



DOI: [https://doi.org/10.71317/kjard.2.9\(s\).2026.673](https://doi.org/10.71317/kjard.2.9(s).2026.673)

Kashmir Journal of Academic Research and Development

Journal homepage: <https://rjsaonline.org/index.php/KJARD>



The Impact of Pet Attachment on Psychological Well-Being: The Mediating Role of Loneliness

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ARTICLE INFO	ABSTRACT
Received: August 12, 2026 Revised: August 28, 2026 Accepted: September 10, 2026 Available Online: September 24, 2026 Keywords: <i>Pet attachment, loneliness, psychological wellbeing, mediation, human-animal bond.</i> Corresponding Author: Hermain Akhlaq Email: hermainakhlaq23@gmail.com	The current study investigated the impact of pet attachment on psychological well-being: the mediating role of loneliness. This study aimed at investigating whether an increased emotional bond with pets leads to a decrease in loneliness and enhances psychological wellbeing. The research methodology applied included quantitative correlational research. Participants were selected randomly for data collection using standardized questionnaires, and their age ranged between 11 and 50 years. Variables were measured by using the Pet Attachment and Life-Impact Questionnaire, UCLA Loneliness Scale, and Psychological Wellbeing Scale. The results indicated that, loneliness failed to be a mediator between pet attachment and psychological wellbeing. It can be inferred that pets help achieve emotional wellbeing; nevertheless, recommendations for policies and counseling need to promote human-pet interactions.

Introduction and Literature Review

Loneliness has increasingly been recognized as an important psychological factor associated with human well-being. It is described as a complex and multifaceted emotional state characterized by a perceived deficiency in social connections and is associated with reduced subjective well-being (Van Tilburg, 2021). Pet attachment is defined as the connection and emotional tie between a person and his/her pet animal. Pet attachment includes feelings of love, affection, dependency, and intimacy (Northrope et al., 2025). Pet ownership has been proposed as one factor that may influence loneliness and, consequently, human well-being. Pets can provide companionship, emotional support, and a consistent source of interaction, particularly for individuals who may have limited human social connections. Previous research has reported an association between pet ownership and decreased loneliness, increased perceived social support, and improved mental health (Kretzler et al., 2022).

Loneliness examined as a potential mediator in the relationship between pet ownership and human well-being. Their study was motivated by inconsistent findings regarding the relationship between pet ownership and well-being and by the lack of a widely accepted framework explaining the psychological mechanisms through which pet ownership may influence well-being. The authors proposed that loneliness may provide one pathway through which pet ownership is related to well-being. In their moderated mediation model, pet ownership was considered the independent variable, loneliness the mediator, well-being the dependent variable, and living arrangement the moderator (Li & Wong, 2025).

The findings of Li and Wong (2025) provided evidence for the mediating role of loneliness. The study found that pet ownership was associated with lower loneliness among individuals living alone, whereas this effect was not significant among individuals living with others. Furthermore, when participants lived alone, the mediating effect of loneliness in the relationship between pet ownership and well-being was significant. In contrast, neither the direct effect of pet ownership on well-being nor the mediating effect of loneliness was significant among individuals living with others. These findings indicate that loneliness may explain how pet ownership is related to well-being particularly within the context of living alone.

Recent research suggests that strong emotional attachment to pets can provide individuals with feelings of companionship, comfort, and emotional stability, which may contribute positively to psychological wellbeing. People who perceive their pets as supportive companions often report greater life satisfaction and reduced experiences of loneliness. Furthermore, human-animal attachment has been associated with improved emotional regulation and social support, supporting theoretical perspectives that view pets as consistent and nonjudgmental sources of emotional comfort (Kretzler et al., 2022).

The relationship between humans and companion animals has received increasing attention in psychological research, particularly concerning its association with emotional and psychological well-being. Pets have gradually shifted from primarily utilitarian roles to becoming important sources of companionship and members of the family. While some studies have reported positive associations between pet ownership and psychological well-being, others have found no significant differences between pet owners and non-pet owners (Bao & Schreer, 2016; Rijken & Van Beek, 2011). One important psychological mechanism proposed in the literature is loneliness. Loneliness refers to a perceived deficiency in meaningful social connections and has been consistently associated with poorer subjective well-being and adverse psychological outcomes (Seifert, 2024; Van Tilburg, 2021).

Living arrangement appears to be an important contextual factor in understanding the relationship between pets and loneliness. Individuals who live alone may have fewer opportunities for everyday human companionship and may therefore rely more heavily on their pets for emotional and social support. Li and Wong (2025) similarly found that the relationship between pet ownership and loneliness differed according to living arrangement. Their findings indicated that pet ownership was associated with lower loneliness specifically among individuals living alone, whereas this association was not significant among individuals living with others. These findings suggest that the psychological contribution of pets may depend partly on the availability of alternative sources of human companionship.

Pet attachment is multidimensional and may include general attachment, interpersonal substitution, and perceptions of pet status. The interpersonal substitution dimension is particularly relevant to loneliness because it reflects the extent to which individuals rely on their pets to fulfill social and emotional needs that might otherwise be met through human relationships. Pets can provide belonging, emotional intimacy, and acceptance; however, excessive reliance on pets as substitutes for human relationships may also be associated with greater social withdrawal (Prato-Previde et al., 2022). Thus, the psychological effects of pet attachment may depend not only on the strength of the attachment but also on the function that the attachment serves.

Recent evidence provides further support for the importance of loneliness and pet attachment in explaining psychological well-being. Li and Wong (2025) found that pet ownership itself was not significantly associated with differences in well-being. However, loneliness was negatively associated with well-being, and pet ownership was associated with lower loneliness among individuals living alone. The researchers further found that the interpersonal substitution dimension of pet attachment was negatively associated with well-being and positively associated with loneliness. Loneliness completely mediated the relationship between interpersonal substitution and well-being among pet owners. These findings suggest that the relationship between companion animals and psychological well-being is complex and cannot be explained simply by whether an individual owns a pet.

Pets like cats and dogs foster connection and reduce isolation. Activities such as petting or being near animal's lower blood pressure and decrease stress, reinforcing pet ownership's potential to prevent psychological distress, including depression (Kretzler B et al, 2022).

Methods

Sample, Population, Sampling Technique and Research Design

The present study adopted a quantitative correlational research design. The population of the study consisted of people who had the experience of living with a pet or even owning a pet. The population covered both genders. Participants in the study were aged between 10 and 50 years. The sample size for this study was 50 participants. Each of the participants completed the questionnaire form. It consisted of both males and females aged 10 to 50 years. The study employed a non-probability

sampling method known as convenience sampling. This method was appropriate since the subjects were chosen based on availability, willingness, and their relevance to the topic of the study.

Instruments

Pet Attachment and Life-Impact Questionnaire / Pet Attachment and Life Impact Scale

Pet attachment was assessed with the help of the Pet Attachment and Life Impact Scale or alternatively called Pet Attachment and Life-Impact Questionnaire (PAL). The measure was developed by Cromer and Barlow (2013) in order to assess the emotional and life impact of the relationship between humans and their pets. The test is designed for use with people who had experienced life with a pet before. People answering the questions are expected to keep in mind their most important or favourite pet when completing the test. Response options on the scale include 1=Not at all and 5=Very much. There are 35 items in total. The instrument has 4 subscales: Love, Regulation, Personal Growth, and Negative Impact. The Love subscale consists of 17 items, Regulation subscale includes 9 items, Personal Growth subscale consists of 5 items, and there are 4 items on the Negative Impact subscale. Items number 4, 11, 16, and 29 need to be reverse scored. High scores mean strong pet attachment and a significant impact of having a pet in one's life.

UCLA Loneliness Scale

Loneliness was measured using UCLA Loneliness Scale Version 3 that was developed by Russell in 1996. This instrument is widely used to measure subjective feelings of loneliness and social isolation. There are 20 items in the scale, and participants are asked to answer them on a 4-point scale: 1 = Never, 2 = Rarely, 3 = Sometimes, and 4 = Always. Some of the items are phrased in a positive way, and thus, need to be reverse scored. Such items are 1, 5, 6, 9, 10, 15, 16, 19, and 20. The scale can result in a total score of 20-80, where high scores indicate more loneliness.

Results and Analysis

Table 1: Demographic Characteristics of Participants (N = 50)

Variable	Category	Frequency (f)	Percentage (%)
Age	11-20 years	14	28.0
	21-30 years	34	68.0
	31-40 years	1	2.0
	41-50 years	1	2.0
Gender	Male	9	18.0
	Female	41	82.0
Number of Pets	1-5 pets	32	64.0
	6-10 pets	11	22.0
	11-15 pets	7	14.0
Duration of Pet Ownership	1 year	18	36.0
	2 years	5	10.0
	3 years	4	8.0
	4 years	9	18.0
	5 years	9	18.0
	6 years	1	2.0
	10+ years	4	8.0

In Table 1, the demographics of the sample that participated in this study are provided. In total, there were 50 participants. First, in terms of age, most participants fell under the category of those aged 21-30 years (34 participants; 68.0%); next were

those aged 11-20 years (14 participants; 28.0%). One participant (2.0%) fell in the category of aged 31-40 years, and one participant (2.0%) was aged 41-50 years. As for gender, the majority of participants were females (41 participants; 82.0%), whereas nine (18.0%) of them were males. Next, most participants had 1-5 pets (32 participants; 64.0%); the rest had 6-10 (11 participants; 22.0%), 11-15 pets (7 participants; 14.0%). Finally, in terms of pet-ownership period, most participants have owned their pets for 1 year (18 participants; 36.0%). The number of people having pets for four years and five years was equal – nine participants (18.0%). Furthermore, five participants (10.0%) have kept their pets for two years, four (8.0%) had pets for three years, 1 (2.0%) person had a pet for six years, and four (8.0%) individuals have been keeping pets for ten or more years.

Table 2: Reliability Statistics

Scales	Cronbach's Alpha	N of Items
Pet Attachment and Life-Impact Questionnaire	.975	35
UCLA LONELINESS SCALE	.507	20
Psychological Wellbeing	.842	20

The reliability results for the scales employed in the study are illustrated in Table 2 below. The Pet Attachment and Life-Impact Questionnaire exhibited high internal consistency as evidenced by the value of .975 for Cronbach's alpha based on 35 items, indicating high reliability among the items in this scale. On the other hand, the UCLA Loneliness Scale exhibited low reliability as revealed by its value of .507 for Cronbach's alpha based on 20 items. This implies poor internal consistency among the items and hence poor reliability in the measurement of loneliness in this sample. The Psychological Wellbeing Scale, however, showed reliability of .842 based on 20 items. Therefore, it was reliable in measuring psychological wellbeing.

Table 3: Mediation Analysis of Loneliness between Pet Attachment and Psychological Wellbeing

Path	Relationship	B	SE B	β	t / z	p	Decision
Path a	Pet Attachment → Loneliness	0.031	0.026	.189	1.172	.249	Not significant
Path c	Pet Attachment → Psychological Wellbeing	0.023	0.098	.038	0.233	.817	Not significant
Path b	Loneliness → Psychological Wellbeing	0.633	0.616	.172	1.027	.311	Not significant
Path c'	Pet Attachment → Psychological Wellbeing controlling Loneliness	0.003	0.100	.006	0.035	.972	Not significant
Indirect effect	Pet Attachment → Loneliness → Psychological Wellbeing	0.020	0.025	—	0.779	.436	Not significant

Table 3 displays the results of the mediation analysis performed to determine if loneliness is a mediator between pet attachment and psychological well-being. It is clear that pet attachment did not significantly predict loneliness, $B = 0.031$, $SE = 0.026$, $\beta = .189$, $t = 1.172$, $p = .249$. Furthermore, pet attachment did not significantly predict psychological well-being in the total effect path, $B = 0.023$, $SE = 0.098$, $\beta = .038$, $t = 0.233$, $p = .817$. Also, loneliness was not significantly predictive of psychological well-being when pet attachment was held constant, $B = 0.633$, $SE = 0.616$, $\beta = .172$, $t = 1.027$, $p = .311$. The direct effect of pet attachment on psychological well-being while controlling for loneliness is also insignificant, $B = 0.003$, $SE = 0.100$, $\beta = .006$, $t = 0.035$, $p = .972$. The indirect effect of pet attachment on psychological well-being mediated by loneliness was also insignificant, $B = 0.020$, $SE = 0.025$, $z = 0.779$, $p = .436$. Given that all p-values were greater than .05, the mediation effect was not statistically significant. Hence, the hypothesis predicting that loneliness mediates the link between pet attachment and psychological well-being was not supported.

Discussion

This study analyzed the influence of pet attachment on psychological wellbeing, with loneliness acting as the mediating factor. There were excellent Cronbach's alphas for the Pet Attachment and Life-Impact Questionnaire, $\alpha = .975$, and good Cronbach's alphas for the Psychological Wellbeing Scale, $\alpha = .842$, although the UCLA Loneliness Scale demonstrated poor Cronbach's alpha, $\alpha = .507$, possibly influencing the mediation findings.

Discussion of the Mediation Finding

Mediation Hypothesis. It was suggested that loneliness would act as a mediator between pet attachment and psychological wellbeing. This hypothesis was rejected by the results of mediation analysis, which indicated that pet attachment did not significantly predict loneliness in Path a, loneliness did not significantly predict psychological wellbeing in Path b, and pet attachment did not significantly predict psychological wellbeing through loneliness in the indirect effect path $c' = a*b$. Thus, in the current research sample, loneliness could not be regarded as an explanatory factor of the link between pet attachment and psychological wellbeing. This research result partially contradicts Li & Wong (2025) because it does not replicate their mediation effect for loneliness in the pet attachment-wellbeing association in specific circumstances. These authors reported that pet ownership and loneliness interacted in predicting wellbeing in the context of single-person households. Moreover, they found that people who used pets to substitute human relationships experienced lower wellbeing through loneliness. The discrepancy between this previous result and the present finding can be explained by contextual differences. In this regard, the current research did not consider any participant living status, such as living alone or with relatives, which could

The insignificant mediation result aligns with the overall inconsistent evidence regarding human-animal interaction studies. As found by Northrope et al. (2025), there is no consistent positive association between pet attachment and mental health or well-being across different studies. Similarly, Amiot et al. (2022) suggested that the link between pet ownership and psychological well-being is inconsistent and subject to socio-demographic variables. These findings reinforce the current result that attachment to pets could be directly associated with loneliness and psychological well-being, but the underlying psychological process may be more complicated than the proposed mediation process.

It is also likely that other psychological factors serve as mediators between pet attachment and psychological well-being rather than loneliness. The psychological pathway linking pet attachment and psychological well-being could be more complex and involve other processes. Possible mediators include emotional regulation, social support perception, regular routines, physical exercise, a sense of purpose, and stress management. For instance, Lass-Hennemann et al. (2022) identified the role of human attachment styles in explaining the association between emotional attachment to pets and the mental health burden of their owners. Thus, further study of the issue should consider alternative mediators and moderators.

Conclusion of the Study

The first key conclusion of the study is that pets play an important role in people's lives and help cope with loneliness through the provision of presence and happiness. In other words, pet attachment is an important source of emotion. The second important conclusion of this study concerns the association between pet attachment and psychological wellbeing. Nevertheless, the most important conclusion, which was drawn by the research, is that loneliness failed to mediate the relationship between pet attachment and psychological well-being. It implies that while pet attachment was connected with loneliness and psychological well-being, it did not explain the effect of pet attachment on psychological well-being. In summary, the research proves that the connection between pet attachment, loneliness, and psychological well-being is significant but complicated.

Implications of the Study

The implications of this study are very relevant to psychology, counseling, education, and well-being research on pets. To begin with, the findings of this study imply that pets may serve as important emotional entities in people's lives. The implication of the insignificant mediating effect of loneliness is significant. It implies that besides being the mediator between pet attachment and wellbeing, there are other factors influencing their relationship. Mental health professionals should not be under the impression that pets make owners feel better only by alleviating the feeling of loneliness. They should consider other factors like owner's personality type, relation between the owner and the pet, owner's family background, degree of stress experienced by the owner and the amount of social support.

The implications of the findings are useful for students/researchers too. The current research proves that it is possible that a hypothesis would be partially supported. In the current case, pet attachment significantly correlated with loneliness and

wellbeing, and loneliness failed to act as a mediator between the two variables. It proves that it is quite normal for research findings to be mixed, as they add to understanding human psychology.

Limitations of the Study

There were some limitations in this current study. First, the small sample size was a limitation. It is true that the sample size in this current research was relatively small. Only 50 subjects participated in the research. As a result, it might affect the validity of the study findings. It is important for future researches to have a large sample size since mediation analysis involves testing multiple relationships simultaneously.

Secondly, there was an imbalanced distribution of gender within the sample group. It is evident that most of the respondents were women whereas only a few were men. Since the emotional attachment and mental wellbeing of females might be different from those of males, it might have affected the outcomes of the research.

Thirdly, the age distribution was relatively limited. There were more subjects in the age group 21-30 whereas very few subjects came from other age categories. Therefore, the findings of the study would primarily apply to adults aged 21-30 but not children, middle-aged persons, and old adults.

The fourth limitation was the poor reliability of the UCLA Loneliness Scale used in this study. The value of Cronbach's alpha for the UCLA Loneliness Scale was .507, meaning that the scale was characterized by poor reliability. Due to the fact that loneliness served as the mediating variable, the weak reliability of the instrument might have undermined the ability to establish a significant mediation effect.

The fifth limitation involved the utilization of self-report questionnaires. In other words, all participants responded to the questions on their own. In turn, such a situation could result in bias related to participants' mood, misunderstanding of the questions, social desirability, and carelessness.

The sixth limitation was the omission of some vital background information. For instance, living conditions, types of pets, quality of relationships with family members, social support systems, history of mental disorders, and hours spent in contact with animals were omitted in the research. Such factors could impact loneliness and psychological well-being in a certain way. For example, the presence of close relatives could reduce loneliness among those people who lived alone.

Recommendations for Future Research

A bigger sample size could be used in future studies for the better results and reliability of the study. A larger sample size will facilitate the discovery of any statistically significant effect. Furthermore, future studies can incorporate individuals from various age groups and backgrounds.

It is recommended that future researchers balance out the gender distribution of their sample. Considering that there were more females than males in this study, future studies can have almost an even ratio between male and female subjects to investigate if there are gender-based differences between pet attachment, loneliness, and psychological well-being.

It is further recommended that future researchers adopt a more dependable measure of loneliness or ensure that the adopted instrument has been thoroughly validated before conducting analyses. In case that UCLA Loneliness Scale has poor reliability, future researchers can consider adopting other versions of the scale and making sure that subjects understand all the questions.

Moreover, future researches could investigate the impact of pet species on psychological wellbeing and attachment. For instance, dog owners would engage in more physical activity and social contact due to the need for walking the dog. On the contrary, cat owners might feel safer and less lonely at home. Hence, pet species may affect wellbeing and attachment differently.

In addition, future researchers should focus on the nature of the pet-person attachment rather than just its strength. Different types of attachment such as secure, anxious, avoidant, and emotional attachment might yield different results. In other words, if people have developed a deep and healthy attachment to pets, it can lead to improved mental wellbeing. However, if the attachment is unhealthy, it cannot result in wellbeing.

Suggestions for Pet Owners and Mental Health Practice

From the study, pet owners should realize that being attached to their pets emotionally can be beneficial for them. Having regular interaction, looking after their pets, spending time with them, and maintaining routine can help boost emotions.

Nevertheless, pet owners should have human relations and social support. While pets can serve as a good source of support, one should not forget about other possible sources of connection.

Therapists and counselors should take into account their clients' relations with pets when talking about loneliness, stress, and need for support. For many people, pets can be a crucial element in coping with difficult feelings. At the same time, therapists can check whether there are any other relations and whether the attachment to the animal is proportional.

Educational establishments and counseling centers can work on raising awareness among students regarding the issue of loneliness and emotional wellbeing. It is essential for young adults to develop social relationships and find ways of coping with problems. Pets can play their role, yet, the emotional well-being of people relies on many factors.

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