenged and autism. In

Table 1 Summary of the literature on animal-assisted therapy in India

Sr. No	Year	Author	Type of literature	Title	Source
1	(2007b)	Kavishwar, M	Conference paper	Animal Assisted Therapy as a mode of intervention for the mentally challenged AAT and Autism	BPA-IPH Conference on Child and Adolescent Mental Health International Conference on Psychology, NIMHANS, Bangalore
2	(2007a)	Kavishwar, M	Conference paper	Effect of Animal-assisted Therapy among Children with Autism	Proquest
3	(2012)	Goswami, L	Thesis	The Effect of Animal Assisted Therapy in Improving Functional Skills among Children with Intellectual Disability	Academia
4	(2013)	Ravi, A	Thesis	Animal-assisted interventions and geriatric well-being: The Indian context	Indian Journal of Health & Wellbeing
5	(2013)	Valiyamattam, G. J	Original article	Animal-Assisted Therapy for Children with Autism in India	3rd International Conference on Counseling and Psychotherapy, CHRIST University, Bangalore
6	(2016)	Khera et al.	Conference paper	Role of Dogs in Life Satisfaction and Stress Reduction: A Comparative Study	IOSR Journal Of Humanities And Social Science
7	(2016)	Singh et al.	Research article	Multicultural Considerations in Animal-Assisted Intervention	Human-Animal Interaction Bulletin
8	(2018)	Valiyamattam et al.	Original article	A bite out of anxiety: Evaluation of animal-assisted 9,activity on anxiety in children attending a pediatric dental outpatient unit	Journal of Indian Society of Pedodontics and Preventive Dentistry
9	(2018)	Nammalwar, R.B. & Rangeeth, P	Research article	On implementation of animal-assisted therapy (AAT) in a school for children with special needs	ZENITH International Journal of Multidisciplinary Research
10	(2018)	Balsubramanian, G. & Paul, P	Research article	Parents' acceptance and their children's choice of pet for animal-assisted therapy (A.A.T) in 3-to 12-year-old children in the dental operatory –A questionnaire-based pilot study	International Journal of Paediatric Dentistry
11	(2018)	Gupta, N. & Yadav, T	Research article	Effectiveness of animal assisted therapy on children and adolescents with Autism	International Journal of Research in Social Sciences
12	(2019)	Priyanka, M. B	Research article		

Table 1 (continued)

Sr. No	Year	Author	Type of literature	Title	Source
13	(2020)	Valiyamattam et al.	Research article	Do animals engage greater social attention in autism? An eye tracking analysis	Frontiers in Psychology
14	(2020)	Thakkar et al.	Research article	Assessment of dental anxiety in children between 5 and 10 years of age in the presence of a therapy dog: a randomized controlled clinical study	European Archives of Paediatric Dentistry
15	(2020)	Varghese et al.	Conference paper	Animal Assisted Intervention for Palliative Care for patients at Karunashraya, Bangalore	27th International Conference of Indian Association of Palliative Care, Guwahati
16	(2021)	Deepika, G. A. & Valiyamattam, G	Conference paper	Treatment acceptability of Animal-Assisted Intervention (AAI) for Children with Developmental Disabilities	47th National Annual Conference of Indian Association of Clinical Psychologist, Pune

the first study with 8 children with intellectual impairment, it was found that AAT led to an improvement in motor skills and reduced problem behaviour. Although experimental and control groups were employed in the study, each group had only 4 participants which limit its generalizability. Another study with the autism children found that children who received AAT were more expressive and were able to relate better than the control group employed in the study. However, there is no mention of the research design as well as the sample size in the paper. Although on a small scale, these two studies are probably the first documented research in the field of animal-assisted therapy in India.

Goswami (2012) studied the effect of AAT on four children between 3 and 12 years with autism for her MPhil (Psychology) thesis. She utilized a case study method by collecting data through observation, semi-structured interviews, and medical records. The author found that there might be improvements in the area of communication and social skills who were utilizing AAT. However, the changes in the motor skills were not very substantial. The certainty of this result is debatable since the author was not present throughout all the therapy sessions from the beginning.

Ravi (2013) examined the effects of animal-assisted therapy on functional skills of 5 students with intellectual disability using one group pre-test post-test design. The therapy was provided for 15 sessions duration of which was 20 min for each session. The results indicated that there was a significant improvement in functional skills across four domains—personal, social, academic, and occupational. However, there is no mention of the training of the researcher or the animal. The use of the phrase ‘pet dog’ throughout the paper creates confusion on the role of the animal as well as the nature of the intervention.

A study conducted by Nammalwar and Rangeeth (2018) in a pediatric dental outpatient unit found that exposure to animal-assisted activities for 15 min in a waiting area reduced the level of anxiety among children of 4–11 years. However, the control group was not employed in the study and the sample was limited to only 20 children. Another study was published by Thakkar et al. (2020) using 102 children who visited dental clinics for regular dental procedures. The study results established significant anxiety reduction in the group of children whose dental treatment was performed with the presence of a therapy dog. This is perhaps the first study in India with a larger sample, random allocation of participants to experimental and control groups as well as utilization of both Dental Anxiety Scale and measurement of pulse rate for quantifying the anxiety levels of children. However, both these studies had employed animal-assisted activities wherein in the former study, the children were offered informal interactions with the trained dogs and in the latter, the therapy dog was just present during the procedure. Nonetheless, these studies are important since they have made use of animal-assisted interventions which is a broader term for activities involving therapy animals and help lay down the foundation for future studies incorporating therapy animals for clients’ benefits.

Priyanka (2019) used a qualitative approach to study the impact of animal-assisted therapy on 6 participants with autism. The researcher utilized the tools of observation and semi-structured interviews to gather data from the animal-assisted therapist, caregivers, and special educators. The results found an improvement in social and communication skills. The gap, as well as the difference between therapy delivered to each participant, is the main limitation of this study.

The other literature talks about the other factors crucial to animal-assisted therapy such as experiences of animal-assisted therapy practitioners, acceptance of the intervention, and the impact of animals on human lives. For instance, Khera et al. (2016) presented a paper titled animal-assisted therapy for children with autism in India at the 3rd International Conference on Counseling and Psychotherapy, CHRIST University, Bangalore. The study utilized

semi-structured telephonic interviews with three AAT practitioners across different organizations and the findings were presented after conducting the thematic analysis. The analysis found that the most commonly used animal in India is the dog, the major positive outcomes were in the areas of motor skills and social functioning of children with autism, and AAT is mostly used along with other therapies such as physiotherapy, behaviour therapy, and play therapy in India.

A study conducted by Singh et al. (2016) assessed stress and life satisfaction among 100 dog owners and non-dog owners. A low level of stress and high level of life satisfaction were reported by the study in the dog owners. Although the authors did not directly investigate animal-assisted therapy, they did mention the role of potential benefits of dogs for animal-assisted therapy advocating the advantages of human-animal interactions.

Balasubramanian and Paul (2018) collected data using a semi-structured interview with therapy professions employed in schools working with children having special needs. The obtained data suggest that the major challenges the therapist are facing are pertaining to lack of awareness, fear about animals, cultural beliefs, training, and funding indicative of more awareness needed in this field in India.

Gupta and Yadav (2018) interviewed 62 children and parents who visited the Department of Paediatric and Preventive Dentistry for treatment in Mumbai. This study employed a questionnaire method and analyzed parents' as well as children's preferences for pet animals in the clinic. The results obtained are suggestive of the majority of children preferring animals especially dogs in clinical setups. However, not more than 41% of the parents gave consent to the presence of animals. This indicated a lack of awareness about the benefits of animals among the parent population and thus has implications in the application of animal-assisted therapy in dentistry in India.

A paper presented by Varghese et al. (2020) talked about animal-assisted intervention among patients in palliative care. The study measured the distress and analyzed the quality of human-animal interactions of the patients. It was observed that those who had higher scores on the human-animal interaction scale expressed lesser distress. The results indicated that meaningful interactions with a therapy animal can help lower the distress in patients.

Deepika and Valiyamattam (2021) aimed at understanding the acceptability of animal-assisted interventions in India which involved the use of four vignettes of possible treatments of developmental disabilities. The participants were pediatricians, psychologists, nurses, and students from medicine, psychology, and nursing who has to evaluate each treatment option. The results concluded a moderate to high overall acceptability for AAI but concerns were raised regarding the safety of children. The study was significant in terms of indicating the need to increase awareness in these professional groups.

The rest published literature is limited to presenting theoretical underpinnings and the scope of the field in India. For instance, Valiyamattam (2013) published a paper wherein she discussed geriatric well-being using animal-assisted interventions in the Indian context. Although she found AAT might be beneficial for the geriatric group in India, she mentions the lack of knowledge, proper documentation, and cultural beliefs surrounding animals as the main limitations why the country is still not able to make use of this therapeutic approach. Her other paper talks about multicultural considerations in AAI focusing upon the places outside the USA and Europe such as in East and South-East Asia where AAT is still in the process of emergence (Valiyamattam et al., 2018). Recently, she published research about social attention in autism using eye-tracking analysis. The study found that animals produce greater visual attention among children with autism which can be taken into consideration to plan intervention

and suggest the potential benefits of incorporating AAT for enhancing social attention (Valiyamattam et al., 2020).

Three other articles published were review papers written by Indian authors. Chandramouleeswaran and Russell (2014) wrote about the beneficial effects of pet-assisted therapy in child and adolescent psychiatry. Joseph et al. (2016) assessed the effects of animal-assisted therapy in children with cerebral palsy. Srinivasan et al. (2018) also conducted a systematic review of the effects of equine therapy on people with autism. Dargan (2021) analyzed the implications of animal-assisted therapy in health and concluded that animals can be additional support for a smoother treatment process.

The emergence of the COVID-19 pandemic diverted attention to the fellow pets around us and the realization of their role in mental health contributed to two articles in the Indian context recently. Through correspondence from the authors to the journal editors, the article talked about how animals play a central role in addressing the mental health of people in the times of crisis of COVID-19 (Hunjan & Reddy, 2020; Nagendrappa et al., 2020; Reddy & Kishor, 2020) and this is indicative of current health professionals getting familiar with this new approach of dealing with the health of people. Pai-Dhungat and Verma (2020) also contributed to the article walking the readers through the brief history of animal-assisted therapy and its potential benefits. Although these papers do not contribute to the empirical literature on animal-assisted therapy, their impact in terms of analyzing how far the professionals in India are aware of the field and taking steps to spread across the academia the benefits of animal-assisted therapy is significant.

Reviewing the literature about animal-assisted therapy in India, thus, it can be concluded that India still needs a lot of research work for developing this field. The majority of the studies have incorporated children as their subjects and have focused mostly on children with disabilities (predominantly autism) leaving out all other potential populations which might benefit from animal-assisted therapy. Few studies have studied dental anxiety but again in the group of children. However, the literature has identified a variety of clients on which animal-assisted therapy is found to be useful such as adults with mental health issues, old people, students, and people with health conditions such as cancer and AIDS (Chandler, 2017; Cherniack & Cherniack, 2014; Brelsford et al., 2017; Reed et al., 2012).

Furthermore, the studies conducted are restricted only to hospital or rehabilitation settings. Despite having abundant literature on animals' therapeutic value in diverse settings such as in corporate offices, forensic courtrooms, disaster areas, or educational settings (Dimolareva et al., 2018; Fine, 2019a, b), India remains behind in exploring these settings. Likewise, no studies have been conducted on the welfare of the animal, challenges therapy animals face during sessions, or misuse of animal assistance indicating the poor state of the field which would perhaps only come into the picture when the field will get recognition as an alternate form of intervention in India.

Most of the research studies that have been discussed here have methodological limitations in terms of smaller sample sizes, lack of randomization, absence of control group, lack of standardization of animal-assisted interventions, length of the study, lack of information regarding the training of therapy animal, credentials of the animal-assisted therapist, and so on. This might be because of various factors hampering utilization of better research designs in studies such as lack of awareness about animal-assisted therapy among general people, health professionals, and researchers in India; few certified AAT practitioners; the dearth of organizations delivering AAT services; lack of access or difficulty finding

clients undergoing AAT sessions; absence of a regulatory body to keep a check on AAT activities and its ethical implications.

Looking at the authors and institutions where the studies are conducted, it is very evident that animal-assisted therapy has not been mainstreamed into India. The studies have been restricted to only certain parts of India since its beginning where probably most of the work in this field is carried out. The majority of these studies have been carried out by students or professionals from specific organizations, or institutions. For instance, three of these studies are published by authors from D Y Patil Dental Hospital, Mumbai. Likewise, other publications are either from CHRIST University scholars, faculty of GITAM University, Visakhapatnam, or members of Animal Angel Foundation, Pune. Thus, these are the prominent zones of India where animal-assisted therapy is being performed and researched while the rest of India is still unaware of this alternate form of treatment modality.

Shaping the Future of Animal-Assisted Therapy in India

Although relatively naive for India, considering the implications of animal-assisted therapy for both physical and mental health, we can certainly use animal-assisted therapy effectively in India. AAT needs a lot of groundwork to get established and recognized in society. A speedy recognition of the challenges associated with the implementation of animal-assisted therapy and resolving those will help in the growth of the field. Since in recent years more and more pet owners are getting aware of this natural healing, there are increasing chances of a rise in interest in this field. However, in order to effectively mainstream animal-assisted therapy in India, certain steps have to be taken which are discussed in this section.

In India, the concept of mental health itself is yet to popularize and there is still apprehension in the general population about visiting licenced psychiatrists and psychotherapists for help. In such a situation, approaching animals for treatment purposes might seem trivial to those who lack a basic understanding of the benefits of human-animal interactions. Thus, efforts should be generated towards the direction of creating awareness about the field. Apart from the paucity of knowledge, there is an unequal distribution of AAT services throughout the country with a wide treatment gap. But these limitations can be turned into strengths by the implementation of animal-assisted therapy wherein certain established benefits of therapy animals such as developing rapport with the clients, reducing the anxiety of the treatment processes, and adherence to the treatment can itself be used in favour of providing mental health services and further reaching the clientele.

The most essential step needed to develop animal-assisted therapy in India is education. Academics have probably a greater role in creating awareness about human-animal interactions and throw light on how these interactions help in achieving larger societal goals. Educational institutions in India should contribute towards providing knowledge to the students in terms of introduction of the major subject on AAT or certificate courses which will help familiarize them with basic AAT theory along with practical training. Fine et al. (2019) also stated that compulsory education and training will take this field to next level and move towards acceptance of AAT as a complementary therapy. Academia's role in this field, besides, will ensure the safe and reliable practice of the therapy with the proper certification of the animal-assisted therapists. Although many countries like India are showing interest in animal-assisted interventions, very few have initiated steps to deliver programs

and services in this field. For instance, there was a mention of the University of Denver's Graduate School that educated around 250 social work students of animal-assisted interventions in recent years. India requires more such kinds of openings if the field has to grow.

Research is another important aspect of the development of any field in health care. Because of the lack of research on AAT in the Indian context, probably it becomes difficult to establish its effectiveness with the Indian population. Although all studies have found positive outcomes with the incorporation of therapy animals, considering the inconsistent methodologies, smaller sample sizes, no evaluation of long-term effects on AAT clients, and lack of significant results, we cannot generalize the outcomes with confidence. More elaborative research with accurate research designs is thus the necessity. Since the investigation in animal-assisted therapy involves both human and animal participants, the complexity of the study variables increases and hence it is imperative to use both qualitative and quantitative data together to entirely measure the outcomes (Chandler, 2017). This huge research gap in India can be reduced only when more researchers become curious in understanding the process of animal-assisted therapy and take an interest to explore the same. The responsibility of inculcating this interest partly lies with the organizations or animal-assisted therapists who are already committed to the field.

The major role of such animal-assisted therapy organizations is creating awareness among the general public and health professionals about this novel therapeutic approach and its efficacy in health. These can be done through various human-animal interaction programs at different levels and in different parts of the country. Social media too can play a predominant role in spreading awareness about agencies that work in this area. The organizations such as the Animal Angels Foundation contributing significantly to the development of this field can help in the expansion by establishing several branches across the country. It can also help the opening of some new therapy centres in collaboration with other interested stakeholders in this field.

Furthermore, practising animal-assisted therapy can be difficult at times owing to varying beliefs people have about animals. Especially negative perceptions around the use of animals can be detrimental to the growth of the field. We tend to assign meanings to different animals based on where they stand on the socio-zoologic scale. Animals that can be incorporated into human lives easily are referred to as pets and those who are seen as destroying livestock are seen as bad animals such as vermins and pests (Arluke & Sanders, 1996). This differentiation can sometimes also be complex because of prevailing cultural and religious factors. People can have both positive and negative attitudes toward a certain animal. For instance, a rat can be looked upon positively because it is associated with a Hindu God Ganesh while still be undesirable because it tends to destroy food. Which aspect of an animal is rated higher is what determines what meaning the animal has for that particular person. Thus, the acceptability of the animal as having therapeutic value greatly depends on whether the animal is perceived as a pet, food, tool, or just filthy.

Although such specific religious and cultural views of animals can be difficult to change or touch upon, at least the myths surrounding the animals have to be taken care of. This can be achieved by providing facts and statistics creating a conducive environment for animal-assisted therapy practice. Also selecting a therapy animal based on the client's attitudes toward that particular animal could help achieve the therapeutic goal. Culturally sensitive adaptation of the AAT should be emphasized to produce the best results in the field (Haubenhofner & Kirchengast, 2006). Another way would be to publish a variety of material on this topic not limited to only books or newsletters to decrease the taboos associated with animals. Again the role of media is influential here in today's digital era.

Another step that can also help with structuring the beliefs of people or promoting the field is to document the success stories of those who have participated in animal-assisted therapy. Even though some practitioners are practising animal-assisted therapy in India, they have not got a lot of attention probably because they have not put effort into publishing the data or the positive outcomes experienced by their clients. Testimonials can contribute but the focus has to be more on storing the records of each client and with consent and confidentiality publish the positive as well as negative results so that the public knows about the impact of animal-assisted therapy. Since there are scarce data about clients benefiting from AAT in India, this step becomes even more vital. Dissemination of positive results by the certified and experienced practitioners will certainly have more value attached to it which will foster confidence in this treatment model. Chandler (2017) also mentions that it is one among the responsibility of the AAT practitioners to document the clinical successes of their clientele.

One more important area to look at is the utilization of animal-assisted therapy for various other populations. The benefits of therapy animals are not just restricted to mental health. They are also suitable for other purposes such as meeting educational needs, reducing physical pain, or increasing mobility depending on the setting they are employed. Exploring these other areas will also help develop the field. Local news articles and blogs have reported the work done by animal-assisted therapists with people suffering from trauma, cancer, stroke, dementia, depression, and alcoholism as well as corporate and call-centre workers (Joshi, 2018; Prasher, 2018; Ray, 2012). However, the work being done with these adult populations has not reached the public confining the knowledge of AAT being only used with neurotypical or atypical children. Attempt to work and study the effects of AAT in these populations should also be prioritized.

Additionally, there is an urgent need for developing a standardized manual for animal-assisted therapy so that the practice of AAT across the country follows certain guidelines in absence of any particular regulatory body. This will avoid discrepancies present in the practice at various places as reported by Khera et al. (2016) in their conference paper. The uniformity of the implementation of animal-assisted therapy sessions will provide more valid results upon which we can guide further development of animal-assisted therapy. Another important reason why there must be uniform guidelines on practising animal-assisted therapy is that this is a field used by professionals from various disciplines and is not restricted to psychology alone. For example, AAT is also used by occupational therapists, social workers, school counsellors, and so on. A multidisciplinary use of therapy animals can bring more confusion regarding the rationale of practice. Hence, clearly remarking the role and requirements of animal-assisted therapy practitioners in different disciplines would benefit in the longer run. Currently, Animal Assisted Intervention International's Standards of Practice which is updated in 2019 is the available framework that can be used to guide the AAT practice (AAII, 2019).

To advance the field, we also need to convince our policymakers and other governing bodies about the value of animal-assisted therapy which can be done by providing them with the quality of evidence-based research (Feldman et al., 2019). Thus, research will advocate for animal-assisted therapy and the doors to public policy and resources will open new opportunities. Knowledge about legal laws related to animal use and animal welfare in the country of practice is also essential to avoid facing any legal crisis. In a nutshell, research and practice both are essential and any step contributing to this will bring the country more closer to the therapeutic benefits of animal-assisted therapy.

Significance of this Study

The growing positive literature about animal-assisted therapy worldwide undoubtedly confirms its beneficial effects on various problems of humankind. Looking at the considerable increase in the pet population in India especially dogs in recent years which was approximately around 19.5 million in the year 2018 and estimated to reach over 31 million by 2023 (Keelery, 2021), we can certainly utilize them in the health care industry to promote better health among people. Although a fair amount of people in the country know the value of pet animals and do consider them important in life, their health benefits largely remain unnoticed. Since very few organizations and groups of people are practising animal-assisted therapy, a large section of Indian society is unaware of how animals can aid their well-being. The paper is important in providing knowledge about the development of this field and will also help people know of the organizations where they can get access to animal-assisted therapy in India.

Having discussed the research, it is also evident that there is a lot of practice and research gap in animal-assisted therapy in India. This article is significant in terms of providing a clear picture of the state of animal-assisted therapy in India. Although the paper reviews the literature, it cannot be termed as a systematic review paper. This is one of the major limitations of the paper. Since the literature about animal-assisted therapy is scarce in India and the author aimed to highlight the current scenario, the paper has taken into consideration all the possible existing literature. Also, unless there is a significant amount of qualitative or quantitative studies published, it would be difficult to write a systematic review paper in this regard. The enumerated discussions on limitations of research will guide researchers into a better way of planning research designs that will eventually lead to strong evidence in favour of animal-assisted therapy. This data then certainly can be useful for supporting the field in India.

Owing to the work happening in animal-assisted therapy in India, it is apparent that India is still in its infancy stage and a lot of efforts are needed for growing this field. The paper will help highlight the existing challenges that the budding AAT practitioners are facing as well as assist them with a general idea on how to manage certain problems in order to give this field status worth recognition in India. If animal-assisted therapy is mainstreamed in the health care industry, it can support those who cannot meet the expense of other health treatments (Palley et al., 2010). The paper is also an appeal to all the health professionals, AAT practitioners, researchers, stakeholders of education, and policymakers in India as well as across the globe to recognize the importance of this complementary therapeutic approach and take necessary steps to promote the growth of this field.

Furthermore, a lot of stray animals, for instance, cats or dogs on the streets can get the job to uphold the health of our population. For being a therapy animal, we do not want a specific type of breed but it is the temperament and behaviour of the animal that matters. Considering street animals for this role after selection and proper training will not only help improve the health of people but will also curb the societal issues prevalent because of street animals. The animals will get recognition for their positive service and probably the negative attitude persisting towards them will eventually decrease promoting the ideal living environment of co-existence. Thus, the expansion of animal-assisted therapy not only has health advantages but also has societal implications which can lead to a better world, a world with minimal human-animal conflict.

Conclusion

Animal-assisted therapy today is witnessing a paradigm shift while India is still regarded as being in the nascent stage even though it has been practised for the last 25 years. Owing to the fact that it has not been recognized much throughout the country because of multiple issues, there is a need to emphasize development to a greater extent. To promote practice and growth of the field, we require continuous education and research opportunities, regular animal-assisted programmes and workshops, support from health professionals and policymakers, and also sensitize media about the efficacy of animal-assisted interventions so that it reaches the maximum country people. The author through the overview of the field wants to appeal to the practitioners and the potential readers to move the field in the best direction which can advance this therapy and more clients can avail its health benefits.

Declarations

Conflict of Interest The author declares no competing interests.

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