

## Furry Friends, Happy Hearts: Pet Ownership and Stress Levels in College Students

Shekyna A. Milana<sup>1</sup>, Cristal May T. Imperial<sup>1</sup>, Florence Kristen D. Lapeceros<sup>1</sup>,  
Stephen Jhan G. Inta<sup>1</sup>, Glorhey Fe L. Malajos<sup>1</sup>, Angelito L. Hermosilla<sup>1</sup>,  
Marian Joy Batiancila<sup>1</sup>

<sup>1</sup>(Department of Arts and Sciences, University of Mindanao Digos College, Philippines)

Corresponding author: Shekyna A. Milana<sup>1</sup>

**ABSTRACT:** Stress is one of the common problems faced by many people, and even college students are no exception. There are many coping mechanisms to help reduce stress. One of these is interacting with pets, which is effective for some people. This study seeks to examine the differences in the level of perceived stress among college students who owned pets and college students who do not owned pets at a university in the Mindanao Region of the Philippines. The research study used a descriptive-comparative quantitative research design, employing a Perceived Stress Scale as an assessment tool to collect data from a sample of 300 students. The collected data was interpreted using the Mann-Whitney U Test, a statistical test that is alternate to the Independent Sample T Test, to investigate the substantial difference between the two groups. The results were found to be not normally distributed, as set by the Kolmogorov-Smirnov Test. Therefore, the levels of both variables were described using the mean and standard deviation. There is a minimal difference in terms of stress level assessment among college students with pets ( $M = 2.52$ ,  $SD = 0.48$ ), and college students without pets ( $M = 2.53$ ,  $SD = 0.62$ ). The results also revealed that there is no significant difference ( $p = 0.475$ ) in terms of perceived stress level among college students who owned pets and who do not owned pets. Future study directions and the findings' implication for educational institutions are discussed.

**Keywords** - college students, Perceived Stress Scale, pets, pet ownership, stress levels

### I. INTRODUCTION

Stress is a prevalent issue, particularly among college students. This is attributed to several factors, such as academic pressures, financial burdens, relationship challenges, sleep deprivation, and mental health concerns. Chu et al., (2019) indicated that those university students who reported having first semester mental health challenges were the most likely to continue struggling during their academic term [1.]. In Gao et al. (2020), meeting demanding academic expectations for effective academic performance presents a college student challenge [2.]. These demands require students to be capable of working effectively and performing well under pressure. Although there are many challenges that stress throws at students, they often utilize several mechanisms to cope with their feelings and improve their general well-being. Such mechanisms include exercising, meditating, writing in a journal, and even simple interactions with their pets.

The intense pressure of academic life frequently results in significant stress among students. The research study indicates that academic stress negatively impacts students' mental health. For instance, Deng et al. (2022) found that academic stress and other factors contributes to depression among students in Pakistan, negatively affecting their academic performance [3.]. Gradually, research studies about pet ownership and stress reduction have emerged over the years. 95% of pet parents rely on their pet for stress relief. For example, Elsayed (2024), with 6 participants to compare the anxiety level before and after the pet interaction state that after interacting with pets, the anxiety level of university students of Effat University, Saudi Arabia is found to decrease ( $M = 37$ ,  $SD = 6.0$ ) [4.].

On one hand, Philippine research studies have proven the connection between academic stress and mental health issues in college students. Alibudbud (2021) discovered that negative mental health concerns,

such as depression, at 35%, and anxiety, at 42.7%, have been rising among college students in Metro Manila, thus putting many at risk. This underlines the necessity of effective stress-management techniques [5.]. Investigating the relationship between stress levels and perceived benefits of pet ownership among Laguna students in the Philippines, Dela Cruz (2022) confirmed through a significant positive correlation that greater stress levels contribute to increased perceived benefits from pet ownership [6.]. Such findings indicate that pet ownership may be an important source of relief for the stresses of students.

While pet ownership has been linked to reduce stress through various studies, on the other hand, a gap exists in this area in the research landscape within Davao City. Up to date, there have been no published studies regarding the comparative relationship of college students who do have and do not have pets when it comes to their respective stress levels within the locality. To bridge this gap, this research study titled "Furry Friends, Happy Hearts: Pet Ownership and Stress Reduction in College Students" is designed to look into the differences in the levels of stress between college students who have pets and those who do not have. By contextualizing this differences in Davao City, this study will provide insight into the effects that pet ownership has on the mental well-being of college students in the region.

## II. RESEARCH QUESTIONS

The purpose of this study is to explore the difference in the level of stress of both groups: college students with pets and college students without pets. Additionally, this study hopes to answer the following questions:

- 1.What is the level of perceived stress among college students who own pets?
- 2.What is the level of perceived stress among college students who do not own pets?
- 3.Is there a substantial difference between the levels of the perceived stress among college students who own pets and college students who do not own pets?

## III. CONCEPTUAL FRAMEWORK

### Independent Variable

### Dependent Variable

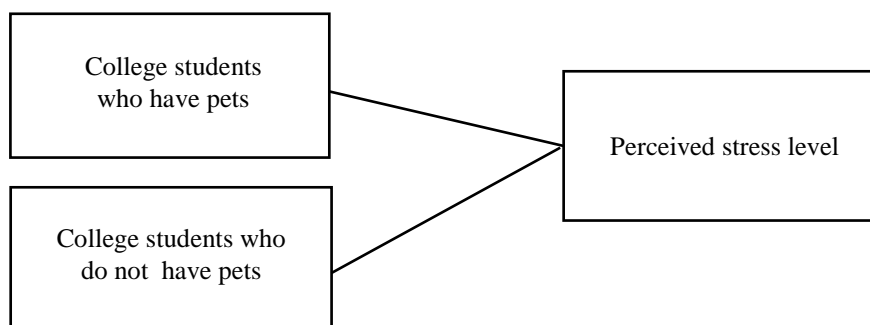


Fig. 1

Furry Friends, Happy Hearts: Pet Ownership and Stress Level in College Students' conceptual framework is illustrated in Figure 1. The framework depicts two independent groups: college students who own pets and college students who do not own pets. The dependent variable is the level of perceived stress of the students. This study uses a descriptive-comparative research approach for the purpose of determining the differences in stress levels between both groups.

## IV. METHODS

### 4.1. Research Design

This study adopted a descriptive-comparative research design to explore the difference in the perceived stress levels between pet owners and non-pet owners college students, this is the design they used throughout the process of this research study. According to Devi (2023), the method of descriptive comparative identifies and analyzes two distinct groups: pet owners and non-pet owners to check the differences in the reported stress in the both groups [7.]. This design allows a direct comparison of stress levels between these two independent groups, and valuable insights will be made regarding the possible influence that pet ownership might have on the well-being of students. The comparative analysis will be conducted to check whether there is a statistically significant difference; thus, it will highlight the relation between pet ownership and college students' ability to

handle stress. Besides this, this design presents a very strong framework in an unbiased examination of this relationship without actually controlling the variables, hence safeguarding the integrity and the ethics involved. The findings will thereby improve the understanding of whether keeping pets is a form of benefiting the life of college students while managing academics or it will worsen their feeling of stress if they have pets with them.

#### 4.2. Research Participants

The research study involved 300 participants, including all students from different departments at the University of Mindanao Digos College. The participants are ranging from the age of 18-23 years old, as they are the suitable individual for this study due to the reason of in this particular age stress is prevalent making them an ideal participant in this research study. According to Hyde (2023), academic stress has a high contribution on the rising rates of the young adults having an anxiety attack and depression [8.]. Participants were selected on the basis of their relevance to the study, ensuring a balanced distribution of students with pets and without pets. Stress levels were measured using the Perceived Stress Scale, which was the only questionnaires used in the study. The PSS is widely recognized for measuring the stress level of an individual in different areas like academic, work-related and personal situations. A sample questionnaire was administered to the selected students to help them articulate experiences on stress levels and owning a pet, thereby providing research valuable data.

Based on pet ownership, the researchers divided the students into two subgroups. Those owning pets were considered, and then there were those who did not own pets. Researchers selected a sample from both of these subgroups. As indicated in Table 1, the majority of student respondents were female at 57.3% and 172 students in total. The remaining 42.7% of the respondents, who were 128 students, were male. In addition, the number of pet owners was balanced with that of non-pet owners, whereby 150 participants fell under each category, making up 50.0% of the total sample size for both categories. This balanced representation allowed for a comprehensive exploration of the study's objectives, considering different levels of stress among both who owned pets and who do not owned pets in the student population.

**Table 1. Characteristics of the Respondents (n= 300)**

Profile	f	%
<b>SEX</b>		
Male	128	42.7
Female	172	57.3
<b>PET OWNERSHIP</b>		
Yes	150	50.0
No	150	50.0
<b>TOTAL</b>	300	100.0

#### 4.3. Research Instrument

The Perceived Stress Scale (PSS) is a commonly utilized tool for measuring levels of perceived stress. The PSS has 30 items that are measured on a 4-point Likert scale from 1 (Almost) to 4 (Usually), enabling participants to report how often they face different forms of stressful circumstances. Strong internal consistency has been shown by the Perceived Stress Scale (Cronbach's Alpha values range from 0.90 to 0.92) across diverse linguistic and cultural contexts (Shahid et al., 2011) [9.]. In our study, the PSS exhibited high internal consistency ( $\alpha = 0.920$ ), exceeding the commonly accepted threshold of 0.70 for acceptable reliability (Statistics Solution, 2019) [10.]. A pilot test conducted at the University of Mindanao Digos College confirmed the validity of the PSS by assessing the correlation between individual items and the overall construct using the Pearson-r Correlation Coefficient, with all items except for item number 2 demonstrating validity.

**Table 2. Mean Interpretation Table**

MEAN INTERVAL	DESCRIPTIVE RATING	DESCRIPTIVE INTERPRETATION
3.25 – 4.00	Usually	Stress levels are very high among college students.
2.50 – 3.24	Sometimes	Stress levels are moderately high among college students.
1.75 – 2.49	Often	Stress levels are moderately low among college students.
1.00 – 1.74	Almost	Stress levels are very low among college students.

#### 4.4. Statistical Treatment

The prevalence of the data was evaluated by applying the Kolmogorov-Smirnov test known as K-S test using IBM SPSS, as the study involves 300 participants. K-S test is suitable for samples with  $n \geq 50$  (Mishra et al., 2019) [11.]. In this study, results from the K-S test indicated that the variables are not normally distributed ( $D = 0.053$ ,  $p\text{-value} = 0.042$ ). Therefore, the non-parametric alternative to the independent samples t-test is the Mann-Whitney U test. This study applied the Mann-Whitney U test to compare the perceived stress levels of college students with pets and those without pets. The Mann-Whitney U test, otherwise known as the Wilcoxon Rank Sum Test, is a non-parametric statistical test that was used as an alternative for comparing two independent groups when evaluating two sets of samples (McClenaghan, 2022) [12.]. Mean and standard deviation were calculated to further describe the level of perceived stress in each group. The mean, according to Hurley and Tenny (2023), is the sum of data points in a sample divided by the sample size [13.]. Standard deviation measures how spread out data points are from the average (Hargrave, 2024) [14.]. These descriptive statistics provided a more detailed understanding of the perceived stress levels within each group.

#### 4.5. Research Procedure

Data was gathered utilizing Levenstein's (2021) validated Perceived Stress Questionnaire, administered both on traditional paper-based questionnaires and an online Google Form in order to achieve the targeted participants on their research study [15.]. Pre-data collection, ethical concerns were raised as it is one of the important factors in a research study; it ensures the rights and the well-being of the participants. It also includes a formal permission from the participant's advisor and the Dean of the Professional School, ensuring the approval and the support from a higher academic authority. Participants received information sheets that ensure that consent is informed and to keep transparency towards their participants. These sheet helps the participants to understand what they are participating in . Upon obtaining the data, researchers employed IBM SPSS Statistics 25 to analyze the questionnaires' validity, reliability and internal consistency.

#### 4.6. Ethical Consideration

This study had ethical considerations in it that gave priority to the rights, dignity, and welfare of all participants. It also ensures the transparency and authenticity of the researcher to their respected participants. Ethical principles were adhered to protect participants from potential harm or exploitation. According to the World Health Organization (2024), the study protocol was critically reviewed by an independent ethics committee before initiation of the study to ensure all regulatory and best practice requirements were met [16.]. Each participant was given informed consent prior to participating, explaining to them the purpose of the study, procedures, and risks and benefits associated with it. The right to withdraw from the study at any point without giving a negative penalty or consequences was also clarified towards their participants. Participation was strictly on a voluntary basis, hence the sovereignty of each individual. Upon completing their participation the researcher will give a token of appreciation to their participants as a reward for their given time and insightful participation in their research study. All data collected were handled in the strictest confidence using high anonymization techniques that were used to avoid disclosing identifying information in any of the study findings or publications resulting from this research. Data security was ensured to maintain participants' privacy during the entire period of the research and thereafter. All researchers involved in this research are fully committed to observing the highest ethical standards in all the aspects of this research study process.

## V. RESULTS AND DISCUSSIONS

**Table 3. Stress Level in College Students Who Own Pets and Who Do Not Own Pets**

Perceived Stress		
Indicators	X	SD
College Students With Pets	2.52	.48
College Students Without Pets	2.53	.62

The results of the stress level assessment among college students who have pets was ( $M = 2.52$ ,  $SD = 0.48$ ). This means that the perceived level of stress is moderately high, which falls in the "sometimes" category from the mean interpretation table. Although owning pets can create positive effects, research says that pet ownership also promotes stress (Hemendinger, 2024; McWhinney, 2023) [17.] [18.]. Pet owners often face financial burdens related to vet appointments, managing illnesses, and finding caregivers. The financial responsibilities associated with pet ownership, including the cost of food, medical care, and other necessities, can further exacerbate financial concerns. Additionally, anxiety about leaving pets alone at home and sadness due to their shorter lifespan can also contribute to stress. Aside from interacting with pets, there are also many different coping mechanisms that people use to manage stress, including setting boundaries, practicing

relaxation techniques, engaging in physical activities, and seeking social support (Lcsw, 2023) [19.]. There are several reasons why pet owners may not interact with their pets. According to Applebaum et al. (2020) financial strain is the significant reason why the owners cannot interact with their pets properly, other factors are managing work-life balance, accessing pet supplies, and dealing with pets' behavioral changes [20.]. Also, the study conducted by Endo et al. (2020) disclosed that not all pets can enhance the well being of teenagers, it depends on the pets they take care of [21.].

Similarly, the results of the stress level assessment for university students who do not own pets also show a moderately high mean perceived stress level ( $M = 2.53$ ,  $SD = 0.62$ ). This score falls within the "sometimes" category on the mean interpretation table. This finding is also supported by a study of Munkhong et al., (2022) and found that the stress level of people who do not own pets was significantly higher than people who own pets during the pandemic era [22.]. People who do not have pets may also experience higher stress levels than those who do because interacting with pets can lead to enlarge levels of oxytocin, endorphins, and prolactin, hormones connected with feelings of well-being, relaxation, and nurturing. This interaction also leads to a decrease in cortisol, a stress hormone, suggesting a potential mechanism for the observed differences in stress levels (Feldman, 2024) [23.]

**Table 4. Null Hypothesis of the Perceived Stress Level of College Students With Pets and Without Pets**

Null Hypothesis	Sig.
The distribution of Perceived Stress Mean is the same across categories of Pet Ownership	.475

The obtained p-value was .475. Although this value approaches statistical significance, it does not meet the conventional threshold of 0.05. Statistical significance testing involves comparing a p-value to an arbitrarily chosen threshold (usually 0.05), declaring significance only if the p-value falls below it (Hayat et al., 2020) [24.]. As a result, the researchers fail to reject the null hypothesis, that there is not enough data to draw the conclusion that there is a statistically significant difference in the mean stress levels—between pet owners and non-pet owners. Therefore, the observed difference in stress levels between these two groups may be attributed to random variation rather than a true effect of pet ownership.

Based on the results, no significant difference exists in average stress levels between college students with and without pets. Students with pets reported an average of a slightly lower level of stress ( $M = 2.52$ ,  $SD = 0.48$ ) compared to students without pets ( $M = 2.53$ ,  $SD = 0.62$ ). This finding aligns with previous research by Ogata et al. (2022) and Khushboo and Ayushi. (2020), both of which concluded that pet ownership does not significantly affect stress levels, as pet owners and non-owners exhibit comparable stress levels despite their awareness of the potential benefits of pets in reducing stress. stress levels despite their awareness of the potential benefits of pets in reducing stress [25.] [26.].

## VI. CONCLUSIONS

The research study sought to explore a potential causal relationship between pet ownership and perceived stress levels, with the goal of identifying factors that might influence stress regulation. While the findings do not establish a clear cause-and-effect relationship, they contribute to the growing body of literature on the people-and-pet relationship and its potential effect on psychological health. The study highlights the complexity of this relationship, suggesting that factors beyond pet ownership alone may play a role in stress reduction.

The results of the study highlight that more research should be done. Future research may take into account a wider variety of variables that might affect the relationship between pets and stress, such as the type of pet, the frequency and quality of interactions between the pet and the owner, and the owner's financial capacity to care for them. These factors could be crucial in determining whether pet ownership serves as an effective means of stress management. A more granular understanding of how these variables interact will be crucial for future studies seeking to evaluate the effect of pet ownership on stress.

Further longitudinal designs would be able to track changes in the levels of stress over time and allow for a more complete understanding of how pet ownership impacts stress over the long term. A more diverse sample also could enhance generalizability of findings. Exploring mediating factors such as social support networks, coping strategies, and individual personality traits may further enlighten the mechanisms through

which pet ownership might influence stress. A more nuanced exploration of these factors may lead to a deeper comprehension of the possible benefits and limitations of pet ownership as a tool for stress reduction.

## VII. DISCLOSURES OF CONFLICTS AND INTEREST

The authors declare no conflict of interest whether financial or personal is associated regarding the publication of this study. All authors have already reviewed and discussed this statement and agreed that no conflict of interest is present that can affect the research study. This statement helps to maintain the authenticity and credibility of this research study. All authors have agreed to include this statement as part of their final manuscript.

## VIII. HAZARDS AND HUMAN OR ANIMAL SUBJECTS

The authors of this study make sure that there are no human participants that have been involved in any hazardous activity during the conduction of this study. This study did not involve any animal subjects during the process of this research study. No hazardous materials or any things that can affect the safety of their participants. The procedure of this study is all maintained by safety precautions and ethical consideration by the authors.

## IX. ROLE OF THE FUNDING SOURCE

This study was not sponsored by any particular external fund. The research was entirely conducted by the authors from their own resources. The design, conduct, analysis, or interpretation of the study did not result from any grants, contracts, or other financial contributions. This therefore ensures absolute independence and objectivity of the research findings.

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**Corresponding Author: Shekyna A. Milana<sup>1</sup>**

<sup>1</sup>(Department of Arts and Sciences, University of Mindanao Digos College, Philippines)