

Original Research Article**Pets During Covid-19 Pandemic: Significant Role as Stress Buster for their Owners**Ifrah Ahmed<sup>1</sup>, Vijaya Lakshmi<sup>2\*</sup><sup>1</sup>MBBS (3<sup>rd</sup> Year student), School of Medical Sciences & Research, Sharda University, Knowledge Park III, Greater Noida, UP, India.<sup>2</sup>MBBS.MD, Associate Professor, Department of Physiology, School of Medical Sciences & Research, Sharda University, Knowledge Park III, Greater Noida, UP, India.

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**Abstract**

**Background:** COVID-19 pandemic has affected everyone's lives in many different ways since January 2020 globally. COVID-19 pandemic has revealed the vulnerability of humans to disorders related to loneliness due to physical distancing measures and it has also highlighted the positive aspects of the relationship between animals and humans. Apart from physical wellbeing, psychological wellness has also been a matter of concern during lockdown. Animal assisted therapy aims at improving physical, mental and emotional aspects of human life. **Aim & Objective:** To evaluate the Role of pets in an individual's life during Covid -19 Pandemic **Methodology:** Questionnaire on PSS-10-C and a questionnaire on human animal relationship with relevant demographic data was distributed electronically via social media to subjects of age group more than 18 years after taking consent for participation in the study during April-May 2021. Subjects having any psychiatric disorder or taking any medication were excluded from the study. **Result:** Out of 230 participants 69 (30%) had pets amongst which dog was the most preferred pet. Many pet owners were concerned about their pet during lockdown, reason being restriction to veterinary treatment, etc. Stress of non-pet owners was significantly high as compared to pet owners. Regardless of owning a pet, 82% participants agreed that pets act as stress busters. **Conclusion:** Human-animal bond has beneficial effect on human's physical and mental health. Animal assisted therapy utilises this interaction to promote the health of patients. Animals as pet played an important role in reducing stress among their owners during COVID-19 pandemic. Animal assisted therapy therefore can be promoted in certain ailments which will not only cure the patients but improve the well-being of animals too.

**Key words:** COVID-19 pandemic, stress, pet animals, human-animal interaction, social isolation, lockdown

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**Introduction**

On January 30, 2020, the World Health Organization declared the SARS-CoV-2 outbreak (also known as "COVID-19") a global public health emergency.[1] On 25th

March 2020, stay at-home orders in the form of nationwide lockdown were given by the Government of India.[2] This was done to "flatten the curve", slow the spread

of the virus as well as preparation of medical infrastructure all over the country. Due to the measures to prevent the spread of Corona virus and decrease the magnitude of mortality globally, the COVID-19 pandemic has affected everyone's lives in many different ways. Social and behavioural health impact seems to be the most affected. The stress level, emotional trauma, low self-esteem and low mood are some of the psychological concerns caused by the current pandemic. Some studies done recently mentions about higher levels of stress, anxiety, depression, and poor quality of life during the COVID-19 crisis in different populations.[3,4,5]

Companion animal ownership is defined as 'any domestic or wild animal, permanently living in a community and kept by people for their company, enjoyment, work, etc. Pet animals are animals, which live in close vicinity of humans and are fed, cared and played by them. They can be either animal or bird. Usually, pet owners spend enormous amounts of money, time, and energy on creatures that seem to give nothing of utilitarian value in return. Archer et al in 1997 mentioned that the perceived mutual affection between companion animals and their human counterparts is supported by the loving and pleasant feelings experienced during interactions.[6] Sable in 1995 very well illustrated that companion animals reduce loneliness and contributes a lot to a general sense of well-being in their owners.[7] Friedmann et al in 1995 found that even looking at animals can reduce anxiety in times of stress in an individual.[8] Human-Animal Interactions (HAI) describe a wide spectrum of interactions and relationships between animals and humans[9] and are of growing interest at the time of physical distancing norm amongst human being. According to American Veterinary Medical Association's Committee, the human animal bond is, "a mutually beneficial and dynamic relationship between people and other animals that is influenced by behaviours that are essential to the health

and well-being of both". The use of human animal interaction as animal assisted therapy dates back to mid-1800s when, Florence Nightingale introduced birds as a distraction for patients admitted in hospitals. Today animal assisted therapy is being widely used clinically and for research purpose. The ownership of pets (or 'companion animals') and its potential effect on human physical and mental health is one area of research[10] which has become popular during the current pandemic.

Previous studies carried out on human-animal bond and human health are mostly focused on selected species, like dogs and cats, with little or no attention paid to other species. The Covid-19 pandemic has raised the previously unexplored question about the role that human animal interactions play in the context of widely applied social distancing and isolation measures. This is because complete lockdown leading to restrictions on travel, loss of close ones, unemployment etc has raised concerns related to mental stress, anxiety and low self-esteem. It has raised a much-awaited question on how human-animal bond has affected on psychological aspects of pet owners.

**Aim** of this study was to evaluate the Role of pets in an individual's life during Covid -19 Pandemic

The **Objectives** of the study were:

1. To assess the presence of stress in general population during Covid -19 Pandemic
2. To identify the most preferred animal as pet
3. To analyse the response of normal individuals and their families towards pets
4. To investigate the relation between stress and human-animal relationship

## Materials and Methods

### Study design

Current study is a descriptive cross-sectional study based on questionnaire survey assessing a representative sample of the adult population confined at home during the nation-wide lockdown due to the COVID-19 pandemic.

### Setting and participants

The survey was conducted in North India (NCR region) in April-May 2021 during the second wave of Covid -19 pandemic in the country amongst general population. Participants were asked to participate in the study only if they were not on any kind of anti-psychotic medication. All participants were over 18 years of age and with prior consent were eligible to take part, irrespective of companion (pet) animal ownership. The participants were also assured that the collected data would be kept confidential and not shared with anyone outside the research team. Ethical approval for the survey was taken from Institutional Ethics committee.

### Methodology

Online Google forms were circulated through social media platforms such as Facebook, WhatsApp, Instagram and Email ID as well as the social networks of the authors to recruit a diverse pool of participants.

### Tool

The questionnaire included validated items and new items based on relevance to Covid-19-related aspects, for example valid consent form, demographic data, Pandemic related perceived stress scale of COVID-19 (PSS-10-C), Comfort from Companion animal scale and a relevant questionnaire on human-animal relationship.

### Demographic data

Demographic information of the participants was collected which includes, participant's age (in years), gender (male/female), occupational status (student/employed/unemployed) and

cohabitation (alone/with friends/ with parents/ with partners/ with children).

**Covid-19 isolation status.** Participants were asked to inform whether they had been in social isolation since the Covid-19 outbreak, due to a suspected infection.

### Stress during COVID-19 pandemic

Pandemic related perceived stress scale of COVID-19 (PSS-10-C) developed by Cohen, Kamarck and Mermelstein in 1983 was distributed which measures the stress during last 15 days in the pandemic.[11] This scale contains 10 questions which are to be answered under five responses as: never, hardly ever, occasionally, almost always and always. Items 1, 2, 3, 6, 9 and 10 are scored directly from 0 to 4 and items 4, 5, 7 and 8, conversely, from 4 to 0. The sum total was calculated. The stress scale was then compared with the questionnaire on ownership of pet animals and the changes in relationship between humans and animals during pandemic.

**Pet ownership-** The participants were asked whether they own any pet or not. If yes, they were asked which pet they own.

**Human-animal bond and interactions.** Keeping their pet animal in mind, participants were then asked to indicate agreement to statements on the validated 11-item Comfort from Companion Animals Scale (CCA), using a four-point Likert scale (1 = strongly disagree; 4 = strongly agree).[12] The Comfort from Companion Animal scale focuses specifically on the intimacy or comfort domain of the human-animal relationship. Comfort from Companion Animal scale is an instrument to measure the 'attachment' to companion animals, as well as measures the comfort or 'closeness/intimacy' dimension of the human-animal bond. Scores for each item on the CCA were combined into one total score (11–44) and included as an interval variable in the analyses.[13]

**Role of companion animals during lockdown.** Participants who owned animals were

asked to identify the animal they felt closest to, and indicate their agreement with seven statements on the role of their animals in the lockdown situation on a 4-point Likert scale (1 = strongly agree; 4 = strongly disagree)

Lastly participants were asked whether they consider pets or companion animal as stress buster or not.

### Statistical analysis

A spreadsheet was prepared from google forms on Microsoft excel. Data was analysed using Microsoft excel as well as SPSS.

### Result

A total 230 participants gave their valid consent to participate in the study as well as submitted the complete questionnaire.

Mean age of the participants was  $23 \pm 2.4$  years. 57.8% participants were females whereas only 42.2% were males. In the current study maximum response obtained was from students i.e., 82.6%, 14% participants were employed and rest preferred not to say. Related to cohabitation, 85% participants were living with their parents, 10% were living with their friends, whereas 5% were found to be living alone during the pandemic. 80% of the total participants were socially isolating themselves during the pandemic.

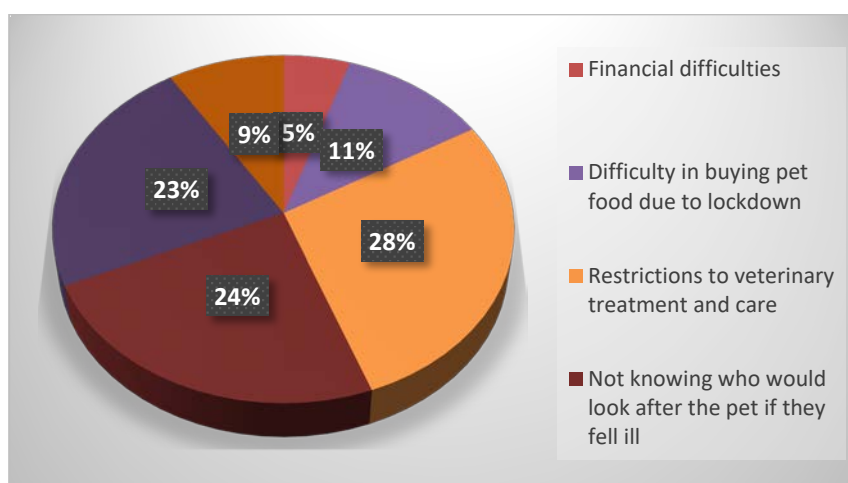
Pandemic related perceived stress scale of COVID-19 (PSS-10-C) of all participants showed 9% participants had mild stress, 15% participants had severe stress and rest 76% had moderate stress. Dog was the preferred pet owned by the pet owners (56%) in the current study followed by cat (14%), bird (13%), rabbit (6%), fish (3%), etc

**Table 1: Perceptions of pet owners regarding the role of companion (pet) animals during Covid-19 pandemic**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
My pet helps me cope emotionally with the Covid-19 situation.	0.9%	4.5%	25.5%	38.2%	30.9%
My pet keeps me fit and active in the Covid-19 situation	1.8%	7.3%	38.5%	26.6%	25.7%
My pet has positive effects on my family at this time	0.9%	0.9%	26.2%	34.6%	37.4%
My pet causes problems in my family at this time	29.6%	32.4%	24.1%	10.2%	3.7%
I can't imagine being without my pet at this time	1.8%	8.3%	29.4%	30.3%	30.3%
It would be easier for me not to have an animal at this time	23.6%	32.7%	26.4%	12.7%	4.5%
My pet keeps me motivated, calm and happy during this time	0.9%	1.9%	24.5%	39.6%	33.0%

**Table 2: Perception of participants on Animal Assisted therapy**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
My pet provides me with companionship	3.6%	6.2%	21.2%	26.5%	42.5%
Having a pet gives me something to care for	0.9%	2.7%	17.9%	36.6%	42.0%
My pet makes me play and laugh	0.9%	3.7%	15.7%	35.2%	44.4%
I enjoy watching my pet	0.9%	0.9%	17.4%	30.3%	50.5%
My pet makes me feel loved & trusted	0.9%	0.9%	25.0%	36.1%	37.0%
I get comfort from touching my pet	0.9%	2.8%	23.4%	31.8%	41.1%
Petting my pet makes me feel good	0.9%	0.9%	26.6%	33.9%	37.6%
Talking with my pet help me relieve stress	2.8%	0.9%	22.4%	36.4%	37.4%



**Figure 1: Worries of pet owners about their pet during the COVID-19 pandemic**

**Table 3: Difference between stress levels of pet owners compared to non-pet owners by two-sample t test.**

Two-sample T for Yes (Pet owner) vs NO (Non pet owner)				
	N	Mean	StDev	SE Mean
Yes	69	18.97	6.14	0.74
NO	161	20.41	5.23	0.41

Difference =  $\mu$  (Yes) -  $\mu$  (NO)  
 Estimate for difference: -1.439  
 95% upper bound for difference: -0.128  
 T-Test of difference = 0 (vs <): T-Value = -1.81 P-Value = 0.036 DF = 228

As the p value is 0.036 (< 0.05), it shows that there is significant difference in stress level between pet owners and non-pet owners

Overall, 83% of the participants agreed to the role of pets as Stress buster.

## Discussion

The psychological and social consequences of the corona virus disease 2019 (COVID-19) pandemic have created significant uncertainty in the lives of almost all individuals across the globe. Whether its mandatory stay-at-home orders, loved ones falling ill to the virus or financial insecurity because of unemployment, almost every individual has experienced uncertainty unlike any other time in their lives. Due to restriction of movement, human social network interaction was affected which made people turn towards their pets to fill up this void. Pets played an important role through the COVID-19 pandemic as a complementary social support. In the previous studies, it was found that Animal-assisted interventions have been successful at improving the mental health and quality of life for persons with developmental, neurological, social, and psychological impairments.[14]

Physical contact with animals is also considered to help in reducing feelings of loneliness and isolation while living alone thus becoming “lifeline” during the pandemic. This study tries to correlate human animal bond and its effect on stress and the role of animals during the COVID-19 pandemic. Current study is the first of its kind done in India, though several studies on companion animals has been done in foreign countries.

In the current study the authors found that almost all individuals were having mild to severe stress during COVID-19 pandemic. Out of 230 participants, 69 (30%) had pets and dog was the most preferred animal followed by cat. The pet owners strongly agreed for the positive role of pets in their life during the second wave of COVID 19 pandemic. According to the participants, their pets helped in coping emotionally, keeping fit, active and calm during stressful pandemic. During the current pandemic, companion animals commonly known as pets, constituted a reliable source of

support, providing unconditional love, affection and companionship. Pets were frequently perceived as being able to enhance mood, reduce stress, and help participants to cope generally with the COVID-19 lockdown phase.

They also expressed that even their family could not imagine living without their pet.

Participants also suggested that seeing an animal in their natural environment provided opportunities for distraction from their inner feelings of distress due to the pandemic.

There was significant ( $p=0.036$  i.e.,  $<0.05$ ) difference in the stress level of pet owners as compared to non-pet owners in the current study thus showing pets helped owners to feel less lonely, both before and during the pandemic. This is also consistent with findings in a U.K. study by Ratschen and colleagues, which suggested that pet ownership may offer some moderation of loneliness during the pandemic.[15] The practice of using animals as a part of therapy dates back to the late 18th century, when animals were introduced into mental institutions to help socialize patients with mental disorders.[16]

Shiloh S et al in 2003 mentioned that petting a real animal significantly reduced anxiety.[17]

This aligns with the current findings, that the animals are able to provide unique emotional support as a result of their ability to respond to their owners in an intuitive manner, especially in times of distress. Research on animal-assisted interventions has suggested that a positive distraction is a major benefit and is more than just emotional support and companionship, as animals can distract from pain, stress and other difficulties.[18] Maximum participants in this study agreed in favour of animal assisted therapy. All the participants in the current study unanimously agreed to the statement that pets could really act as a stress buster.

Challenge for pet owners were concerns and worries relating to caring for their animals during this time were frequently reported and were likely to have exacerbated feelings of stress for the owner. A number of participants expressed their concerns about their animals' health and wellbeing during the COVID-19 lockdown phase. This was often exacerbated by the possibility that their access to veterinary care would be restricted, as appointments were often limited to emergency care only. Those requiring routine appointments (e.g. vaccinations, flea treatment) were often delayed, which could result in stressful situation for the pet owner. Due to financial uncertainty, participants expressed their concern over buying pet food and other necessities, being able to provide healthcare if required. There was a consensus that interactions with non-companion animals (e.g., wildlife) and frequent contact with nature had a positive impact on mental health of all the participants.

### Conclusion

COVID-19 pandemic has brought significant uncertainty to many, and with social distancing, limited access to human-to-human contact, access to social support from pets may provide a sense of companionship and comfort to individuals. In conclusion, this study provides in-depth insight into the impact of human-animal relationships and interaction with both companion and non-companion animals in a COVID-19 lockdown context. Role of animals as source of emotional and physical support during a period when most of the population is experiencing social and environmental challenges has been established. However, the study also highlights specific challenges that are associated with caring for a companion animal during the lockdown phase, which can often exacerbate feelings of distress for the owner. Pets also have a positive impact on the family of their owner and they were loved and cared by one and all. The current

study shows that pet owners have a significantly low stress level as compared to non-pet owners during COVID-19 pandemic. This study also supports the hypothesis that pet animal can act as stress busters in the form of therapy. Animal assisted therapy therefore can be promoted in certain ailments which will not only cure the patients but improve the wellbeing of animals too.

### Limitation

The survey was conducted online, limiting the sample to only those who had access to the Internet. As the questionnaire was in English therefore, participants were English-speaking educated urban people and may not be the representative of uneducated people of poor socioeconomic status having pets for various utility.

However, the online method of recruitment helped the authors to collect data from a diverse sample within a short time, given the restriction of physical mobility due to the lockdown. Current study is an observational study based on survey rather than interventional research. Since it was a cross-sectional study, the causal association between the role of pets and stress cannot be established.

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