

# Perception of Physical Therapists Regarding Kynotherapy

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## Author's Contribution

<sup>1 4 5</sup> Substantial contributions to the conception or design of the work for the acquisition, analysis or interpretation of data for the work, <sup>2 3</sup> Drafting the work or reviewing it critically for important intellectual content, <sup>2 3</sup> Final approval of the version to be published, <sup>6</sup> Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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## A B S T R A C T

**Background:** Kynotherapy is a form of contact therapy in which trained and certified dogs are used for the purpose of rehabilitation of people. Therapist has a significant role in planning and maintaining therapy session as well as engaging patient in session, the incorporation of animals (dog) in session totally depends on the therapist. In conditions such as psychological well-being, communication, socializing, autistic spectrum disorders, pain relief, stress reduction, and improved mobility, hypnotherapy has been shown to be effective.

**Objective:** The objective of this study was to determine the perception of physical therapists regarding kynotherapy.

**Methodology:** A Questionnaire-based survey was conducted in which 169 physical therapists of Hyderabad participated. Purposive sampling technique was used. A closed ended questionnaire comprised of 20 positive and negative statements regarding Kynotherapy which was extracted from the study on "Attitudes of Physiotherapy students towards Kynotherapy" that is conducted by Maria Dabrowska, Magdalena Grabowska in 2015 was used, study included both male and female physical therapist who gave written consent and currently working in any clinical and/or academic settings. Those who gave only verbal consent and were not willing to participate were excluded. The study was held from July 2022 to December 2022. The data was analyzed by using the SPSS version22.

**Results:** The mean age of participants was 27.21±3.95. males with the frequency of 39 (23.10 %) and females with the frequency of 130 (76.90%) participated in this study. Academicians with the total percentage of (41.5%), clinicians with the total percentage of (43.4%) and the participants who provided service in both the academic and clinical side with the total percentage of (48.4%) showed positive perception regarding Kynotherapy.

**Conclusion:** A limited number of participants have positive perception regarding kynotherapy as very few physical therapists had heard about kynotherapy.

**Keywords:** Animal-assisted Therapy. Kynotherapy, Physical Therapists, Perceptions, Rehabilitation, Animal-assisted Therapy.

## Introduction

Rehabilitation therapists constantly integrate new evidence-based approaches to provide the best possible patient-centered care. Over the past few decades, kynotherapy and other forms of animal assisted therapy have gained more attention.<sup>1</sup>

Kynotherapy is also called Canine Assisted Therapy or Canisotherapy. It is a form of contact therapy in which trained

and certified dogs are used for the purpose of rehabilitation of children and adults. Animals possess many characteristics that significantly helps to facilitate therapy. The most frequently used animals for the facilitation of therapy are horses, dogs and cats, however, according to experiences and based on the criteria, dogs appears the most appropriate animal for contact therapy in rehabilitation settings.<sup>2</sup> Companion animals have historically and significant roles in many aspects of daily life. According to researches there are 78.6 million pet dogs in United States.<sup>3</sup>

It is reported from the studies that animal assisted therapy helps to reduce pain, fatigue, improve socialization communication and mood, increase patient's motivation, gait, speed, functional tasks,<sup>1</sup> increase muscle strength and range of motion.<sup>4</sup> Studies undertaken in both inpatient and outpatient settings have examined the pain relieving effects of therapy dog interactions for both pediatric and adult patients, after visits which typically lasts between ten and twenty minutes, there has been significant reduction for both acute and chronic pain. These studies found that therapy dog visits significantly reduce stress, mood disturbance and weariness in addition to reducing pain.<sup>5</sup>

The studies that are conducted in pediatric patients indicated the improvement in speech, socialization and task attention by using kynotherapy.<sup>1</sup> It is evident from the study conducted to evaluate the effects of dog assisted therapy in cerebral palsy child, which shows the great improvement in children physical movement, maintain emotions, develop empathy among child and dog. Children learn to face anxiety and stress, they improve their communication skills, and thus kynotherapy has proved to be a beneficial therapy / intervention for cerebral palsy child.<sup>6</sup>

Animal assisted therapy is a growing field which can be used for the treatment of autism spectrum disorder as it increases patients' physical involvement by physical interaction with animals such as Dogs.<sup>7</sup> It is used for the Autism spectrum disorder patients on the basis that the evidences from many researches reports the beneficial effects to many of the symptoms of autism spectrum disorder such as it reduces depression and loneliness, increases calmness, socialization and motivation and improve communication. It is believed that such positive results were obtained by the relaxation, fun and the dog- contact experience.<sup>7</sup>

Therapist has a significant role in planning and maintaining therapy session as well as engaging patient in session, the incorporation of animals (dog) in session totally depends on the therapist.<sup>8</sup>

There are number of animal assisted therapies implemented in health care settings which reflects its significance however these strategies cause potential risks for humans such as service dog or therapy dogs in Hospital settings may cause zoonotic disease transmission, potential cross contamination and maximizes the exposure to allergens. Such kind of believes and restrictions hinders the use of these beneficial supplementary therapies for the welfare of patients.<sup>10</sup>

Several studies show the benefits of kynotherapy but it is important to know the perceptions of physical therapist as they

are the one who will include it in part of rehabilitation and may be its barriers can hinder their point of view about kynotherapy so the objective of this study was to know the perception of physical therapists regarding kynotherapy. which will assist in establishing its degree of implementation in clinical settings.

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## Methodology

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It was a cross sectional study in which participants were recruited from Isra University, Liaquat University of Medical and Health Sciences, National Institute of Physiotherapy and Rehabilitation Medicine, Hyderabad Institute of Medical and Allied Sciences, Al-Beruni Institute of Physiotherapy, Jeejal Maa Institute of Physiotherapy and different private clinics of Hyderabad in July 2022 to December 2022. Purposive sampling technique was used. Participants were selected if they met the inclusion criteria: both male and female physical therapist who gave written consent and currently working in any clinical and/or academic settings. Those who gave only verbal consent and were not willing to participate were excluded. The sample size was determined by using Raosoft sample size calculator. By keeping 50% of response distribution, 95% confidence interval and 3% margin of error, the calculated sample size was 169. Written informed consent form was obtained from participants and questionnaire was distributed after the review of departmental ethical committee of Isra Institute of Rehabilitation Sciences(IIRS) Isra University Hyderabad.

The questionnaire was extracted from Attitudes of Physiotherapy students towards Kynotherapy which was conducted by Maria Dabrowska, Magdalena Grabowska in 2015.<sup>11</sup> This questionnaire includes demographic section with 5 questions, whereas there were 10 positive and 10 negative statements regarding kynotherapy with the options of yes, no and no option. These all questions were closed-ended questions. The study investigator was present to guide if participants had any query without prompting them with the answers. All information was kept confidential and only used for statistical analysis. The data was analyzed by using the SPSS version 22.

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## Results

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A total of 169 Physical therapists participated in the study and returned completely filled questionnaire. Table I shows the demographic characteristics of participants that is: the mean age of participants was  $27.21 \pm 3.95$  years. Male participants were (39) 23.1% and female participants were (130) 76.9% in this study. According to participant's work settings 22.5% were academicians, 56.8% were clinicians and 20.7% were both (academicians and clinicians).

Majority of the physical therapist (70.4%) had never heard of kynotherapy. Only 29.6% of participants were aware.

**Table I: Demographic Characteristics.**

Age	Mean ± SD	27.21 ± 3.95
Gender	Male	23.1%
	Female	76.9%
Qualification	Bachelor	65.7%
	Masters	12.4%
	M.Phil.	20.7%
	PH.D	1.2%
Currently Services Provided In Physiotherapy Field.	Academicians	22.5%
	Clinicians	56.8%
	Both(Academicians and clinicians)	20.7%
Place Of Work	Institute	32.5%
	Clinics/Hospitals	62.1%
	Both(clinics and hospitals)	5.3%
Year Of Experience	6 Months To 1 Year	30.8%
	1 To 2 Years	18.9%
	3 To 5 Years	21.9%
	>5 Years	28.4%
Knowledge: Have You Ever Heard About Kynotherapy	Yes	29.6%
	No	70.4%

Table II represents the frequencies and percentages of all statements, of which the academicians with the total percentage of (41.5%), clinicians with the total percentage of (43.4%) and participants who provided services in both the academic side and clinical side with the total percentage of (48.4%) showed positive responses.

**Table II: Comparison of Academicians, Clinicians and Academicians/Clinicians (Both)**

Statements	Academicians only (N=38)		Clinicians only (N=96)		Both (academicians and clinicians) N=35	
	F	%	F	%	F	%
Q 1	18	47.4	43	44.8	20	57.1
Q 2	21	55.3	51	53.1	20	57.1
Q 3	22	57.9	61	63.5	21	60.0
Q 4	20	52.6	55	57.3	16	45.7
Q 5	11	28.9	43	44.8	22	62.9
Q 6	22	57.9	46	47.9	16	45.7
Q 7	20	52.6	56	58.3	19	54.3
Q 8	20	52.6	47	49.0	22	62.9
Q 9	23	60.5	51	53.1	15	42.9
Q 10	13	34.2	41	42.7	14	40.0
Q 11	10	26.3	27	28.1	9	25.7
Q 12	12	31.6	43	44.8	15	42.9
Q 13	10	26.3	25	26.0	15	42.9
Q 14	11	28.9	37	38.5	15	42.9
Q 15	14	36.8	24	25.0	11	34.4
Q 16	13	34.2	49	51.0	18	57.1
Q 17	11	29.0	36	37.5	20	57.1
Q 18	13	34.2	30	31.3	14	40.0
Q 19	15	39.5	26	27.1	16	45.7
Q 20	17	44.7	43	44.8	21	60.0
Total %	41.5		43.4		48.4	

Table III represents the frequencies and percentages regarding positive and negative statements in the response of yes, no and I don't know such as: Population with the

percentage of 52.7% (89) believed that exercises with a trained dog improve therapist's interaction with a patient whereas participants with the percentage of 46.7% (79) thinks that exercises with a trained dog will focus patients 'attention mainly to a dog-not to exercises.

**Table III: Analysis Regarding Positive and Negative Statements.**

Positive statements		YES		NO		I DON'T KNOW	
		F	%	F	%	F	%
Q:1	Kynotherapy may improve an efficiency of physiotherapy	81	47.9	45	26.6	43	25.4
Q:2	Kynotherapy is a good way to complement other methods of rehabilitation	92	54.4	35	20.7	42	24.9
Q:3	Kynotherapy may improve social functioning of a patient	104	61.5	30	17.8	35	20.7
Q:4	Exercises with a trained dog improve patients' frame of mind	91	53.8	43	25.4	35	20.7
Q:5	Kynotherapy may improve patients' dexterity	76	45.0	56	33.1	37	21.9
Q:6	Exercises with a trained dog will distract patient's attention from difficulty of these exercises	83	49.1	56	33.1	28	16.6
Q:7	Exercises with a trained dog are more interesting to a patient than rehabilitation conducted at home	95	56.2	45	26.6	29	17.2
Q:8	Exercises with a trained dog improve therapist's interaction with a patient	89	52.7	47	27.8	32	18.9
Q:9	Working with a trained dog may weaken fatigue and boredom connected to long term rehabilitation	89	52.7	46	27.2	34	20.1
Q:10	Kynotherapy may be applied in all age patients' group	68	40.2	60	35.5	41	24.3

## Discussion

Kynotherapy has proven to be very beneficial as it helps to improve the communication, concentration, orientation and aggressive behavior of patients.<sup>4</sup> It also facilitates the functional tasks and gait.<sup>1</sup> The purpose of this study was to know the perception of physical therapists regarding kynotherapy.

A qualitative study conducted to evaluate the perception and behavior of therapists regarding animal assisted therapy

Cont.. table III: Analysis Regarding Positive and Negative Statements.							
	Negative statements	YES		NO		I DON'T KNOW	
		F	%	F	%	F	%
Q: 11	Exercises with a trained dog will focus patients' attention mainly to a dog-not to exercises	79	46.7	46	27.2	44	26.0
Q: 12	Exercises with a trained dog will cause patients' dislike to ordinary rehabilitation	63	37.3	70	41.4	35	20.7
Q: 13	Kynotherapists are not well educated and because of it their work is not efficient	73	43.2	50	29.6	46	27.2
Q: 14	Kynotherapy is an amusement, not a therapy	58	34.3	63	37.7	48	28.4
Q: 15	Kynotherapy should be used only if other methods are not efficient at all.	85	50.3	49	29.0	35	20.7
Q: 16	Kynotherapy may replace standard rehabilitation	51	30.2	80	47.3	38	22.5
Q: 17	Exercises with a trained dog will focus physiotherapist's attention mainly to a dog-not to patients	56	33.1	67	39.6	45	26.6
Q: 18	Physiotherapist working with a dog will share time to a patient and a dog and it will weaken his/her efficiency	67	39.6	57	33.7	45	26.6
Q: 19	Kynotherapists who are not physiotherapists usually conduct rehabilitation in wrong way	70	41.4	57	33.7	42	24.9
Q: 20	Kynotherapy should be applied only in children	41	24.3	81	47.9	47	27.8

and to evaluate the barriers and motivation in practicing animal assisted therapy. On evaluation the results showed a positive response regarding animal assisted therapy in the context of professional practice however few disagreed for the implementation of animal assisted therapy in current settings.

A need for sufficient knowledge in practicing this therapy was reported and many of them believed that animal assisted therapy increases patient 's participation and reduces psychological instability. In reference to the barriers and facilitators it was found that organization 's policies and physical environment may cause barriers and all of them reported that proper scheduling may became a barrier in implementing this therapy but if barriers are tackled they are agreed for the implementation of animal assisted therapy.

Thus it is concluded that therapists showed a positive response regarding animal assisted therapy and they reported a potential benefit when integrating animal assisted therapy in standard one but the institutional or organizational policies and the lack of knowledge hinders in practicing animal assisted therapy.<sup>1</sup>

In reference to this study the participants with the percentages of 61.5% (104) showed a positive response when asked regarding improvement in social functioning of patient with the use of kynotherapy. Similarly, a research conducted in 2019 by Karin Hediger et al evaluated the effectiveness of animal assisted therapy in context of social behavior among patients receiving neurorehabilitation sessions, for which the results showed the positive effects on various aspects of social behavior i.e.(communication, emotions) ( $p < 0.001$ ) it could be because of the concerns that the dog did not judge, interacts nonverbally and it only motivates so it provides the favorable

and comfortable environment to patients with psychosocial impairment.<sup>12</sup>

Regarding the statement kynotherapy is only applicable in children, the results of this study shows that participants with the percentage of 24.35% responded yes while in 2019 Melanie G.Tones et al conducted a review of evidence to evaluate the effects of kynotherapy for adolescents in context of psychological effects for which the study shows a positive results such as reduction in anxiety and depression ( $p < 0.05$ ).<sup>13</sup>

Another study conducted on facilitating effects of kynotherapy in children with disability in 2018 by Iwona Grabowska which revealed that kynotherapy helps to improve locomotion (92%), attention (94%), balance and coordination (84%) and the children's downtime (92%) which concludes that kynotherapy can be used as a supportive method for disabled children<sup>14</sup> and also it is evident from the review of evidences conducted in 2022 by Mitchell. A Franklin et al. to evaluate the mental health of elders by including the animal assisted therapy in residual care. They included 18 studies which uses dogs. The results of this review showed a positive effect on depression and socioemotional behavior.<sup>15</sup> These multiple studies revealed that kynotherapy could not only benefit children with different condition but can be helpful in treating patients in their adulthood and older ages.

It is evident from the results of this study that standard rehabilitation cannot be replaced by kynotherapy as only 30.2% physical therapist agreed to it. The study on perception of physiotherapy students regarding kynotherapy which was conducted by Dabrowska, Maria et.al in 2015 states that 66% of participants agreed that kynotherapy could not replace the standard rehabilitation, it is due to the concept of kynotherapy



that the dog itself is not a therapy it motivates or facilitates to take specific actions in therapeutic settings as it assists to perform exercises which are the key component of physical therapy practices.<sup>11</sup>

The results of this study regarding an ineffective work of kynotherapists due to lack of knowledge and education of kynotherapists 50 participants with the percentage of (29.6%) negated this but another experimental study conducted on human dog interaction and dog welfare by Magdalena Rogoza et al in 2018 in which dog handlers practices and knowledge to assess and understand dog's behavior was assessed by different behaviors of dog in sessions such as yawning of the dog indicates that the dog feels itself exhausted and need more oxygen but many of the dog handlers(50%) could not understand or identify the sign of dog which revealed that handlers interaction and understanding with dog was not appropriate and did not know that how to take care of dog and how to include dog in therapy sessions because an exhausted dog in during sessions may cause harm to child by a dog bite so, so handlers should be well educated and should be certified kynotherapists to implement their practices in rehabilitation.<sup>16</sup>

The results of this study were limited just to our area of practice (Hyderabad). No any correlation and association was found between the variables. Despite of its ease, convenient sampling may have led to the biasness in the results of the study. Limited availability of resources for conduction was also one of the limitations for this study.

It is recommended that further studies should be conducted regarding the benefits of kynotherapy in our area of practices so that, people became aware of its benefits, as it is widely used in other countries but in Pakistan there is very little awareness, however while conducting a study it is observed that there is insufficient literature regarding kynotherapy. Further training sessions and different kynotherapy organizations should be introduced to promote this practice as it helps to increase the outcomes of physical therapy treatment.

## Conclusion

The perception of physical therapists regarding kynotherapy is very limited. Most of the therapist have not even heard about kynotherapy which is one of the emerging interventional regime that can be integrated with conventional treatment options to treat several patients, physical and mentally. Furthermore, the participants who provided services in both the academic side and clinical side showed more positive response as compared to the academicians only and clinicians only.

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