

A Cross Sectional Study on the Correlation Between Owning a Pet and Subjective Happiness & Self-Esteem Among Medical and Dentistry Undergraduate Students

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Abstract

Whether you own a dog, a cat, a hamster or a even a snake, owning a pet can be an adventure. Spending time with a pet has shown to increase levels of oxytocin which is responsible for the feeling of closeness and bonding with one's pet and is also known to be a mood booster. We carried out this study as we were curious to find out if owning a pet had an effect on subjective happiness and self-esteem. A cross-sectional study was conducted among undergraduate medicine and dentistry students of Manipal University College Malaysia (MUCM). An online questionnaire which consisted of four parts, was sent out through google forms and a total of 109 responses were collected. Unpaired T-test, Analysis of Variance (ANOVA) and correlation analysis were the chosen statistical tests. Out of the 109 students that participated in the study, 62.3% of the students owned pets while 37.6% of them did not. Students that owned a pet were significantly happier, (mean (SD) 19.8 (4.8)) and had a higher self-esteem (mean(SD) 29.3 (4.97) compared to the students who did not own a pet. However, it was also observed that there is no significant correlation between pet attachment (total) and subjective happiness (p-value 0.055). From the two domains that were studied, the avoidance domain has a more significant correlation (p-value 0.031) with subjective happiness compared to the anxiety domain (p-value 0.114). There is also no significant correlation between pet attachment (total) and self-esteem (p-value 0.079) and in the anxiety domain of pet attachment and self-esteem (p-value 0.0114). Nonetheless, there is a slight association between the avoidance domain of pet attachment and self-esteem (p-value 0.02). Further research is required to establish the relationship between owning a pet, subjective happiness and self-esteem. More variables can be added to improve the study.

Keywords

Pet, Pet Attachment, Subjective Happiness, Self-esteem

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1. Introduction

The Bonn-Oberkassel remains [1] discovered in 1914, consists of one of the earliest records of a domestic dog burial and- by extension, one of the earliest records of a domestic relationship between animals and humans, of the

existence of pets, in general. In accordance to the Cambridge English Dictionary, a pet is defined as "...an animal that is kept in the home as a companion and treated kindly." [2] As evidenced by the definition and the above-mentioned

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remains, which date back to the Palaeolithic era (at least 14,000 years ago), pets have long been considered a source of companionship to us, playing a significant role and inspiration in various cultural activities such as belief systems, art, literature, etc [3]. The human animal bond is also shown to serve as a buffer to external conflicts and stress, often providing comfort and companionship in the place of social support, with studies aimed at understanding and confirming the link between the human-animal bond, and its effect on individual resilience in the place of social support networks [4].

It is generally believed that pets make people happy. Is there necessarily a link between pet-ownership and subjective happiness? The aforementioned research, published in the journal of Personality and Social Psychology [5], revealed that pet owners who anthropomorphized their pets reported to have more depressed affect and less happiness. But it does not however indicate whether pet owners are happier than non-pet owners, which we intend to find out in this research.

Katherine Jacobs Bao & George Schreer in their research "Pets and Happiness: Examining the Association between Pet Ownership and Well-being" [6] used the four item measure of subjective happiness (Lyubomirsky and Lepper 1999), to estimate the happiness of participants. The study revealed that pet owners had more satisfaction in life than non-owners but these two sets of people did not differ in happiness and negative or positive emotions. The study also compared dog owners and cat owners, which concluded that dog owners are happier than cat owners.

In the study "Benefits of dog ownership: Comparative study of equivalent samples" [7], however concluded that dog owners perceived themselves as healthier – but not happier-than non-dog owners.

This study will compare the subjective happiness among students in relation to pet ownership. There has been no similar research in this demographic population, so it would be interesting to find out if students who are pet owners generally perceive themselves to be happier compared to their fellow non-pet owner college friends.

It is a general assumption that having a pet would improve one's mental and physical health. This could mean that owning a pet would be associated with not having a low self-esteem. A study in the Journal of Personality and Social Psychology [5], revealed that pet owners had more self-esteem than non-owners. Gordana and Vlasta, studied the relationship of pet ownership and self-esteem of children traumatized by war and pointed out that among these war-traumatized children there was no effect of pet ownership on their Self-esteem [8]. The self-esteem of pet owners was not different from that of non-pet owners. This study also pointed

out the fact that the presence of a pet in the household does not necessarily mean there is an emotional attachment to it. They therefore emphasized on the need for more precise measure of the pet-human relationship. In this study therefore, we have adapted the pet attachment scale to assess this. Another study [9] interestingly revealed a lower self-esteem in cat owners compared to non-pet owners and a higher self-esteem in dog owners compared to non-pet owners. The Sunway Academic Journal published an article that studied the effect of owning a pet on self-esteem of Malaysian pet owners [10]. This research showed that there was no significant difference in the self-esteem level between pet-owners and non-pet owners. By this research, we aim to study the relationship between pet ownership and self-esteem among students studying medicine and dentistry.

While pet in general are acknowledged as playing a staple role in the medical field, with the usage of dogs, cats, equines and even fish in areas such as mental health and physical wellness therapy [11] for patients through animal assisted therapy (AAT), as of yet, there are no studies specifically focused on the effects of pet ownership among medical and dentistry students in our setting (that we know of), and how they affect the factors of individual happiness and self-esteem. The objectives of our study is to determine the association between pet attachment, subjective happiness and self-esteem among pet owners. The hypothesis of our research is that owning a pet does affect the subjective happiness and self-esteem.

2. Methodology

2.1. Study Design and Study Time

A cross-sectional study was conducted throughout the month of February 2021.

2.2. Study Setting and Study Population

The study was conducted in Manipal University College Malaysia (MUCM), a private medical university in Malaysia, formerly known as Melaka- Manipal Medical College (MMMC). The university has 2 campuses, one based in Muar, Johor and one based in Bukit Baru, Malacca. The university offers three courses; Foundation in Science (FIS), Bachelors of Medicine and Surgery (MBBS) and Bachelors of Dentistry (BDS). Semester 6 and 7 of the MBBS programme is conducted in Muar and FIS, BDS and Semester 8 to 10 of the MBBS programme are conducted in Malacca. Our study aimed to determine if there is any relationship between owning a pet and emotions such as subjective happiness and self-esteem. A study population of 760 medical and dentistry students from MUMC were chosen to conduct the study.

2.3. Sample Size and Sampling Method

According to the previous study on the “Positive consequences of pet ownership”[5] the results showed a 0.45 association between secure and subjective happiness. Hence, the sample size (n) was calculated using the formula given in the textbook “Sample size tables for clinical studies” 3rd edition [12] chapter 12 on the correlation coefficient.

The previous study had given a Pearson correlation (r) of 0.45. Using these test, of 0.4 and two sided 0.05, power 1- of 0.9 the sample size will be 61.

Taking non-response percentage of 30% into consideration final sample size was calculated as follows:

Therefore, 87 was chosen to be the final sample size.

Sampling method

$$n_{\text{final}} = \frac{n \text{ calculated}}{1 - \text{non response \%}} = \frac{177}{1 - 0.3}$$

One of the non-probability sampling methods, purposive sampling was used to select students for the study. The inclusion criteria were that the undergraduate MBBS and BDS students of MUCM, who had voluntarily agreed to participate in this study, completed the given questionnaire including the consent form. The exclusion criteria included incomplete questionnaires as well as the students who do not wish to wish to participate in the study.

2.4. Data Collection

A sample of 109 responded to an online questionnaire that was distributed to them via communication media such as WhatsApp. They were given a secured URL address that allowed them to respond to the questionnaire. Prior to the filling of the questionnaire the participants were informed that the research being a project carried out by the students of batch 42 of Manipal University College Malaysia, and their consent was obtained. They were also informed that their responses will be anonymous and will not be analysed individually but as a whole.

The online questionnaire would allow the participants to proceed only if the consent was given, requiring them to acknowledge that they have consented to take part in the study. Two of the researchers’ telephone numbers were provided, in case anyone had an inquiry about the study.

The survey took approximately 10 to 15 minutes to fill out.

The questionnaire had four sections.

The first section was demographic data regarding the participants age, Gender (male/female), ethnicity (Malay/Chinese/Indian/other), the course the student is enrolled in (MBBS/BDS), whether they own a pet or not and

if they owned one, what pet they owned.

The independent variable in this research was pet ownership (no; yes).

The Second section was regarding the pet attachment. For this we utilised the Pet Attachment Questionnaire(PAQ) (Zilcha-Mano, Mikulincer, & Shaver, 2011) [13] This section of the questionnaire required the participants to answer the statements based on their relationship with their pet, and if they had more than one pet, they were advised to select the one they had the closest relationship with.

The PAQ had 26 items, each of the items were measured on a 7-point Likert scale ranging from 1-strongly disagree and 7-strongly disagree. To code the PAQ, we reversed the score item no. 1.

An individual’s score in the avoidant dimension was the sum of odd numbered questions and an individual’s score in the anxiety dimension is the sum of the even numbered questions.

The third part of the questionnaire was to assess the subjective happiness of the participants. We adopted the four items scale (Lyubomirsky & Lepper, 1999) [14]. Lyubomirsky and Lepper proved that the SHS has good to excellent internal consistency, also test-retest and self-peer correlations suggested good to excellent reliability. Each item captured their feeling on a 7-point scale (e.g.; In general, I consider myself: 1 being – “not a very happy person” and 7 being “a very happy person”). First two items requires the respondents to characterize themselves using both absolute ratings and ratings relative to peers(first item- Identify themselves as being a happy person (1- not a very happy person and 7 – a very happy person) and second item rate level of happiness relative to their peers (1- less happy and 7-more happy), and the next two items provides a descriptions of happy and unhappy individuals and requires the respondent to state the extent to which that character describes their own. To score the scale, the fourth item was reverse scored. The mean of their responses was calculated. Higher scores would imply that the participants had a higher subjective happiness. Also, participants having scores above the median are classified as happy whereas those below the median are classified as unhappy [15].

In the fourth section of the questionnaire *Rosenberg’s 10 items Self-Esteem Scale* (Rosenberg, 1965) [16] was used to measure student’s self-esteem. Each of the items were measured on 4-point Likert scales ranging from “Strongly Agree” to “Strongly Disagree”. This scale had 10 items. Some of the items were: “I take a positive attitude toward myself”, “I feel that I’m a person of worth, at least on an equal plane with others”.

The items that were reverse scored were 2, 5, 6, 8, 9. After reversing of relevant scores, the scores are summed which ranges from 0-30. The higher values indicating higher self-esteem. It is a widely accepted psychometric assessment focused on measuring self-esteem. [17]

2.5. Data Processing and Data Analysis

Data was collected following the distribution of questionnaires and fed into Microsoft Excel 97-2003. The data was then compiled and any duplicated data was omitted to reduce errors. Epi Info version 7.2.2.6 from the Centers for Disease Control and Prevention website (CDC) was chosen to statistically analyse the data. For the quantitative data (Pet attachment, Subjective Happiness, Self Esteem) the range, mean along with standard deviation and range was calculated, whereas for qualitative data (owning a pet, age, gender, ethnicity,) the frequency and percentage was calculated. The scales that were used are Rosenberg's *10 items Self-Esteem Scale* (Rosenberg, 1965) and *Subjective Happiness Scale* (Lyubomirsky & Lepper, 1999). Rosenberg's 10 items Self-Esteem Scale is a 10-item scale that measures global self-worth by measuring both positive and negative feelings about the self. All items were answered using a 4-point Likert scale format ranging from strongly agree to strongly disagree. The frequency of these data was counted and the percentage was also calculated. The level of significance was set at 5% (0.05). Analysis was carried out to understand the association between the independent and the dependent variables. The statistical tests that were used to determine the association between the independent variables and the dependent variables are tabulated as below.

Table 1. Statistical tests used for association between independent and dependent variables.

Independent Variables	Dependent Variables	Statistical Test
Owning pet	Subjective Happiness	Unpaired t test
Age	Self Esteem	Unpaired t test
Gender		Unpaired t test
Ethnicity		ANOVA
Pet attachment		Correlation

2.6. Ethical Consideration

Before each participant started answering the questionnaire, they were asked for consent for taking part in this study voluntarily. Participants were informed that they can withdraw from this study anytime without reason. All information that was acquired was anonymous and confidentiality was maintained by omitting roll numbers in the analysis. Lastly, this research was approved by the Research Ethics Committee, Faculty of Medicine, Manipal University College, Malaysia.

3. Results

Table 2. Socio-demographic data of undergraduate students that participated in study.

Variables	Frequency (%)
Age	
≤ 22	53 (48.62)
> 22	56 (51.38)
Mean (SD)	22.6 (1.6)
Minimum-maximum	19-27
Gender	
Male	36 (33.03)
Female	73 (66.97)
Ethnicity	
Chinese	27 (24.8)
Indian	45 (41.3)
Malay	11 (10.1)
Others	26 (23.9)
Owning a pet	
Yes	68 (62.39)
No	41 (37.61)

Table 2 illustrates the frequency and the percentage of variables such as age group, gender, ethnicity, course of education, and ownership of a pet. The age group of the students were divided into two groups, less than or equal to 22 years of age and more than 22 years. Out of the 109 respondents, 53 (48.62%) were less than or equal to 22 years and 56 (51.38%) were older than 22 years. The mean age was 22.6 with a standard deviation of 1.6. 73 (66.97%) respondents were females and 36 (33.03%) were males (figure 1). In terms of ethnicity, 45 (41.3%) respondents were Indians, 27 (24.8%) were Chinese, 26 (23.9%) of other ethnicities and 11 (10.1%) respondents were Malay (figure 2). Among 109 respondents 68 (62.39%) of them owned pets and 41 (37.61) % respondents did not own pets.

Table 3. Pet Attachment(Avoidant dimension, Anxiety Dimension and Total Score), Subjective Happiness and Self- esteem levels among undergraduate students that participated in the study.

Variables	Mean (SD)	Min-Max
Pet attachment		
Avoidant dimension	16.2 (14.9)	0-51
Anxiety dimension	24.4 (21.6)	0-79
Total score	40.6 (34.5)	0-120
Subjective happiness	18.9 (5.0)	4-28
Self-esteem	28.3 (5.4)	10-40

Table 3 contains the mean scores, standard deviation, minimum and maximum values for pet attachment, subjective happiness and self-esteem. Pet attachment was isolated into two domains as the avoidant dimension and anxiety dimension. The mean of avoidant dimension was 16.2 with a standard deviation of 14.9 whereas anxiety dimension had a mean score of 24.4 with a standard deviation of 21.6. The minimum-maximum values for avoidant dimension and anxiety dimension were (0-51) and (0-79) respectively. The total mean value for the pet attachment variable was 40.6 with standard deviation of 34.5.

Subjective happiness had a mean score of 18.9 with a standard deviation of 5.0. For Subjective happiness, the minimum and maximum values were 4 and 28. And finally, the mean values for self-esteem was 28.3 with a standard deviation of 5.4. The minimum and maximum values for this variable were 10 and 40 respectively.

Table 4. Association between subjective happiness and owning a pet, gender, ethnicity, age.

Independent Variable	Subjective happiness mean (SD)	Mean Difference (95% CI)	P value
Pet owned			
Yes	19.8 (4.8)	-2.5 (-4.4, -0.6)	0.010
No	17.3 (5.0)		
Gender			
Male	19.0 (5.6)	0.1644 (-2.2, 1.9)	0.870
Female	18.8 (4.7)		
Ethnicity			
Chinese	17.6296 (5.5)	-	0.350
Indian	19.2000 (4.3)		
Malay	20.7273 (5.4)		
Other	18.8846 (5.4)		
Age			
≤22	18.8679 (4.8)	-0.04 (-1.95, 1.9)	0.960
>22	18.9107 (5.3)		

The table 4 shows the association between demographic details (pet ownership, gender, ethnicity, age) and subjective happiness among medical and dentistry undergraduate students of MUCM. Considering the mean and standard deviation of subjective happiness in owning a pet and not owning a pet we can see, subjective happiness among students owning a pet was greater with higher subjective happiness mean (SD) of 19.8 (4.8). The mean difference (95% CI here was -2.5 (-4.4,-0.6). The P value here was found to be 0.010 thus it shows, there is a significant association between pet owning and subjective happiness. According to the table we can see that males have subjective happiness mean (SD) of 19.0 (5.6) which is slightly higher than females which is only 18.8 (4.7). The mean difference (95%) was 0.1644 (-2.2, 1.9) and the P value was 0.870. Thus it is clear that there is no significant association between gender and subjective happiness. When considering the subjective happiness mean (SD) of different ethnicities we can see that Malay is highest with 20.7273 (5.4) then Indian 19.2000 (4.3). Other ethnic groups are slightly lesser than Indian with a mean (SD) of 18.8846 (5.4) and least is Chinese with a mean SD of 17.6296 (5.5). The p value was 0.350 which indicates that there is no significant association between the subjective happiness between the ethnicities. When considering the age groups there was only a slight difference between the subjective happiness between the age groups above 22 and age groups less than and equal to 22. The mean difference 95% CI is -0.04 (-1.95, 1.9). The

P value was 0.960 which indicates that there is no significant association between the subjective happiness and age.

Table 5. Association between self-esteem and owning a pet, gender, ethnicity, age.

Independent Variable	Self- esteem mean (SD)	Mean Difference (95% CI)	P value
Owning a pet			
Yes	29.3 (4.97)	-2.6 (-4.7, -0.5)	0.020
No	26.7 (5.9)		
Gender			
Male	29.3 (5.3)	-1.4 (-3.6, 0.7)	0.200
Female	27.9 (5.5)		
Ethnicity			
Chinese	26.7 (4.2)	-	0.200
Indian	28.4 (4.91)		
Malay	30.5 (4.9)		
Other	29.0 (7.3)		
Age			
≤22	28.7 (4.95)	0.7 (-1.4 2.7)	0.500
>22	28.01 (5.9)		

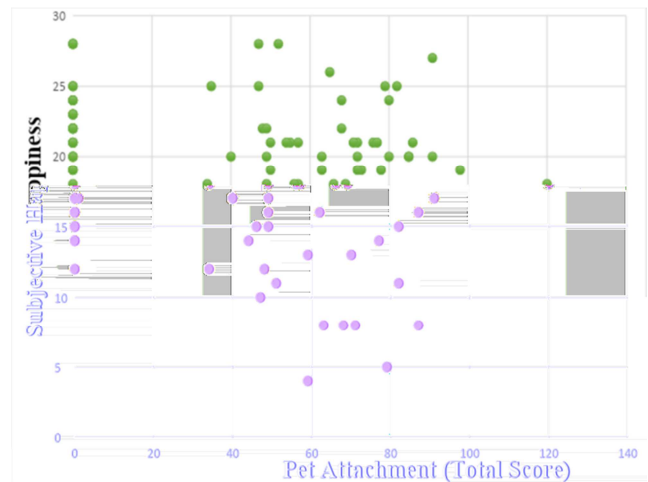
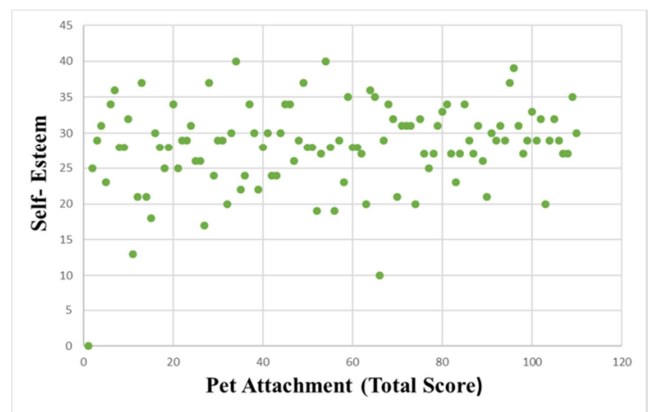
Table 5 shows the association between demographic detail (pet owned, gender, ethnicity, and age) and self-esteem. According to the table above, a mean score of 29.3 (SD=4.97) was observed among undergraduate students that owned a pet which was slightly higher than the undergraduate students that do not own pet, who had a mean score of only 26.7 (SD=5.9). The mean difference was -2.6 with 95% CI range from -4.7 to -0.5. The p-value was 0.020 thus showing that there is a significant association between owning a pet and self- esteem. Males had a mean score of 29.3 (SD=5.3), slightly higher than female with a score of 27.9 (SD=5.5) The mean difference was -1.4 with 95% CI range from -3.6 to 0.7. The p-value is 0.200 thus showing that there is no significant association between gender and self- esteem. When considering the self-esteem among different ethnic groups, Malays had the highest mean score of 30.5 (SD=4.9), followed by the other races with a mean score of 29.0 (SD=7.3). Indians have a mean score of 28.4 (SD=4.91) and Chinese have the lowest mean score of 26.7 (SD=4.2). The p-value was 0.200 thus showing that there is no significant association between ethnicity and self-esteem Undergraduate students that are below or equal to 22 years of age had a mean score of 28.7 (SD=4.95), slightly higher than those who age above 22 with a mean score of 28.01 (SD=5.9). The mean difference was 0.7 with 95% CI range from-1.4 to 2.7. The p- value was 0.5 thus showing that there is no significant association between age and self-esteem.

Table 6. Correlation Table: Correlation between Pet Attachment Score (Total, Anxiety Domain, Avoidance Domain), Subjective Happiness and Self- Esteem.

Variables	Correlation Coefficient (r)	P-Value
Pet Attachment (Total) vs Subjective Happiness	0.17	0.055
Pet Attachment (Avoidance domain) vs Subjective Happiness	0.20	0.031
Pet Attachment (Anxiety domain) vs Subjective Happiness)	0.14	0.114
Pet Attachment (Total) vs Self-esteem	0.17	0.079
Pet Attachment (Avoidance domain) vs Self-esteem	0.22	0.020
Pet Attachment (Anxiety domain) vs Self -esteem	0.14	0.201

Table 6 is a correlation table which shows the correlation between pet attachment (total anxiety domain and avoidance domain), subjective happiness and self- esteem. There are two domains that are classified under pet attachment. The first domain is the anxiety domain which describes how anxious a pet owner feels when he or she is separated from his or her pet. On the other hand, the avoidance domain describes the emotions of the pet owner when he or she is avoided or ignored by his or her pet. The correlation coefficient for the association between subjective happiness and pet attachment was found to be 0.17 and this shows that there is a “low positive and little if any correlation” between Subjective happiness and pet attachment. And the P-value was 0.055, which shows that there is no significant association between pet attachment (total) and subjective happiness. When comparing each domain of pet attachment with subjective happiness, the correlation coefficient for anxiety domain and avoidance domains were 0.14 and 0.20 respectively. This shows there is little if any correlation between anxiety and avoidance domain of pet attachment with subjective happiness. However, when considering the p-values, it shows that, unlike the anxiety domain, the avoidance domain of pet attachment has some association between subjective happiness as the p- value was less than 0.05.

The correlation coefficient for the association between self-esteem and pet attachment was found to be 0.17 and this shows that there is a “low positive and little if any correlation” between self-esteem and pet attachment. And the p-value was 0.079, which shows that there is no association between pet attachment (total) and self-esteem. When comparing each domain of pet attachment with self- esteem, the correlation coefficient for anxiety domain and avoidance domains were 0.14 and 0.22 respectively. This shows that there is little if any correlation between anxiety and avoidance domain of pet attachment with self-esteem. The avoidance domain compared with self-esteem has a p-value of 0.02, which shows that there is an association between them, which means that the self-esteem of a pet owner is affected when avoided by his or her pet. However, there is no association between the anxiety domain of pet attachment and self- esteem.

**Figure 1.** Association between Pet Attachment (Total Score) and Subjective Happiness.**Figure 2.** Association between Pet Attachment (Total Score) and Self-Esteem.

4. Discussion

The cross- sectional study that we conducted aimed to determine the association between owning a pet, subjective happiness and self- esteem among pet owners. The hypothesis of our research is that owning a pet does affect the subjective happiness and self-esteem.

Considering the mean and standard deviation of subjective happiness in owning a pet and not owning a pet we can see, owning a pet had a higher subjective happiness mean (SD) of 19.8 (4.8). The mean difference (95% CI here is -2.5 (-4.4, -0.6). The P value here is 0.010 thus it shows, there is a

significant association between pet owning and subjective happiness. Katherine Jacobs Bao & George Schreer in their research “Pets and Happiness: Examining the Association between Pet Ownership and Wellbeing” [6] used the four item measure of subjective happiness (Lyubomirsky and Lepper 1999), like we did, to estimate the happiness of participants. The study revealed that pet owners had more satisfaction in life than non-owners but these two sets of people did not differ in happiness and negative or positive emotions. The study also compared dog owners and cat owners, which concluded that dog owners are happier than cat owners.

In our study, it was found that undergraduate students who owned pets had a mean score for self-esteem of 29.3 (SD=4.97), slightly higher than undergraduate students that do not own pets, with a mean score of 26.7 (SD=5.9). The mean difference is -2.6 with 95% CI range from -4.7 to -0.5. The p-value was 0.02 thus showing that there is a significant association between owning a pet and self-esteem. A study in the Journal of Personality and Social Psychology [5], also revealed that pet owners had more self-esteem than non-owners. However, Gordana and Vlasta, studied the relationship of pet ownership and self-esteem of children traumatized by war and pointed out that among these war-traumatized children there was no effect of pet ownership on their Self Esteem [8].

Lastly, there is no significant association between subjective happiness and pet attachment. There is also no significant correlation between total pet attachment and self-esteem. However, when considering the relationship between the individual domains of pet attachment with subjective happiness and self-esteem, only the avoidance domains of pet attachment, have albeit a minor one, but a significant association with both subjective happiness and self-esteem. On the other hand, the anxiety domain of pet attachment has no significant association with self-esteem or subjective happiness.

In the course of the research, we did face a few limitations. The study was conducted in only one private medical college at a certain point. Our sample size was relatively small and our non-response rate was high. Instead of our normal 6 weeks of posting we had to complete our research project within 5 weeks, therefore we face some time restrictions. The questionnaires were sent out online, which made it difficult for us to collect responses on time. Our sample also received different research questionnaires at the same time which also contributed to delay and difficulty in collecting the responses on time. Since the undergraduate dentistry students are staying at the Melaka campus, it was difficult to reach them. Some of our team members are international students, thus most of our discussions and group meetings were done online.

In future carrying out a similar study we recommend selecting an adequately large sample and conducting research within an adequate time frame. We also recommend using more variables like association between pet ownership and depression and loneliness. Studying the variables with respect to separate pet owners are also highly recommended like dog owners, bird owners etc without studying pet owners in general. According to the final results of our study we recommend owning a pet as evidence from our study suggests subjective happiness and self-esteem among pet owners compared to non-pet owners.

5. Conclusion

Based on our study, there is a relationship between owning a pet, subjective happiness and self-esteem and pets have a positive impact on the lives of their owners. Pet owners had a higher subjective happiness and self-esteem than non-pet owners. However, students who own pets and are attached to their pets tend to be less happy when their pets avoid them. The undergraduate students who are attached to their pets also appear to have a slightly lower self-esteem if they are avoided by their pets or when they are separated from their pets. More studies should be carried out to ascertain the impact of owning a pet.

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