

The Influence of Domestic Pets on Stress Among Chinese 12-16 Years Old Students in Hangzhou

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Abstract

The study aimed to explore the relationship between pets and academic stress, what kind of effects pets will have, and why pets have positive or negative effects on Chinese high school students, 15 high school students from different schools who have pets were interviewed. All the questions were about if students were under academic stress and whether pets can reduce academic stress in Chinese high school students. The investigation used thematic analysis and found ten themes on this topic. The analysis results show that although Chinese high school students can both feel the positive and negative effects of pets, which inflicted their academic stress, in general, pets have a greater proportion of positive effects on reducing academic stress and also improving the most of participants' academic expectations. Differing from other researches study on pets' impacts on adults, this study found that some of the negative effects are not as bad as people think, and are even negligible when offset by the positive effects. In addition, for the participants who do not think pets have an impact on their academic stress, the study found that these kinds of students do not have a close relationship with their pets and it can be a reason to explain why participants have neutral

views.

Keywords

Pets; Academic stress; Expectation; Participants

Introduction

Nowadays, there is an increasing number of people who keep pets, especially youth. There is an increasing number of pets including cats, dogs, birds, and even some ectotherms and more and more people see these pets as their friends, family members, or even partners. Thus, people are more eager to know if pets can reduce stress for owners. However, the results of previous studies have been mixed, with some suggesting positive, some negative, and some having no relation I also found that although there were many pieces of research on adults, no one has looked at the impact of pets on academic stress, especially for Chinese high school students. As there is little research on pets and the effects of stress in China.

In addition, it is impossible to ignore that now there are more and more students who have academic stress, depression, anxiety, and other mental diseases that are also gradually jeopardizing students' lives. Thus, through this investigation, I want to find the relationship

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between pets and academic stress and whether pets can reduce Chinese high school students' academic stress, and if so why and how they can. I hope this study can find a new way to specifically show the relationship between Chinese high school students and their pets.

Nowadays, students take over different pressure from different stressors and researchers do studies to find the most efficient way to figure out this question. As for the influence of pets on humans, there are three conflicting views. While there is plenty of research showing that companion animals play a beneficial role in human life, there is a lack of conclusive evidence that people who own pets have higher levels of emotional well-being than those who don't (Herzog, 2011). However, all these articles cannot affirm what kind of effect pets will have on students.

What is Academic Stress?

The definition of stress is "the nonspecific response of the body to any demand made upon it" (Selye, 1974, p.1). On the part of pressure from school, Kohn and Farzer (1986) claim that the factors of academic stress, which means the pressure from school, can be divided into three parts: environment, perception, and demand. As people expect, the final grade is the most significant stressor (Kohn & Frazer, 1986), and then are other forms of tests (Kohn & Farzer, 1986).

Kohn and Farzer (1986) also analyze the reaction to stressors, involving physiological (such as losing weight, headache, tremble as well), emotional (such as anger anxious and guilty), cognitive and behavioural, and find that the most significant stressor is produced by students themselves among American students. In addition, the final issue also makes students under pressure (Solway, 1985). On the part of academic expectations, teachers (Bedewy & Gabriel, 2015) and parents (Deb et al., 2015) can increase academic expectations.

Positive Views

When we focus on pet owners' mental health, a lot of research proves that pets have a positive

impact on owners' mental health. For example, it was found that people who keep pets will be more satisfied with their life than those who do not, especially certain groups of people, such as the old people or the disabled (Bao & Schreer, 2016). Kogan et al. (2019) suggested that keeping pets can improve people's health conditions, release public pressure, and increase interactions between humans and dogs can induce positive hormonal effects. Also, a study from Germany and Australia has shown that pets improve their owners' physical health (Heady & Grabka, 2006).

To be more specific, pets can reduce loneliness (Pikhartova et al., 2014). Also, people with pets had lower levels of depression (Clark & Kline, 2010) and higher life satisfaction (Bao & Schreer, 2016). What's more, pets can provide social support, companionship, and liberation for their owners (Kogan et al., 2019). Janssens et al. (2020)'s research found that the owners' negative emotions can be reduced if they have pets. And more times owners interact with their pets, the higher the positive effect level they get, which gives the results suggest that the presence of a pet can not only buffer negative emotions but also that interaction with a pet and also may have an effect on the interaction of advantage emotions.

From the teenagers' mental health perspective, some researchers found that pet ownership during adolescence and childhood can increase self-esteem, reduce loneliness and trust, and increase resilience to symptoms of depression and anxiety (Christian et al., 2020). As the relationship with pets provides an outlet and emotional support for teenagers to deal with their emotions during stressful times and to cope with changes in peer social support without increasing anxiety (Muldoon J.C. et al. 2018).

Although cats and dogs are both common companion animals, they may have different influences on pet owners. Dog owners can have more opportunities to get exercise and there is a strong link between physical activity and positive mental health (Marcheggiani, 2012).

Firstly, dogs can improve loneliness and depression in older adults (Banks & Banks, 2002), and improve overall health in older adults (Raina P et al. 1999). The research from Bao and Schreer (2016) measures the well-being effects on Big Five personality traits, emotional regulation strategies, and satisfaction with needs. They find that dog owners scored higher than cat owners. Also, among older pet owners, cat owners rated depressive symptoms higher than dog owners (Enmarker et al., 2015). Bao and Schreer (2016) also said more studies were needed to investigate the link between happiness and pet ownership, as in some of their results there was no significant difference in happiness between cat and dog owners.

Negative Views

On the other hand, not all studies agree that pets are a good influence on mental health. A recent systematic review showed that there is no convincing evidence that pets can alleviate loneliness (Gilbey & Tani, 2015). A study by Gilbey et al. (2005) showed that the loneliness of individuals with pets is the same as the loneliness of individuals who do not have pets. In a cross-sectional study, pet owners were more likely to suffer from psychological problems such as anxiety, insomnia, and depression than non-pet owners (Mullersdorf et al., 2010). The reason why these kinds of research show opposite results are attributed to different methods (Saunders et al., 2017). As the researchers who get positive results may sometimes use a small and convenient sample, particularly elders (Stanley et al., 2014) or patients.

What's more, Xin et al. (2021) claim that pet owners appear to be more prone to psychological problems, and research by Pikhartova et al. (2014) has shown that owning a pet increases the possibility of reporting loneliness and they think maybe the loneliness is caused by pet ownership. Furthermore, Fraser et al. (2020) claimed that contrary to routine tests, pet owners reported higher levels of depression than non-pet owners, probably because people with problems get pets or more financial pressure from pets (Muldoon J.C. et al.,

2018). Among Canadian old people, pet owners are a lower level of life satisfaction than non-pet owners (Toohey et al., 2018). The finding of these opposite results is might because of the wide change in the methods used to assess health and well-being (Fraser et al., 2020).

Neutral Views

Furthermore, there is a third view on the influence of pets on humans. it is important to note that nationally representative studies have often found no reliable evidence for the pets' positive effects (Gillum & Obisesan, 2010) or the inference that pet owners are worse off than non-owners (Mullersdorf et al., 2010). Bao and Schreer (2016) found that There were no significant differences in happiness or personality between pet-owning and non-pet-owning participants. Pet owners reported higher levels of life satisfaction than non-owners, but there was no difference between the two groups in terms of happiness and positive or negative emotions.

Research Gaps

The goal of finding large swathes of research I found is to focus on adults. Few studies focus on teenagers, and when they do, some experiments have different deficiencies, such as not having enough subjects (Xin et al., 2021). Also, I only find the positive effects on teenagers in the articles and this kind of research has not been done on Chinese high school students. Studies above also show that academic stress can have Hugh influence on high school students. This is the reason that I do this research. I hope to study the relationship between Chinese high school students' academic stress and pets.

Methodology

The survey is conducted from the perspective of dialectical materialist ontology, which is a detailed description of conceptualization, and its core role is to define a field or the professional terms within the field and their relationships. It is a semantic basis for communication between different respondents within a domain, that is, ontology provides a consensus. This study decided to find the relationship between 'pets'

and 'academic stress', by summarizing the different responses of Respondents to interview questions.

Design

The study focused on the relationship between pets and academic pressure from Chinese high school students. 15 junior high school (around Year 7 to Year 10 in the UK) or high school students (around Year 11 to Year 13 in the UK) from different schools were recruited and interviewed in this study, which was considered practical under the constraints of the study.

The study used the interview research method which is involved in a qualitative study to investigate how pets influence academic stress among Chinese high school students. Compared with other methods, researchers directly communicate with interviewees in language and can express more real ideas. As participants only have a short time to think, they need to answer the question with their first ideas.

In addition, the study is analyzed by thematic analysis. This analysis method is mainly based on participants' personal experiences, which can provide researchers with more extensive information and analyzed options.

Due to the different government pandemic restrictions at different times, this study used different forms of interviewing, involving face-to-face and online video. The interview is located in places that are convenient for participants or online.

Participants

During recruiting the participant, they were stipulated that they must be between 12 and 17 years old and must have at least one pet. And as my study's main focus was on the high school students, all the participants were Chinese.

Procedure

The study used a semi-structured interview schedule. In the first place, a draft of the interview protocol was written and designed. Recruitment advertisements were posted on social media or posted on high school boards to

recruit participants. After consulting the questions, with one high school student who has a pet, the interview protocol was refunded. This student also helped me to test if there are any problems or defects in an audio recording that was used during the interview to ensure the accuracy of the transcription and translation later. Fortunately, everything went on wheels, which means the interview was reliable and successful so the rest of the interviews were done in a week.

Then all the audio recordings were transcribed and translated into notes, which can be analyzed. Before getting the initial theme, many codes were collated from notes, which were connected and formed the new themes. This process spent lots of time on reading and codes always should be ensured the authenticity and accuracy. Then themes were reviewed, organized, and simplified into a theme map which help find the final results from the codes clusters.

Ethical Consideration

As all my participants did not reach the legal adult age in China which is 18. Before interviewing, we got the provision from the guardian of the participants and also the participants themselves. In addition, there were no sensitive or personal information was collected in the interviews. What's more, the interviews were conducted anonymously, the respondents' personal information was not recorded, the demographic questions were not audio-recorded, and the demographic questions were not audio-recorded and not included any sensitive information such as names or addresses. All recordings were deleted after two weeks that the interviews were completed.

Result

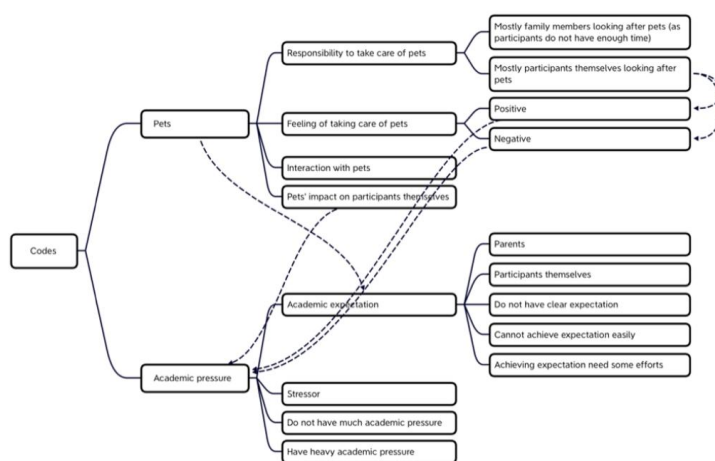
All participants answered 'I have no religion' to the question 'If applicable, please specify your religion', which means the person who does not have any religious beliefs. On the part of the education level of participants, for example, senior two means the second-year students in the senior high school and junior three means the third-year students in junior high school. In China, junior high school and senior high

school both only have three years, which is different from the UK.

In addition, to schools, international schools mean the students in this school will go aboard to the university and normal high or middle school means these students will enter a Chinese university or Chinese senior high school by passing the college entrance examination or senior high school entrance examination.

Participants were constituted of 12 (80%) high school students, which include 6 (40%) international high school students and 6 normal high school students; and 3 (20%) middle school students. Their annual household incomes also have been collected because there are many existing relationships between household income and academic stress. The statistics bureau found that the median per capita disposable income of Chinese residents was 29,975 RMB from 2021 to 2022. And in this study, 6 (40%) of participants are not sure about their annual household income, followed by 3 (20%) of them between ¥240,000 RMB to ¥360,000 RMB and another 3 (20%) of them more than ¥60,000 RMB. Among the rest of the participants, 2 over 15 choose between ¥120,000 RMB to ¥240,000 RMB and only 1 person chose less than ¥600,000 RMB, which means most of the participants have an annual household more than average level.

Table 1.1 Mind map of codes, subcodes and the relationship between each code from interviewing



Theme 1: Academic performance is the most significant stressor

In the part of academic stress, research finds that academic performance is the most significant stressor, which was mentioned by 14 participants 24 times in all, and then followed by their expectations for the study (13 times) and classmates' competition (11 times).

I: What is the main aspect of stress?
respondent 6: There are too many exams recently. It's a bit stressful.

These finds prove the result of Kohn and Farzer (1986) who claimed that the final grades and other exam tests are the most significant stressors for students, which is different from American students. As their biggest stressor is produced by themselves.

Theme 2: Pets reduce loneliness and provide support to their owners, but do not improve social interaction

Pets are reported to reduce loneliness (Pikhartova, et al., 2014) and also can support their owners. (Kogan et al., 2019) 4

Table 1.2 The definition and mentioned time of every code

Codes	Sub-codes	Definition	Total mentioned times
Who takes care of the pets in the family	I don't have time to look after myself	The subjects did not have enough time to take care of their pets due to reasons such as living in school or studying	7
	mostly family care	More than 50 per cent or most of pet care is done by family members. The family includes parents, siblings, and grandparents.	23
	I take care of myself	In addition to playing with the pet or walking the dog, participate in the daily care of the pet, including bathing, cleaning, feeding, grooming	5
Feelings of caring for a pet	positive feelings/satisfaction	Positive feelings, including comfort or satisfaction, that participants experienced while taking care of their pets	15
	Negative feelings	Subjects reported negative feelings about pet care, including irritability, worry, and responsibility	8
academic stress	There isn't much academic stress	Subjects felt little or no pressure from school and didn't feel much trouble in their lives	5
	there are a lot of academic stresses	The subject felt that the academic pressure of school had brought him great trouble and made him feel anxious and uneasy	9
stressor	time management	Subjects were confused about their schedule for many things or felt they didn't have enough time	6
	Students' competition	The subjects felt anxious because they thought their classmates were too good	11
	Interpersonal communication	The subjects felt anxious because they had problems with their classmates and friends	4

Codes	Sub-codes	Definition	Total mentioned times
	Study environment	The subjects felt very agitated and anxious because of the contradictions among students, parents, and teachers in the school	3
	financial pressure	The stressors the participants felt were "financial pressure," including some extracurricular training and the cost of participating in competitions	5
	Parents' expectations of school	The subjects felt anxious because their parents' expectations of their studies were high or their parents' expectations did not match their own	7
	Their expectations for their studies	The subjects put a lot of pressure on themselves because of their high expectations of themselves	13
	worry about the future	The stressors felt by the participants included "worries about the future", including entering college	4
	Academic performance	The source of pressure felt by the subjects is "academic performance", including the results of various examinations and competitions	24
	pressure from the job	When the subjects had class positions, they could not do their job well and felt irritable	1
How easily academic expectations can participants achieve	Difficult	The subjects thought it was not easy to achieve their academic expectations, which would bring great pressure The subjects were not very clear about their expectations to achieve	6
	It takes effort to achieve	The subject felt that the achievement of academic expectations required effort, but would not bring him too much pressure	8

Codes	Sub-codes	Definition	Total mentioned times
	Expectations are not very clear	do not have a clear goal want to achieve	1
The influence of pets	as a friend	Subjects believed that pets could accompany them	3
		The subjects thought of the pet as a listener to whom they could confide	
	company	Subjects believed that pets could accompany them	5
	listening	The subjects thought of the pet as a listener to whom they could confide	11
	supporting	The subjects thought the pet would give the subjects motivation to keep going when they were feeling stressed	3
	as a family member	Subjects saw their pets as relatives	4
	release pressure	The subjects felt that pets could relieve mood and stress	16
	As decoration	Subjects rated pets as ornamental	1
Pets' impact on academic stress	positive impact	The subjects felt that pets could bring them positive emotions, positive effects and relieve stress when they were feeling pressure from the study	39
	Negative impact	Subjects felt that pets caused negative feelings and increased academic stress when they felt pressure to study	8
	It doesn't matter	Subjects saw no link between pets and academic stress	5
Relationship with pets when you are stressed	don't like being around pets	Subjects were less likely to spend time with their pets when they were stressed	8
	Like spending time	Participants were more likely to want to spend time with	8

Codes	Sub-codes	Definition	Total mentioned times
	with pets	their pets when they were stressed	
	Look at participants' different moods	Whether or not the subjects felt stressed depended on how they were feeling at the time	2
	Do not feel anything	The subjects didn't experience a stressful time so they couldn't determine how they felt	1
Pets' influence on their academic expectations	academic expectations improve	Participants had higher or more positive expectations after having a pet	9
	Looking forward to reducing	The subjects had more negative expectations after having a pet The presence or absence of a pet did not affect participants' expectations	1
	Not affect on	The subjects had a previous interaction with the pet, walking the dog	4

participants mentioned that pets provide companionship to them.

Respondent 8: Pets are on your side unconditionally. Yeah, and so, you know, just being with him, you know, you feel like you have someone there, and then you feel so much better. and pets' supporting effects are mentioned 3 times in total.

Respondent 4: I feel like if it was him for me maybe it was him that sustained me spiritually. You know, even though we may be physically raising him and feeding him, to me it's just I can't imagine my life without this cat.

Although Muldoon J.C. et al. (2018) suggested that pets can give teenagers social support, the study did not find that pets can improve owners'

social interactions. In contrast, some participants think that it is easier to spend time with pets because they express emotions so directly that they don't need to think too much.

Respondent 14: Just because it is a small animal and has no idea, the expression is very direct and there is no need to speculate deliberately. So actually, I think it's pretty relaxed to stay with them.

Theme 3: Students in international schools feel more academic stress than normal high school students

In China, the traditional ideas think that compared with normal high schools, the curriculum of international high schools will be

simpler, as normal high school has more strict decision criteria, in 2021, less than 50 percent of all provinces will enroll undergraduate students, people would think that the normal high school student would be under more academic pressure and comparing with normal high school the learning process in an international school will be happier and more relaxed.

Surprisingly, the study finds that students in international schools feel more academic stress than normal high school students. 83.3% of international school students in the study reported that they feel under pressure from the study.

I: Are you under pressure from school now?

Respondent 1: Very stressful. (International school students)

but none of the students from normal high schools reported that they were under great Academic stress.

Respondent 7: Academically, um, there wasn't much pressure, so I was kind of open-minded, not that I did particularly well, but I was open-minded, so I didn't put too much pressure on myself, um, and then my parents didn't put too much pressure on me, so I felt like there wasn't much pressure. (Normal high school students)

and even junior high school students reported that they were under great academic stress more frequently than normal high school students.

I: Do you think you are experiencing academic pressure now?

Respondent 6: A little bit. (Middle school students)

International high school students may have more stress because they face more uncertainty and need to consider a range of problems, such as financial problems, time management, and student competition. Although the management of the international school is not very strict, it needs students' comprehensive ability.

Respondent 4: Since I choose an international

school, as I want to go abroad, I want to go to a better school as much as possible, because after all, the cost of going abroad is not cheap.

Respondent 1: Because much activity at ordinary times, in addition to the activities in school, you have a project to do, like CTB study class activities, and other various kinds of competitions, and then there are my own standardized, such as the SAT, I always feel that my time is not enough, then basically pressure is particularly big, Because the teacher will keep pushing me behind, and then the parents will push me. But I only have a little time which I can't arrange. and due to the problem of time arrangement, I couldn't keep improving on many things, which caused more pressure on me.

But most normal high school students don't have that kind of pressure. Although their standard is stricter, they don't have anything, like time management, to worry about other than getting the appropriate college score.

Respondent 9: In terms of time management, weekends are mostly about classes and homework, but in school, it's very orderly, and in school, it's mostly about studying and doing homework. Yeah, and then the school feels like every time slot is full. There is no schedule, that is to say, we do not need to manage anything, we can allocate our own time is quite little.

Theme 4: Pets' owners can have both positive and negative effects of pets on academic stress

Most participants think that pets can both have positive and negative effects on academic stress.

Respondent 1: I think there are both positive and negative aspects. The positive influence is that when I am stressed, I will play with the dog for a while, or touch it or something, which will relieve the pressure. And then, on the negative side, it would be noisy, it would bark, so for example, when I'm doing a problem, it would bark outside, and it would interfere with my learning, either visually or acoustically.

But the positive effect will be more important

than the negative one.

I: Which of these two influences is likely to be more influential?

Respondent 4: That's a positive because I don't feel any regret about choosing to raise a pet.

Theme 5: Positive feelings from taking care of pets reduced academic stress but the negative feelings about pet care did not increase the academic stress

The study found that positive feelings from taking care of pets reduced learning pressure, which is consistent with the posing of the view that pets can bring a positive impact on owners' mental health.

I: How do you feel about taking care of pets?

Respondent 2: Well, I think I have a feeling of protecting the animals, and then maybe a little inner satisfaction, and I think it's also a way to release the pressure. Yeah, and then I'll stay with them, and I'll be happy.

Although Mullersdorf et al (2010) claimed that adult pets owners are more likely to feel depression or anxiety, to my surprise, the negative feelings of the pet on care for teenagers did not increase the study stress.

Respondent 7: Well, sometimes it's a bit of a hassle because Ginger is a long-haired cat and, well, if you don't brush him sometimes, or if you don't brush him for the next day, his fur gets tangled up and gets worse. Yeah, so I think the long-haired cat is a bit of a hassle, but it's ok, it's pretty quick, and it doesn't take too long to take care of the cat.

I: Do you think it's easier for you to take care of him, or maybe it puts a little pressure on you.

respondent 12: Having a dog is not stressful. I don't have to worry about any income at my house anyway. I just do the basics

Theme 6: Almost all the participants who are not involved in pets care are mentioned that they do not have enough time

In contrast, academic stress also affected pet care. The study finds that almost all the

participants who are not involved in pet care mentioned that they do not have enough time.

Respondent 1: Last semester, I lived on campus, so I didn't have time to get along with my pet. This semester, there were many classes and homework, so I didn't have much time.

Theme 7: Having a pet can both increase or decrease participants' expectations of themselves at school

Pets can also affect students' expectations. The study found that having a pet increased participants' expectations of themselves at school.

Respondents 1: I also had the idea that because of pets, you have to take care of them anyway, so it means that you have self-care ability and a sense of responsibility. Then, this kind of higher expectation makes me feel that I have the ability to manage pets.

There were also times when pets reduced academic expectations.

Respondent 12: I would like to grow up like a salty fish and do not need to think too much. I want to be reborn as a dog next life, finding a good family without any worries.

However, expectations are more likely to increase. In the study, participants mentioned 9 times in total that their expectations are increasing and only mentioned 4 times that their expectations are decreasing.

Theme 8: The higher expectations students got, the more likely their expectations were to be raised by the pet

Additionally, it is interesting that when we asked Respondents how hard they expected to do it, the harder they expected to do it, the more likely their expectations were to be raised by the pet.

I: And you think that's an easy expectation to meet?

Respondent 3: I think you can probably do it if you study hard.

I: Do you think your pet's presence has affected your academic expectations?

Respondent 3: Having a pet can promote my study, but expectations may not have a big impact, after all, most people want to keep a pet to have a companion.

I: Do you think these expectations will be easier for you to meet?

Respondent 8: Well, it's very difficult.

I: Do you think the presence of pets affects your expectations of learning or others' expectations of you?

Respondent 8: Oh yes, after such an experience with him, I want to study hard in the future, and then find a good job and earn a lot of money, so that I can have my own house and raise a pet, which is taken care of by me. Yeah, it's kind of like having a pet as a goal or something. Mm-hmm. More motivation.

The study found that the code 'academic expectations are increased' was mentioned 9 times in total, 6 of which were put forward by the Respondents who felt the expectation was difficult to fulfill.

Theme 9: Pets do not influence participants' academic stress

Some participants do not think pets influence their academic stress.

Respondent 5: As for whether pets can relieve pressure, I don't think they can. After all, um, when I play with them, I usually play with them when I am in the mood. If I am not in the mood to play with them, it has nothing to do with them.

Theme 10: Both cats and dogs can bring positive effects to academic stress but in a different way

On the part of differences between cats and dogs, the study finds that both cats and dogs can bring positive effects to academic stress but in a different way.

Respondent 2: My dog is a little bit noisier than a cat, so he might sometimes. Uh, blow off steam with me, or fight with me. And then the cat was kind of psychologically healing, because he was quiet, and then uh, he would sleep in my bed or something, and then it calmed me down a little bit.

The Respondents didn't think dogs gave them more happiness than cats, but their needs were different sometimes.

Respondent 2: My dog to me, he might play a listening role, and then the cat, sometimes I have a lot of love, and Then I want to find someone to express my protectiveness, and then I go to him. It's not that I don't care about my dog. I care about him, too, not in the same way.

Discussion

Firstly, pets provide support and companionship for students, because pets' unconditional support gives students motivation to learn, most students are understood and supported by their pets, thus reducing loneliness. But pets do not increase students' social contact, students think pets express their emotions in a more direct way than humans, as when they communicate with other people, they need to be sensitive to other people's feelings or to gauge their intentions, which make them feel tired.

On the part of academic stress, this study found that academic finance will be the most significant stressor which is consistent with some foreign studies on adolescent stressors. Grades can be an important thing students need to consider as a good grade is an important criterion for whether they can get into a better school or get better resources. Also, pets do have an impact on students' academic stress. The positive impact is because students can feel satisfied, gratified, happy, and other positive emotions during the interactions with pets, while the negative impact is mostly because pets sometimes reduce their study time or disturb their study, resulting in increased pressure. But the positive effect will be more important than the negative one, only sometimes pets are noisy and disturb their

studies, or it is troublesome to take care of pets. As most of the respondents' participation in caring was not very high, and most pets were mainly cared for by family members, who helped them share most of the negative effects so they felt a greater proportion of positive influence they have not faced realistic pressure, such as the economic pressure of taking care of pets. And for the students who thought pets do not have any impact on their academic stress, the main reason for this opinion is that these kinds of participants do not have a close relationship with their pets. They only play with them and do not involve in caring. So, they don't have as strong an emotional need for pets. Theme 10 suggested that both cats and dogs can bring positive effects to academic stress but differently, although some articles thought cats will be more introverted than dogs, they can provide a different way to reduce academic pressure based on this study. In addition, students in international schools feel more academic stress than normal high school students may because international students need to face more uncertainties, which normal school students do not face as the school or parents will help them arrange everything.

For academic expectations, theme 7 claims that pets do have an impact on students' academic expectations. Expectations improve because they want their cats and dogs to live better lives, so they need to study better and earn more money; while the reason for lowered expectations is that having a cat or dog to live with is enough for them, and they thought they do not need to make that much money or to be happy. Moreover, the higher the expectations students got, the more likely their expectations were to be raised by the pet. This may be because students with high expectations also have higher demands for themselves, and their plans are more comprehensive and clearer, so pets will be included in their plans for the future.

Conclusion

Before doing the research, I assumed that pets could indeed reduce students' academic stress. The overall result is pretty much what I

expected. Pets and academic stress can influence each other. Academic stress can affect the time spent caring for pets and pets can reduce loneliness and provide support to their owners. Although dogs and cats have a little bit different, they can bring both negative and positive feelings to participants with which the positive one has a greater proportion. In addition, pets can both improve or decrease the academic expectation of participants to change their academic stress.

Conflict of Interests: the author has claimed that no conflict of interests exists.

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