

# The advantages of cats for one's health and happiness



A production report submitted in partial of the requirement for the fulfillment of the degree of Doctor of Veterinary Medicine (DVM)

A production Report submitted by

Zannatul Mawa

Roll :17/113

Reg no : 01903

Intern id :84

Faculty of Veterinary Medicine

Chattogram Veterinary and Animal Sciences University

Chattogram-4225, Bangladesh

August 2023

# The advantages of cats for one's health and happiness



A production report submitted as per approved styles and contents

Approved by

---

Supervisor

Prof.Ms.Shahnaz Sultana

Department of Agricultural economics and social sciences,CVASU.

Faculty of Veterinary Medicine

Chattogram Veterinary and Animal Sciences University

Chattogram-4225, Bangladesh

August 2023

## Acknowledgments

The author is grateful to honorable Prof.Ms.Shahnaz Sultana , Dean, Faculty of Veterinary Medicine of Chattogram Veterinary and Animal Sciences University and Professor Dr. A. K. M. Saifuddin, Director of External Affairs, Chattogram Veterinary and Animal Sciences University for arranging this type of research work as a compulsory part of this internship programmed.

The author expresses his sincere gratitude, humble respect heartfelt thanks to my internship Supervisor, Ms.Shahnaz Sultana , Professor, Department of Agricultural economics and social sciences , Chattogram Veterinary and Animal Sciences University for his scholastic guidance, kind cooperation, sincere help, valuable suggestions, inspirations, who was involved with this study its inception. I ever remain grateful to him. Authors are thankful to the cat owners of Chattogram areas for their cooperation in participating and answering pre-formed questions about the relationship with their cats to meet the objectives of this study.

The authors would like to thank the participants who agreed to take the time to answer this questionnaire, and help to make this survey.

## Table of contents

Cover Page.....	01-02
Acknowledgments .....	03
Abstract .....	04
Introduction .....	05-08
Methodology .....	09
Materials and Methods	
Results .....	10-13
Discussion .....	14-18
Summary of the findings .....	19
Conclusions.....	20
References .....	21-25
Appendix .....	26
Biography .....	27

## 1. Abstract:

Cats form close emotional relationships with humans, yet little is known about this. The goal of the study is to determine the effectiveness of having cat for company. The cat owners are very sensitive to their cats. This study characterized different types of relationship that cats might establish with their owners. Data were analyzed from 60 responses to a questionnaire developed using expressions of social support and attachment in relation to everyday cat-owner interactions. The author gave survey questionnaires to those pet owners who were teenagers, college students, and adults, to gather data needed for the study. Different questions were asked to prove that cat ownership is effective in fighting anxiety. The author looked for respondents who were cat owners, and handed them the questionnaires. After getting the data, the study was compromised in manual tabulation and processed through the use of Microsoft Excel.

Author found that all of the respondents (100%) regarded their cat as a part of the family or best friend. According to the results, having a cat can help their owners overcome loneliness and depression. And most of the cat owners are female and maximum of them are adult. Male participants are 24 in number which is 40% in percentage and female participants are 36 in number which is 60%. Approximately 90% of respondents said that having cats help them to reduce worrying and anxious. From the survey, 100% respondents spending time with their cats when they feel alone and sad.

**Keywords:** affectional bond, attachment, cat, human-animal interaction, owner, relationship, social support,

## 2. Introduction

Social support is important for happiness and has been connected to both psychological and physical health outcomes [1]. Even when they are not engaged or otherwise tied to them, animals can establish partnerships with conspecifics and gain from them as well as retain close closeness to others [2,3,4]. Humans may have taken on a role that allows them to support another species socially as a result of domestication [5,6,7]. A companion animal can also serve as a form of social support for its owner [8,9], which means that having the animal around will not only make life better overall but may also make it easier for the owner to handle stressful situations [1] and build resilience [10]. Some owners have reportedly found emotional support in their cats [11], particularly as a companion animal.[12,13].

Interpersonal ties, which may be further broken down into physical and psychological bonds, are what explain why people are with one another. If a cat is not allowed outside because it is physically unable to leave its human, a physical relationship will develop between the cat and person. A psychological relationship denotes a psychological reason for two people to be together. This could be a shared goal, such working together or having a same interest (as is the case with many working teams), but it can also be warm emotional ties. A tendency to wish to be associated with someone else, which is distinguished by its emotional content, is the basis for the identification of an affectionate attachment [2]. There are numerous types of emotional ties ; for instance, the relationship between a dependent (also known as a care recipient) and their carer is distinct from that between the carer and their dependant. The former is frequently described in terms of attachment behaviours, whilst the latter is described by nurturing or caregiving behaviours [2]. Therefore, ties are not always reciprocally balanced, and one party may take advantage of the other; this will be reflected in the relationship that develops. The relationship depicts the dynamics between the persons that result from the bonds that each have to one another as well as other relevant circumstances, whereas the bond indicates the nature of the interactions of one towards another. The bond between a pet owner and their companion animal may be long-lasting, resembling an affectionate bond in which each party values the other as an individual who cannot be replaced [2]. From a historical standpoint, attachment is one kind of affectionate bond; it is a strong emotional connection that offers security, comfort, and the assurance to partake in other activities [2,14]. In this article, we use the term "attachment" in this context in line with earlier work that has attempted to operationally define the cat-owner relationship (e.g., [15,16]), to set it apart from other kinds of emotional ties that may exist in the partnership. In this context, attachment is defined as the desire to be near to the other (usually as a source of safety and security) and the enjoyment experienced upon reuniting after a period of separation. Disturbance is often brought on by separation, while sadness is brought on by continuing loss [2]. The behaviour of dogs in the strange setting test,

which operationalizes the idea of attachment for research purposes [17], has been used to support the claim that the link between a dog and owner in species like the dog is substantially attachment-like in many respects. Even when a counterbalanced version of the test is employed [18], this finding is still supported for the dog, but not for the cat when a comparable test is utilised [16]. Therefore, it's possible that the relationship is different in cats, which may be a reflection of the responsibilities those animals tend to play. For instance, despite the fact that the owner is frequently referred to as the carer, companion animals may also be able to play the reciprocal role of the provider of protection and security in an attachment relationship [19]. despite the owner often being referred to as the carer. They can also provide comfort to their owner at times of distress [20], they may be a source of joy and comfort [21,22,23], and they may be missed when absent [22]. These reflect a diversity of emotions and so caution is warranted in emphasizing just the importance of attachment when characterizing the bond and associated relationship. The emotional complexity of the affectionate bond that keeps individuals together needs to be recognized, considering the full scope of the social roles undertaken by the partners at different times (e.g., playmate, caregiver, etc.) and the type of support this may provide.

Additionally, they can bring their owner solace in difficult times [20], they can bring happiness and solace [21,22,23], and they can make their owner feel missed when they are gone [22]. These reflect a range of feelings, thus it would be unwise to solely emphasise the significance of attachment when describing the link and corresponding relationship. When taking into account the whole range of the social roles played by the partners at various points in time (such as playmate, carer, etc.) and the potential sort of support this may provide, it is important to recognise the emotional complexity of the love relationship that binds people together.

The use of self-report questionnaires is common practice in attachment and relationship research [19]. There are several scales to measure the quality of the pet-owner relationship [24,25,26,27,28,29,30] but many are not sensitive to species-specific features. However, Howell et al. [30] adapted the Monash dog-owner relationship scale (MONASH) [29] to develop the cat-owner relationship scale (CORS) to assess the quality of the cat-owner relationship; this scale might provide limited insight into the complexity of the owner-cat relationship given its ultimate grounding in the dog literature. Cats are potentially social animals, able to form stable cooperative intraspecific groups but also interspecific relationships with humans and with other domestic species [31]. In Australia, the United Kingdom and the United States of America, about one quarter to one third of households have at least one cat [32,33,34]. However, a high number of cats is relinquished every year [33,35] with behaviour problems and changes in owner circumstances, two of the leading causes of relinquishment [35]. About 77% of owners reported that their cat had at least one unwanted behaviour; a significant number of these related to chronic stress and inadequate resources for them [34], suggesting that owner expectations about the behaviour and needs of the cat may often be poor. About one third to a half of veterinary surgeons are reported to have concerns regarding obesity, access to veterinary care,

chronic stress and the provision of inadequate resources to their feline patients [34]. A better understanding of the nature of the relationship that exists between cats and owners could therefore help us provide better care for cats, improve the relationship between cat and owner, and provide greater insight into the potential benefits and limitations of cat ownership [19].

The overall aim of this study was to identify and characterize owner perceptions of the different types of relationships that cats establish with them by using attachment and social support theories as a theoretical foundation for the emotional bonds underpinning them [14,19]. Firstly, we needed to develop a reliable instrument (a questionnaire survey) to explore features of social support, affectionate bonds and attachment (including attachment styles) that can produce affiliation. Secondly, we examined how different items in the instrument relate to each other to form principal components that may be explained by reference to specific underlying psychological constructs. Finally, we could then use scores relating to different components to define different forms of cat-owner relationship and assess their possible association with demographic features, to appreciate the potential nature of the underpinning emotional bonds.

Relationships between cat owners are emotionally complex, and this provides a strong platform for future research on both owner happiness and the emergence of problem behaviours. Future research should examine these findings in further detail using more rigorous, objective metrics of the relationship. Given the demographic connections shown here, we propose that the possible impact of owner reinforcement on the development of the cat's bond is a topic of particular significance.



## 3. Material and Methods

### 2.1. Study area and duration of study:

This study has been carried out at SAQTVH, CVASU. A total of 60 pet owners responded to the questionnaires and data was collected from them.

### 2.2. Sampling strategy:

The methodology of sampling has been applied by simple random method. Prior to this study, a questionnaire was designed and data collected . Questions were close ended and covered issues regarding to the study.

### 2.3. Data analysis:

All data were tabulated using commercial software (Microsoft Excel version 2016, Microsoft, USA),and results expressed as frequencies, percentages,proportions, and ratios.

## 4.Result

The goal of the study is to determine the effectiveness of pet (cat) owners as potential companion in fighting anxiety. The author distributed survey questionnaires and gathered data from 60 respondents which include cat owners who were child, teenagers, college students, and adults.

<b>Gender of owner</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Male	24	40
Female	36	60
Total	60	100
<b>Time of cat owners</b>	<b>Frequency</b>	<b>Percentage (%)</b>
0-5 years	54	90
6-10 years	05	8.3
11-15 years	01	1.7
16 or more years	0	0
Total	60	100
<b>Stage at become cat owner</b>	<b>Frequency</b>	<b>Percentage (%)</b>
At Child	11	18.3
College	19	31.7
Teenager	17	28.3
Adult	13	21.7
Total	60	100

<b>Family member or best friend</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Family member	16	26.7
Best friend	44	73.3
<b>Total</b>	<b>60</b>	<b>100</b>
<b>Motivation of having cat</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Companion	32	53.3
Personal choice	18	30
Breeder	04	6.7
Rescued	06	10
<b>Total</b>	<b>60</b>	<b>100</b>
<b>Feeling excited or happy when coming home</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	57	95
No	0	0
Somehow	3	5
<b>Total</b>	<b>60</b>	<b>100</b>
<b>Feeling sad when separated from cat</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	58	96.7
No	2	3.3
<b>Total</b>	<b>60</b>	<b>100</b>

<b>Feel worried or anxious seeking their cat for comfort</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Yes</b>	<b>59</b>	<b>98.3</b>
<b>No</b>	<b>1</b>	<b>1.7</b>
<b>Total</b>	<b>60</b>	<b>100</b>
<b>Feel alone and sad spending their time with cat</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Yes</b>	<b>60</b>	<b>100</b>
<b>No</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>60</b>	<b>100</b>
<b>Describe their emotions when they are spending time with cats</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Happy</b>	<b>35</b>	<b>58.3</b>
<b>Relieves worrying</b>	<b>05</b>	<b>8.3</b>
<b>Loving</b>	<b>15</b>	<b>25.0</b>
<b>Contented</b>	<b>05</b>	<b>8.3</b>
<b>Total</b>	<b>60</b>	<b>100</b>

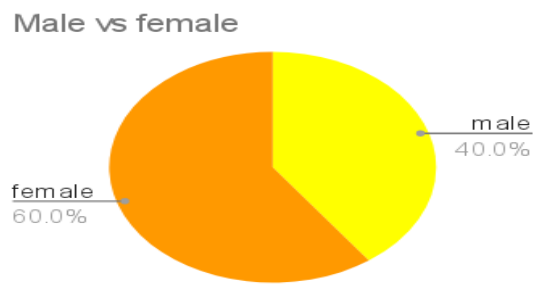
<b>pets contribute to your mental health</b>	<b>Frequency</b>	<b>Percentage (%)</b>
My pet's clinginess, gives me joy	51	85
If I hug my pet, I feel relieved	9	15
Just by having pets, make me not feel alone.	0	0
Total	60	100
<b>Cat reduce worrying and being anxious</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	54	90
No	06	10
Total	60	100

This Table showed the demographic profile of the respondents. The table presented the various questions of survey questionnaires, which are answered by the respondents properly. This considers the background of the respondents in owning a pet as a cat, in order for the researcher to differentiate and explain the respondents' answers in each question with the choices that are provided.

## 5. Discussion

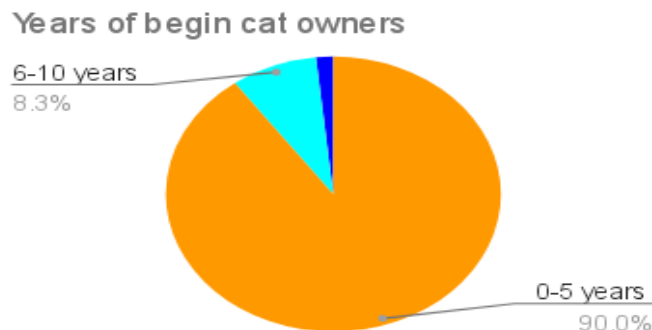
### A. Gender of the owner :

Out of 60 participants, 36 participants are female and 24 participants are male who have a cat. The study showing that there is difference between Male and Female participants. Female participants are higher than male participants in this study.



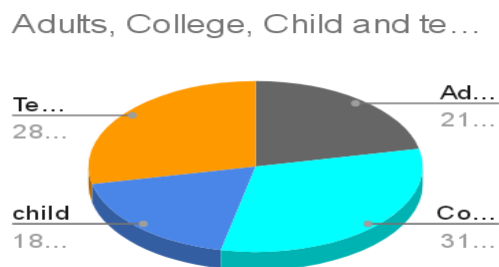
### B. For how many years have you been a cat's owner?

In this question, the 60 respondents can now have only one answer and that is to specify how many years they have been a Cat's owner. Most of the respondents answered 0-5 years, with total counts of 54. The next one is 6-10 years, with total counts of 5, and the last respondent who answered 11- 15 years, but no respondents answered 16 or more than 16 year



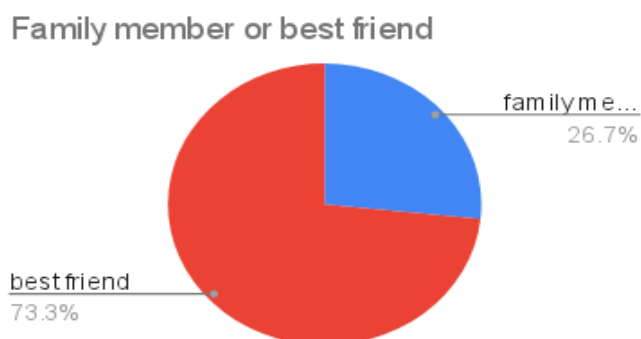
### C.Stage at become cat owner

The respondents in this question can now discuss on what stage of their life they became a Cat's owner. First, most of the respondents became a Cat's owner when they are College students , with total counts of 19. Second of all, the respondents answered that they became Cat's owner when they are a teenager, with total counts of 17. The 13 respondents answered the stage when they are adults, while the other 11 is in the stage of child.



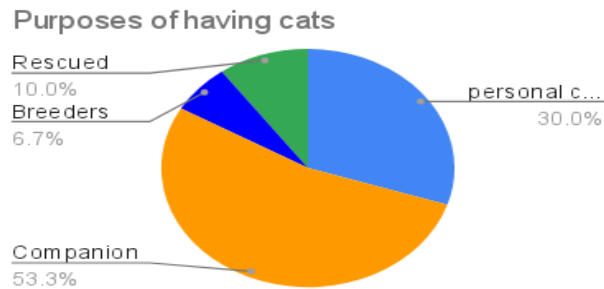
### D.Family member or best friend

For this question, the respondents have only 2 choices; family members or best friend most of the participants respond to the best friend with total count is 44 as they think that their cat is their best friend. And others responded to the second choice which is family member with the total count is 16.



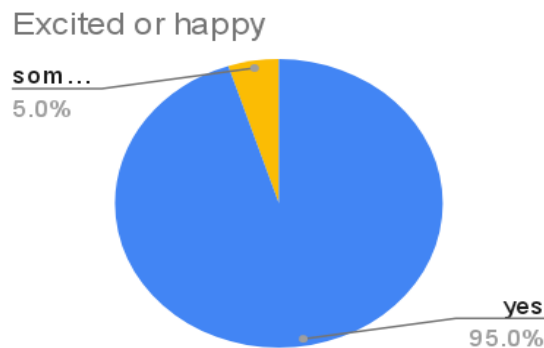
### E.Motivation of having cat

Here, the author can have one or more answers since this question will serve us a guide to know what the reasons of the respondents are behind having a cat. Personal choice is preferred mostly by the respondents with total counts of 18; for companion, with total counts of 32; for Breeding purposes, with total counts of 4; and lastly the reason of found or rescued, with total counts of 6.



### F. Feeling excited or happy when coming home

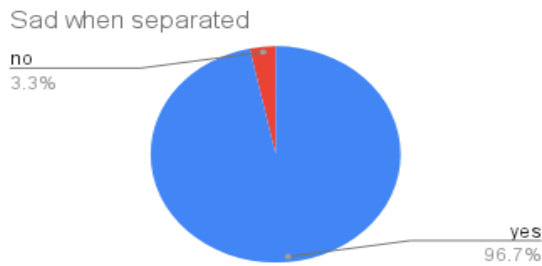
For this question, the respondents have only 3 choices; Yes, No and Somehow. Most of the total respondents answered yes, which is 57 in total number. Others participants responded to the answered somehow which is 3 in total number. No participants responded to the answered no.





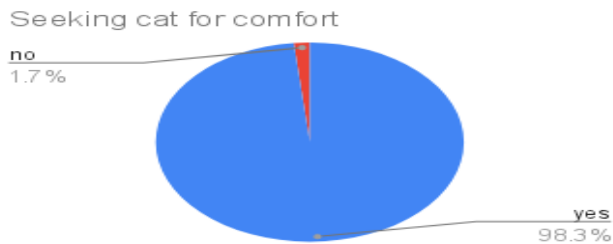
### G. Feeling sad when separated from cat

Most of the respondents answered yes, with total counts of 54; and other respondents answered no, with total counts of 02.



### H. Feel worried or anxious, seeking their cat for comfort

This study showing that, most of the participants respond to the answered yes which is the total number of 59 and only one participant answered to the no.

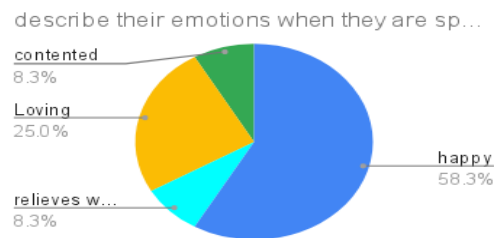


### I. Feel alone and sad spending their time with cat

For this question, the respondents have only 2 choices; Yes, and no. The total number of respondents answered yes, which is 60 in total, making the choices no, 0.

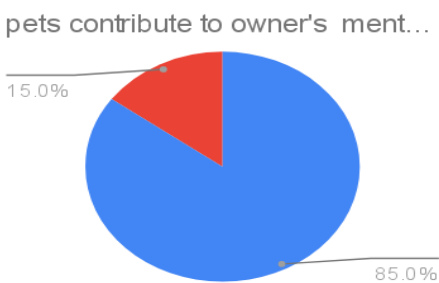
### J. Describe their emotions when they are spending time with cats

According to the owners emotions, the study showing that 35 respondents feeling happy when they are spending time with their cats. other 15 respondents answered to the loving and 5 respondents answered to the relieving worrying and 5 respondents answered to the contented.



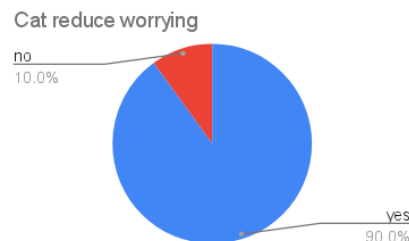
### K. Cats contribute to your mental health

In this question, the respondents can answer to three choices. Most of the respondents answered that their pet's clinginess gives them joy, with total counts of 51. Some answered that if they hug their pet, they feel relieved, with total counts of 9. No one respondents answered to Just by having pets, make me not feel alone.



### L. Cat reduce worrying and being anxious

For this question, participants responded to the answered yes, with the total number is 54 and other 6 participants respond to the answered no.



## 6. Summary of Findings

Aside from physical health, one thing should also be considered is the mental health of human beings. The data gathered revealed that 60% of the Cat's owners are female and 40% of the cat's owners are male. About 90% have been a Cat's owner mostly for about 0-5 years. It was also stated that most of the respondents owned a pet when they were at College students.

This study identified that among 60 participants, 90% of them stated that pets help them reduce their anxiousness, and 10% of the respondents also stated that pet somehow help them reduce it. The findings of the study showed counts and percentage of gathered data that were used as statistical tools. The following are the important problems that are answered throughout the study

### 1. What was your motivation of having a cat?

Most of the participants respond that they love to spend time with their cats. It gives them happiness. They help them to reduce their loneliness. cats are so adorable to them.

The 53.3% of respondents stated that it is for their companion when it comes to owning a cat. However, the 30% pet owners also chose that it was the personal choice that motivates them to own a cat. Meaning, the findings of the study revealed that personal choice and companionship are the two main reasons why the respondents keep up with a cat.

### 2. What are the positive effects of owning a cat?

They are good as a companion and joyful. A cat has the ability to both calm one's nervous system and provide an immediate outlet for fun and play.

Owning a cat can bring unconditional love and companionship to one's life. Having a feline friend can also bring health benefits, helping to relieve stress and improve our heart and health.

### 3. How can pets contribute to the mental health of owners specifically in anxiety?

The 96.7% of the respondents stated that they feel sad when separated with their pets. And all of the respondents stated that when they are feeling alone or sad, they spend most of the time with their pets, 98.3% seek their pet for comfort when anxious, The reason behind this is that it is more comforting for them when they do so. The respondents stated that spending time with their pets can make them happy and they think that their pet can sense whether they are truly happy or not.

### 4. How pets and owners interact with each other?

Throughout the study, the author found out the two ways on how pets and owners interact with each other. First, the respondents stated that they interact with their pets by means of bonding, and the second one is by means of talking to it.

## 7. Conclusions

Although cats are well-liked as pets, little is known about their bonds and interactions with their owners. Using human attachment and social support theories as a foundation for the underlying link, the goal of this study was to discover and categorise the various sorts of relationships that cats may have with their owners. In order to learn more about the various emotional factors that might support the relationship, a questionnaire was created. It asked questions about the owner's level of engagement with the cat, their sensitivity to the cat's needs, and how consistently they interact with the cat.

## 8. References

1. Cohen S., Wills T.A. Stress, social support, and the buffering hypothesis. *Psychol. Bull.* 1985;98:310–357. doi: 10.1037/0033-2909.98.2.310. [PubMed] [CrossRef] [Google Scholar]
2. Ainsworth M.S. Attachments beyond infancy. *Am. Psychol.* 1989;44:709–716. doi: 10.1037/0003-066X.44.4.709. [PubMed] [CrossRef] [Google Scholar]
3. Dreschel N.A., Granger D.A. Physiological and behavioral reactivity to stress in thunderstorm-phobic dogs and their caregivers. *Appl. Anim. Behav. Sci.* 2005;95:153–168. doi: 10.1016/j.applanim.2005.04.009. [CrossRef] [Google Scholar]
4. Sanchez M.M., McCormack K.M., Howell B.R. Social buffering of stress responses in nonhuman primates: Maternal regulation of the development of emotional regulatory brain circuits. *Soc. Neurosci.* 2015;10:512–526. doi: 10.1080/17470919.2015.1087426. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
5. Hennessy M.B., Kaiser S., Sachser N. Social buffering of the stress response: Diversity, mechanisms, and functions. *Front. Neuroendocrinol.* 2009;30:470–482. doi: 10.1016/j.yfrne.2009.06.001. [PubMed] [CrossRef] [Google Scholar]
6. Shiverdecker M.D., Schiml P.A., Hennessy M.B. Human interaction moderates plasma cortisol and behavioral responses of dogs to shelter housing. *Physiol. Behav.* 2013;109:75–79. doi: 10.1016/j.physbeh.2012.12.002. [PubMed] [CrossRef] [Google Scholar]
7. Schoberl I., Wedl M., Beetz A., Kotrschal K. Psychobiological Factors Affecting Cortisol Variability in Human-Dog Dyads. *PLoS ONE.* 2017;12 doi: 10.1371/journal.pone.0170707. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
8. Staats S., Wallace H., Anderson T. Reasons for Companion Animal Guardianship (Pet Ownership) from Two Populations. *Soc. Anim.* 2008;16:279–291. doi: 10.1163/156853008X323411. [CrossRef] [Google Scholar]
9. Beetz A., Julius H., Turner D., Kotrschal K. Effects of Social Support by a Dog on Stress Modulation in Male Children with Insecure Attachment. *Front. Psychol.* 2012;3 doi: 10.3389/fpsyg.2012.00352. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
10. Windle G. What is resilience? A review and concept analysis. *Rev. Clin. Gerontol.* 2011;21:152–169. doi: 10.1017/S0959259810000420. [CrossRef] [Google Scholar]
11. Stambach K.B., Turner D.C. Understanding the human-cat relationship: Human social support or attachment. *Anthrozoos.* 1999;12:162–168. doi: 10.2752/089279399787000237. [CrossRef] [Google Scholar]

12. Hafen M., Rush B.R., Reisbig A.M., McDaniel K.Z. The role of family therapists in veterinary medicine: Opportunities for clinical services, education, and research. *J. Marital Fam. Ther.* 2007;33:165–176. doi: 10.1111/j.1752-0606.2007.00014.x. [PubMed] [CrossRef] [Google Scholar]
13. Pachana N.A., Massavelli B.M., Robleda-Gomez S. A developmental psychological perspective on the human–animal bond. In: Blazina C., Boyraz G., Shen-Miller D., editors. *The psychology of the Human-Animal Bond*. Springer; New York, NY, USA: 2011. pp. 151–165. [Google Scholar]
14. Meehan M., Massavelli B., Pachana N. Using Attachment Theory and Social Support Theory to Examine and Measure Pets as Sources of Social Support and Attachment Figures. *Anthrozoos*. 2017;30:273–289. doi: 10.1080/08927936.2017.1311050. [CrossRef] [Google Scholar]
15. Edwards C., Heiblum M., Tejeda A., Galindo F. Experimental evaluation of attachment behaviors in owned cats. *J. Vet. Behav.* 2007;2:119–125. doi: 10.1016/j.jveb.2007.06.004. [CrossRef] [Google Scholar]
16. Potter A., Mills D.S. Domestic cats (*Felis silvestris catus*) do not show signs of secure attachment to their owners. *PLoS ONE*. 2015;10 doi: 10.1371/journal.pone.0135109. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
17. Topál J., Miklósi Á., Csányi V., Dóka A. Attachment Behaviour in Dogs (*Canis familiaris*): A New Application of Ainsworth’s (1969) Strange Situation Test. *J. Comp. Psychol.* 1998;112:219–229. doi: 10.1037/0735-7036.112.3.219. [PubMed] [CrossRef] [Google Scholar]
18. Palmer R., Custance D. A counterbalanced version of Ainsworth’s Strange Situation Procedure reveals secure-base effects in dog–human relationships. *Appl. Anim. Behav. Sci.* 2008;109:306–319. doi: 10.1016/j.applanim.2007.04.002. [CrossRef] [Google Scholar]
19. Rockett B., Carr S. Animals and Attachment Theory. *Soc. Anim.* 2014;22:415–433. doi: 10.1163/15685306-12341322. [CrossRef] [Google Scholar]
20. Kurdek L.A. Pet dogs as attachment figures for adult owners. *J. Fam. Psychol.* 2009;23:439–446. doi: 10.1037/a0014979. [PubMed] [CrossRef] [Google Scholar]
21. Prato-Previde E., Fallani G., Valsecchi P. Gender differences in owners interacting with pet dogs: An observational study. *Ethology*. 2006;112:64–73. doi: 10.1111/j.1439-0310.2006.01123.x. [CrossRef] [Google Scholar]
22. Kurdek L.A. Pet dogs as attachment figures. *J. Soc. Pers. Relat.* 2008;25:247–266. doi: 10.1177/0265407507087958. [CrossRef] [Google Scholar]
23. Walsh F. Human-Animal Bonds I: The Relational Significance of Companion Animals. *Fam.*

- Process. 2009;48:462–480. doi: 10.1111/j.1545-5300.2009.01296.x. [PubMed] [CrossRef] [Google Scholar]
24. Templer D.I., Salter C.A., Dickey S., Baldwin R., Veleber D.M. The Construction of a Pet Attitude Scale. *Psychol. Rec.* 1981;31:343–348. doi: 10.1007/BF03394747. [CrossRef] [Google Scholar]
25. Wilson C.C., Netting F.E., New J.C. The Pet Attitude Inventory. *Anthrozoos.* 1987;1:76–84. doi: 10.2752/089279388787058650. [CrossRef] [Google Scholar]
26. Lago D., Kafer R., Delaney M., Connel C. Assessment of Favorable Attitudes Toward Pets: Development and Preliminary Validation of Self-Report Pet Relationship Scales. *Anthrozoos.* 1988;1:240–254. doi: 10.2752/089279388787058308. [CrossRef] [Google Scholar]
27. Johnson T.P., Garrity T.F., Stalannes L. Psychometric Evaluation of the Lexington Attachment to Pets Scale (Laps) *Anthrozoos.* 1992;5:160–175. doi: 10.2752/089279392787011395. [CrossRef] [Google Scholar]
28. Staats S., Miller D., Carnot M.J., Rada K., Turns J. The Miller-Rada Commitment to Pets Scale. *Anthrozoos.* 1996;9:88–94. doi: 10.2752/089279396787001509. [CrossRef] [Google Scholar]
29. Dwyer F., Bennett P.C., Coleman G.J. Development of the Monash Dog Owner Relationship Scale (MDORS). *Anthrozoos.* 2006;19:243–256. doi: 10.2752/089279306785415592. [CrossRef] [Google Scholar]
30. Howell T.J., Bowen J., Fatjo J., Calvo P., Holloway A. Development of the Cat-Owner Relationship Scale (CORS) *Behav. Proc.* 2017;141:305–315. doi: 10.1016/j.beproc.2017.02.024. [PubMed] [CrossRef] [Google Scholar]
31. Bradshaw J.W. Sociality in cats: A comparative review. *J. Vet. Behav.* 2016;11:113–124. doi: 10.1016/j.jveb.2015.09.004. [CrossRef] [Google Scholar]
32. Animal Medicines Australia Pets in Australia: A National Survey of Pets and People. [(accessed on 12 December 2020)];2019 Available online: [https://animalmedicinesaustralia.org.au/wp-content/uploads/2019/10/ANIM001-Pet-Survey-Report19\\_v1.7\\_WEB\\_high-res.pdf](https://animalmedicinesaustralia.org.au/wp-content/uploads/2019/10/ANIM001-Pet-Survey-Report19_v1.7_WEB_high-res.pdf)
33. ASPCA Pet Statistics. Facts about Pet Ownership in the US. [(accessed on 12 December 2020)]; Available online: <https://www.asPCA.org/animal-homelessness/shelter-intake-and-surrender/pet-statistics>
34. PDSA PDSA Animal Wellbeing (PAW) Report. [(accessed on 10 December 2020)];2020 Available online: <https://www.pdsa.org.uk/media/10540/pdsa-paw-report-2020.pdf>
35. Casey R.A., Vandenbussche S., Bradshaw J.W.S., Roberts M.A. Reasons for Relinquishment and Return of Domestic Cats (*Felis Silvestris Catus*) to Rescue Shelters in the UK. *Anthrozoos.*

- 2009;22:347–358. doi: 10.2752/089279309X12538695316185. [CrossRef] [Google Scholar]
36. Bowlby J. *Attachment and Loss*. 2nd ed. Pimlico; London, UK: 1997. pp. 235–262. [Google Scholar]
37. Ainsworth M.D.S., Bell S.M. Attachment, Exploration, and Separation: Illustrated by the behaviour of one-year-olds in a strange situation. *Child. Dev.* 1970;41:49–67. doi: 10.2307/1127388. [PubMed] [CrossRef] [Google Scholar]
38. Panksepp J., Biven L. *The Archaeology of Mind: Neuroevolutionary Origins of Human Emotions*. W.W Norton & Company; New York, NY, USA: 2012. pp. 351–387. [Google Scholar]
39. Mills D.S., Ewbank R. ISAE, ethology and the veterinary profession. In: Brown J.A., Seddon Y.M., Appleby M.C., editors. *Animals and Us: 50 Years and More of Applied Ethology*. Wageningen Academic Publishers; Wageningen, The Netherlands: 2016. pp. 95–111. [Google Scholar]
40. Lakey B., Cohen S. Social support theory and measurement. In: Cohen S., Underwood L.G., Gottlieb B.H., editors. *Social Support Measurement and Intervention: A Guide for Health and Social Scientists*. Oxford University Press; New York, NY, USA: 2000. pp. 29–52. [Google Scholar]
41. Hostinar C., Gunnar M.R., Sullivan R.M. Psychobiological Mechanisms Underlying the Social Buffering of the Hypothalamic-Pituitary-Adrenocortical Axis: A review of Animal Models and Human Studies Across Development. *Psychol. Bull.* 2014;140:256–282. doi: 10.1037/a0032671. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
42. Goodman L.A. Snowball Sampling. *Ann. Math. Stat.* 1961;32:148–170. doi: 10.1214/aoms/1177705148. [CrossRef] [Google Scholar]
43. Benfield J.A., Szlemko W.J. Internet-based data collection: Promises and realities. *J. Res. Pract.* 2006;2:D1. [Google Scholar]
44. Baltar F., Brunet I. Social research 2.0: Virtual snowball sampling method using Facebook. *Internet Res.* 2012;22:57–74. doi: 10.1108/10662241211199960. [CrossRef] [Google Scholar]
45. Kline P. *The New Psychometrics: Science, Psychology and Measurement*. Routledge; London, UK: 2000. pp. 51–69. [Google Scholar]
46. Taylor K.D., Mills D.S. The development and assessment of temperament tests for adult companion dogs. *J. Vet. Behav.* 2006;1:94–108. doi: 10.1016/j.jveb.2006.09.002. [CrossRef] [Google Scholar]
47. Reid P.J. Adapting to the human world: Dogs' responsiveness to our social cues. *Behav. Proc.* 2009;80:325–333. doi: 10.1016/j.beproc.2008.11.002. [PubMed] [CrossRef] [Google Scholar]



48. Gosling S.D., John O.P. Personality dimensions in nonhuman animals: A cross-species review. *Curr. Dir. Psychol. Sci.* 1999;8:69–75. doi: 10.1111/1467-8721.00017. [CrossRef] [Google Scholar]
49. Soennichsen S., Chamove A.S. Responses of cats to petting by humans. *Anthrozoos.* 2002;15:258–265. doi: 10.2752/089279302786992577. [CrossRef] [Google Scholar]
50. Ellis S.L., Thompson H., Guijarro C., Zulch H.E. The influence of body region, handler familiarity and order of region handled on the domestic cat's response to being stroked. *Appl. Anim. Behav. Sci.* 2015;173:60–67. doi: 10.1016/j.applanim.2014.11.002. [CrossRef] [Google Scholar]
51. Kotrschal K., Day J., McCune S., Wedl M. *The Domestic Cat. The Biology of Its Behavior.* 3rd ed. Cambridge University Press; New York, NY, USA: 2014. Human and cat personalities: Building the bond from both sides; pp. 113–129. [Google Scholar]
52. de Assis L.S., Mills D.S. Introducing a controlled outdoor environment impacts positively in cat welfare and owner concerns: The use of a new feline welfare assessment tool. *Front. Vet. Sci.* 2021;7:1161. doi: 10.3389/fvets.2020.599284. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
53. Barcelos A.M., McPeake K., Affenzeller N., Mills D.S. Common risk factors for urinary house soiling (periuria) in cats and its differentiation: The sensitivity and specificity of common diagnostic signs. *Front. Vet. Sci.* 2018;5:108. doi: 10.3389/fvets.2018.00108. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
54. Ellis S.L., Swindell V., Burman O.H. Human classification of context-related vocalizations emitted by familiar and unfamiliar domestic cats: An exploratory study. *Anthrozoos.* 2015;28:625–634. doi: 10.1080/08927936.2015.1070005. [CrossRef] [Google Scholar]
55. Schwartz S. Separation anxiety syndrome in cats: 136 Cases (1991–2000) *J. Am. Vet. Med. Assoc.* 2002;220:1028–1033. doi: 10.2460/javma.2002.220.1028. [PubMed] [CrossRef] [Google Scholar]
56. Vitale K.R., Behnke A.C., Udell M.A.R. Attachment bonds between domestic cats and humans. *Curr. Biol.* 2019;29:R864–R865. doi: 10.1016/j.cub.2019.08.036. [PubMed] [CrossRef] [Google Scholar]

## 9. Appendix

### Owner 's details

A. Name of the owner:

B. Age of the owner :

C. Gender of the owner :

D. Area:

01. For how many years have you been a cat's owner?

A. 0-5 years B. 11-15 years C. 6-10 years D. 16 or more years

02. At what stage do you become a pet (cat) owner?

A. As a child B. While in college C. At a time when I live alone D. As a teenager E. As adult  
F. Others (please specify)

03. What was your motivation of having a pet?

A. For companion B. Found/rescued E. Others (please specify) C. For Breeding . . D. Personal  
Choice

04. Do you consider your pet (cat) as a family member or best friend?

A. Yes. B. No C. Somehow

05. Do you feel excited or happy when coming home because of your pet?

A. Yes B. No C. Somehow

06. Do you feel sad when you are separated with your pet?

A. Yes B. No C. Somehow

07. When you feel worried or anxious, do you seek your pet (cat) for comfort?

A. Yes B. No C. Sometimes

08. When you feel alone or sad, do you spend most of your time with your pet?

A. Yes B. No C.Sometimes

09. How do you describe your emotions when you are spending time with your pet?

A. Happy. B. Relieves worrying E. Others (please specify) C. Loving D.Contented

11. How do you interact with your pet(cat)?

A. Bonding C.Others (please specify) B. Talking to it

12. In what way/s do pets contribute to your mental health? When I'm anxious....

A.My pet's clinginess, gives me joy C. If I hug my pet, I feel relieved B. Just by having pets, make me not feel alone. D. Others (please specify)

13. Does your pet (cat)help you to reduce worrying and being anxious?

A. Yes. B. No C.Somewhat

14. Why do you get cats?

Short answer

## Biography

I am Zannatul Mawa . I was born in Chattogram District . I passed my Secondary School Certificate (SSC) examination from Chattogram Cantonment High School, Chattogram in 2014 and Higher Secondary Certificate (HSC) examination from Chattogram Cantonment Public School and Collage, Chattogram , in 2016. I enrolled for Doctor of Veterinary Medicine (DVM) degree in Chattogram Veterinary and Animal Sciences University (CVASU), Chattogram, Bangladesh in 2016-2017 session. In the near future, I would like to work and have massive interest in Agricultural economics..