



My Therapist Has Paws and a Tail – Impact of Having Pets on the Psychosocial Wellbeing of Pet Owners Residing In an Urban Area of Kancheepuram District Tamil Nadu

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ABSTRACT

Introduction: Pet attachment plays an important role in human's mental health, well-being, and quality of life. This study examined the human attachment to their pets and their stress reduction because of their pets among urban area of Kancheepuram district, Tamil Nadu.

Objective: With the above background, the study was done with the aim to assess stress reduction due to pet attachment among pet owners.

Methodology: Sample size was calculated using the formula $4PQ/l^2$. Based on the study done by Hart LA et al, 64% of pet owners benefitted psychosocially from pet companionship.¹³ Keeping this as P in the formula, sample size was calculated with 8% absolute precision and 10% non-response. The required sample size was rounded off to 170. The study was started in January 2021. By purposive sampling method, from the outpatients visiting urban health center attached to a private medical college, those who have pets were included in the study. Study was completed by April 2021 when the required sample size of 170 was reached.

Results: Among the study participants, most of them were in the age group between 15 to 30 years. Around 50.6% were females and 48.2% were males. About 94.7% were educated and 62.9% were employed. Around 75.9% participants allowed their pets inside the room and around 82.4% of them considered their pet as their family member. Attachment to pets been calculated using Short Attachment to Pet Scale (SAPS) of which 74.1% participants had good attachment to pets. In this study around 80.6% participants felt reduction in self-reported stress being with their pets.

Conclusion: From this study, 74.1% reported stress reduction on being with pets. Thus, adopting a pet can considerably reduce the stress.

Keywords: stress buster, attachment, pets, humane behavior

INTRODUCTION

Mental health conditions are increasing globally. Because of demographic changes, there has been a 13% increase in mental health conditions and substance use disorders in the last decade. Around 1 in 5 years

living with disability are caused by Mental health conditions. Around 20% of the children globally and adolescent population have a mental health condition, with suicide being the second leading cause of death among 15-29 years of age. Approximately 1 in

How to cite this article: Keerthana R, Umadevi R. My Therapist Has Paws and a Tail – Impact of Having Pets on the Psychosocial Wellbeing of Pet Owners Residing In an Urban Area of Kancheepuram District Tamil Nadu. *Natl J Community Med* 2021;12(6):158-162. DOI: 10.5455/njcm.20210526054537

Financial Support: None declared **Conflict of Interest:** None declared

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Date of Submission: 26-05-2021; **Date of Acceptance:** 29-06-2021; **Date of Publication:** 30-06-2021

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5 in post-conflict settings found to have a mental health condition.¹

Globally 264 million people suffer from depression. According to WHO about 7.5 per cent Indians suffer from some mental disorder and predicts that by end of this year roughly 20% of Indian population will suffer from mental illnesses. According to the statistics, 56 million Indians suffer from depression and 38 million Indians suffer from anxiety disorders.²

Pet attachment plays an important role in human's mental health, well-being, and quality of life. Pet animals can help alleviate stress, anxiety, depression, and feelings of loneliness and social isolation. Interactions with animals can help people manage their long-term mental health conditions.³ Pets generally satisfy the need for comfort and reassurance, assistance, and protection. Attachments to a pet dog may function by providing security and stability from which children can explore their environment. Specifically, dogs help children to regulate their emotions because they can trigger and respond to a child's attachment related behavior.⁴ Researchers found that pet-owning patients with high blood pressure could keep their blood pressure lower during times of mental stress than patients without pets.

If pet ownership is demonstrated to provide mental, social, and/or physical health benefits for adults, children, or adolescents at the population level, it could provide a relatively cost-effective way to promote health.⁵ During the last decades, animal assistance in therapy, education, and care has greatly increased. Today, the value of animal-assisted interventions [AAI, including animal-assisted therapy (AAT) and activities] is widely acknowledged. In the light of the rapid development of the practice of AAI, research evaluating the effects of AAIs as well as studies investigating the basic effects of human-animal interaction (HAI) and the underlying mechanisms seem to lag.⁶ This study examined the human attachment to their pets and stress reduction because of their pets, among dog owners in urban area of Kancheepuram district, Tamil Nadu. This study enhances the pet attachment and its implication for reducing stress and well-being.

Based on the above background, the study was done with the aim to assess the stress reduction due to pet attachment among pet (dogs) owners in an urban area of Kancheepuram district, Tamil Nadu.

METHODOLOGY

Study design and study area: The study is descriptive cross-sectional study done in an urban area of Kancheepuram district, Tamil Nadu.

Sampling method and sample size calculation: Sample size was calculated using the formula $4PQ/l^2$. Based on the study done by Hart LA et al, 64% of pet owners benefitted psychosocially from pet companionship.¹² Keeping this as P in the formula, sample

size was calculated with 8% absolute precision and 10% non-response. The required sample size was rounded off to 170. The study was started in January 2021. By purposive sampling method, from the outpatients visiting urban health center attached to a private medical college, those who have pets were included in the study. Study was completed by April 2021 when the required sample size of 170 was reached.

Inclusion criteria: All outpatients who have dogs as their pets visiting the urban health center in anakaputhur and who were staying minimum of 6 months in anakaputhur were included as study participants.

Exclusion criteria: Those who were unable to fill the questionnaire and answer the survey due to their medical illness were excluded.

Data collection tools: A pretested semi structured questionnaire was used to collect details regarding the socio demographic data and the attachment of pet owners with their dogs.

The Short Attachment to Pets Scale (SAPS) developed and validated by Marsa-Sambola et al. was used to measure the attachment to pets. One nine-item scale asked participants to "please tell us how you feel about your favorite pet animal" with nine statements, e.g., "I love pets" and "I consider my pet to be a friend (or would if I had one)". Each item was scored on a five-point Likert scale ("strongly agree" to "strongly disagree"). Total scores were calculated (minimum score 9, maximum score 45) ($\alpha = 0.85$). from the total score of 45 median was taken as 23 and above the score 23 was considered as good attachment to pets. This measure is based on previous research and mainly focuses on the strength of the emotional attachment of children and adults to their pets. The measure includes items like 'love and interaction', 'joy of pet ownership', 'affectionate companionship', 'equal family member status', 'mutual physical activity', 'pet problems', and 'general attachment'.¹³ It does not include certain features of human attachment like secure base behavior.

Data analysis method: Data collected was entered in Microsoft excel sheet and analysed using SPSS 25 version. The outcome variables of the study are all categorical variables and expressed as proportions. Statistical tools such as frequencies, percentages and chi square test were applied to check if there is significance association between demographic characteristics stress reduction on being with pets.

Ethical consideration: Approval from the medical ethical committee of Sree Balaji Medical College and Hospital obtained before starting the study.

Consent form obtained from the all the study participants above 18 years of age.

Assent form obtained from all the study participants of 15-18 years of age.

RESULTS

The study included 170 participants between 15 to 30 years of age in urban area of Kancheepuram district, Tamil Nadu.

Table 1: Socio-demographic characteristics of study samples (N=170)

Variable	Frequency N (%)
Age	
15-20	23 (13.5)
21-25	93 (54.7)
26-30	44 (25.9)
>30	10 (5.9)
Sex	
Male	82 (48.2)
Female	88 (51.7)
Occupation	
Unemployed/Students	61 (35.9)
Employed	109 (64.1)
Education	
Educated	161 (94.7)
Uneducated	9 (5.3)
Living condition	
Lives alone	54 (31.8)
Living with others	116 (68.2)
Marital status	
Unmarried	150 (88.2)
Married	20 (11.8)

Table 1 represents demographic profile of study participants. The majority of the participants (54.7) in the study were between age group 21 to 25 years of age. Most of the pet owners were female (50.6%), educated (94.7%), employed (48.2%)

Table 2: Variables related to having pets and stress among the study participants

Variable	Frequency N (%)
Do you visit a doctor if your pet is sick?	
Yes	131 (77.1)
No	39 (22.9)
Do you allow your pets inside your room?	
Yes	131 (77.1)
No	39 (22.9)
Do you consider your pet as your family?	
Yes	142 (83.5)
No	28 (16.5)
Have you felt reduction in stress when you are with your pets?	
Yes	137 (80.6)
No	33 (19.4)
Can you imagine a life without your pets?	
Yes	79 (46.5)
No	91 (53.5)
Have you suffered any pet loss?	
Yes	78 (45.9)
No	87 (47.6)
Short Attachment of Pets (SAPS)	
Yes	128 (75)
No	42 (25)

Table 2 shows the details related to having pets and stress among study participants. About 61.2% participants visited a doctor when dog was sick. About 60% people allowed their pet inside their room. About 75% of the participants accepted pets as their family. About 60.6% people felt reduction in stress on being with their pets. And 44.7% participants cannot imagine their life without pets. Also, 46% of the participants have suffered pet loss.

Table 3: Factors affecting the stress reduction on being with pets

Variable	Do you feel stress reduction On being with pets?		P value
	Yes n=137(%)	No n=33 (%)	
Age			
15-20	17(73.9)	6(26.1)	
21-26	75(80.6)	18(19.4)	
27-30	37(84.1)	7(15.9)	
>30	8(80)	2(20)	0.169
Sex			
Male	59(71.9)	23(28.04)	
Female	78(88.6)	10(11.3)	0.006*
Occupation			
Employed	86(78.9)	23(21.1)	
Unemployed	51(83.6)	10(16.4)	0.546
Marital status			
Married	12(60)	8(40)	
Unmarried	125(83.3)	25(16.7)	0.029*
Living condition			
Lives alone	40(74.07)	14(25.9)	
Living with others	97(83.6)	19(16.4)	0.15

*p value <0.05 statistically significant at 95% confidence interval

Table 3 the determinants regarding stress reduction on being with pets, female sex and married status had significant statistical association (P value <0.05) whereas age factor, occupation, living status did not have any significant statistical association with stress reduction on being with pets.

DISCUSSION

In this study, we inferred that 80.6% of the study participants felt reduction in stress on being with pets which is a majority population. A study conducted by R Yolken, et al stated that 75.95% of them had a significant decreased hazard of having a schizophrenia diagnosis as compared to those who were not in contact with the dogs.⁷

In this study, 77.1% of the participants allowed their pet inside the room and 83.5% of them considered dog as their family member. This helps in having more interaction and attachment to the dog and eventually helped in reducing their stress. Human Animal Interactions have been investigated by many researches and also its effects on hormonal indicators of stress such as cortisol, and on neurotransmitters such as epinephrine and norepinephrine are studied lately. Most of those studies provided evi-

dence that interaction with a friendly companion animal, especially a dog, positively affects the endocrine responses (changes in the levels of cortisol, epinephrine and norepinephrine).⁶

A study conducted by Barker et al. (2005) compared the effects of 20 mins of rest to 5- and 20-mins of interaction with the help of a therapy dog in healthcare professionals. Before the interaction(baseline), during the interaction and after the interaction or resting, the serum cortisol, epinephrine, and norepinephrine levels as well as salivary cortisol were collected. A significant decrease of serum and salivary cortisol was found, but none of the other parameters were affected in the dogs. A study done by Cole et al. (2007) compared a visit/contact with a dog and a visit/contact without a dog along with the usual management in the hospital among adults hospitalized with heart failure. Significantly the epinephrine and norepinephrine levels were measured to be lower during and after the dog visits. Another study by Crowley-Robinson et al. (1996) found reduction in depression over the course of 2 years in elderly residents residing in nursing home with a dog, and compared that with those in home without a resident dog.⁶ These are some of the evidence that proves there is strong association between attachment to pets and stress reduction (depression, anxiety, other mental conditions).

Gender is one of the important determinants of human health, and there is a clear pattern for the sex-specific prevalence rates for various physical as well as mental disorders.⁸ According to American Psychological Association, women are more likely to report having a great deal of stress than men.⁹ Here in this study we have inferred 65.1% of females felt stress reduction on being with pets than males which was 57.3%. This shows that if adoption of pets is encouraged among females, it can lead to reduction of stress levels and help them to improve their psychosocial wellbeing. Since there is a paucity of research data regarding the same it is imperative to understand the gender specific interactions and mechanisms to have a better understanding in the gender differences observed in mental health disorders among those who have pets.⁸

Marriage can lower the risk of all sorts of diseases, including cancer, high blood pressure, heart disease. Whereas unhappy marriages can drag partners down in body and spirit. Fights, uncertainty about the future, unequal workloads, and basic lack of compatibility can all generate stress.¹⁰ It can be recommended that, married couples could be encouraged to adopt a pet so that their marital conflicts could be reduced as evident from this study findings which shows that having pets can have a stress reducing property among married couples as a statistically significant association was found between the same.

Pet loss is yet another important aspect to be discussed in dealing with psychological problems. We observed that 46% of the study participants suffered

pet loss. This can also cause depression in many of the pet owners. The study done by Lorann Stallones, suggested the importance of providing a source of mental health counseling for people who are undergoing pet loss.¹¹ Since we are finding association with stress reduction on being with pets, pet loss has to be considered significantly.

CONCLUSION

From this study, 74.1% of the study participants reported stress reduction on being with pets. 83.5% of the participants considered pets as their family member. Overall, this study enhances our understanding of human attachment to pets, multiple benefits of the development and use of brief attachment scales to find their emotional attachment with pets. Since the exact mechanism cannot be obtained from a cross-sectional data, the statistical associations between pet attachment and caring behavior suggest that encouraging humans to participate in pet care behavior may have a range of positive outcomes for both human (such as better well-being, quality of life) and pets (such as better welfare and humane treatment). Thus, adopting a pet can considerably reduce the stress. This can be useful in reducing the stress level of the frontline workers of COVID-19 at the current situation since social distancing is followed for human interactions. The field of human-animal interaction continues to grow and there is an increasing need for shorted, validated measures of dimensions of human-animal relationships. One of the drawback or disadvantages of having pet is the pet loss. This pet loss itself can cause depression and mental illness in majority of them. Hence this human animal interaction intervention can be used as an additional management along with the proper medical or hospital management.

LIMITATIONS

This study examined only the participant's self-reported stress reduction on being with pets but not the exact mechanism of hormonal changes (cortisol, epinephrine, norepinephrine) in reducing the stress level. Hence further studies are required to study this physiology behind.

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