

THE RELATIONSHIP BETWEEN HEALTH ANXIETY, PERCEIVED STRESS AND SATISFACTION OF PET OWNERS

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Abstract: *Introduction: The aim of the study is to see if and in what way pets influence certain aspects of their owners' lives. Methodology: A number of 856 participants filled in the online form, out of which 586 have at least one pet. Results: The results show that there are significant differences between the two groups. Animal owners are less anxious about their health, have a lower perceived stress level and higher life satisfaction than non-owners. Conclusion: Given the results obtained, pets positively influence the life of the owner. This link should be studied in more detail in future research.*

Key words: *human-animal interaction, life satisfaction, perceived stress, pets, anxiety*

1. Introduction

In the field of health, the effects of animal-assisted therapy (AAT) on patients were studied, and the results were spectacular. Hospitalization produces stress, anxiety, feelings of isolation, depression, regardless of age. Animal-assisted therapy meets the needs of patients by reducing all these conditions (Barchas et al., 2020).

The results were similar both in the case of short interventions of 5 to 20 minutes and in the case of long interventions of more than 20 minutes (Abate, 2011; Waite et al., 2018). This therapy is used to reduce pain, fatigue, depression and anxiety. After animal-assisted therapy sessions, the results showed that in addition to reducing the stress caused by hospitalization, it has beneficial effects on well-being. Patients are more motivated to heal, more relaxed, collaborate more with hospital staff and with family. (Schimtz, et al. 2017; Harper, et al., 2015; Marcus, et al., 2012; Phung, et al., 2017).

Not only animal-assisted therapy brings benefits for people, but also owning pets. In a comparative study conducted by Raghunath and colleagues (2017), they concluded that pet owners are happier, physically healthier and they have lower levels of anxiety and depression.

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In the case of hospitalized patients, an improvement in well-being was observed following family visits with pet. They reported feeling less lonely, anxious or sad. Those who have a companion animal said that they are happy that animal-assisted therapy exists, but they would feel better if they saw their own animal (Barchas et al., 2020). Given the seriousness of many illnesses, ex.cancer, patients need all the support they can get. This can be given besides their partner (Vintila, M., Stefanut, A., Sarbescu, P, 2019; Stefanut, A., Vintila, M, 2019), also by pets, mainly dogs.

The social support that pets represent is considered an important modulator of stress. Put in a stressful laboratory situation, adults reported a lower level of stress when in the company of a dog than if they were alone or with a friend. These results were also obtained due to the fact that the friend can evaluate performance in task, being a source of additional stress, while a dog is a non-evaluative company (Kertes, et al., 2016).

This has also been observed in older people. They have reached a respectable age when they are in the situation of losing loved ones. It feels like they can no longer talk to anyone because of the fear of being judged and ridiculed and the fact that they have a pet, a source of unconditional support, helps them cope more easily with stress and loneliness (Pachana et al., 2011). It can be part of a healthier life style at this age (Eglite, A., Vintila, M., Grinfelde, A., Kantike, I., 2009, Vintila, M., Marklinder, I., Nydahl, M., Istrat, D., Kuglis, A., 2009).

Given that perceived stress is one of the predictors of happiness, González-Ramírez and collaborators (2018), investigated the link between happiness, perceived stress and the human-dog relationship. The results showed that people who reported higher levels of subjective happiness and lower perceived stress, also showed higher values in their relationship with their dog.

Thus, a factor of major importance in peoples' life is represented by the quality of their relationships (Coman, 2018a, p.245), whether they are relationships with humans or animals. However, peoples' level of life satisfaction and happiness can also be influenced by the image they have regarding the life they should have, and in this regard, one must take into account the fact that "between images and reality there is a close connection, due to the fact that images reflect the reality, being based on the sensorial information from the external reality and on the information that exists in peoples' minds" (Coman, 2018b).

The human-dog relationship has direct effects on perceived stress, but not on subjective happiness. Thus, happiness is also analysed today in the context of consumer behavior, and in today's society, happiness as an obligation is translated simply through the idea of consumerism (Coman, 2007, p.27) meaning that the more people have, the happier they will be.

More specifically, owners who spend more time with dogs, play together and let their dogs be present in their daily activities, not only have a better relationship, but have a lower level of perceived stress.

The explanation given by the authors is that pets provide social support for owners, and this interaction makes them more relaxed to perceive stress and

recognize subjective happiness (Swami, V., Khatib, NAM, Vidal-Mollon, J, Vintila, M., Barron, D., Goian, C., Mayoral, O., Toh, EKL, Tudorel, O., Vazirani, S., 2019).

Dog owners reported lower levels of psychosomatic and stress indicators, but also higher levels of health, energy, absence of body pain, social functioning and mental health than non-dog owners. However, there were no significant differences between the two groups in terms of life satisfaction, happiness, physical functioning (González & Hernández, 2014).

In some studies, such as the one presented above, the relationship between life satisfaction and the possession of a pet is statistically insignificant, while in other studies it is significant. For example, in the research conducted by Bao and Schreer (2016), the results show that pet owners have higher scores on life satisfaction than non-owners, but for the other components of well-being (positive and negative emotions) no differences were observed.

Studies on life satisfaction have shown that social support is an important factor. The fact that they have good relationships with family and at work can increase the level of life satisfaction. Also, the perceived support from friends has this effect (Connaughton, 2016). Pets can, in a way, be considered as a substitute for human social support, and this should increase life satisfaction.

Thus, a study evaluating the link between pets, physical function, and psychological factors found that people who had pets reported a significantly higher level of perceived and anticipated social support than those who did not own pets (Connaughton, 2016).

Another study (Luhmann & Kalitzki, 2016) presents both the positive and negative parts of caring for a pet (dog, cat or horse) associated with life satisfaction. Satisfying the need for autonomy, the fact that they experience positive emotions when they are with the pet and the fulfillment of social roles are associated with a higher level of life satisfaction.

On the other hand, the higher financial stress felt due to the pet and the experiencing negative emotions were associated with a lower level of life satisfaction. In certain psychiatric diseases or personality disorders associated with lower levels of life quality and/or life satisfaction owning a pet can increase their level of well-being (Swami, V., Barron, D., Vintila, M., Ong, HS, Tudorel, O., Goian, C, Wong, KY, Toh, EKL.,2021, Barron., D., Vintila, M., Swami, V., 2020).

The purpose of this study is to see if owning a pet improves certain aspects of life. More specifically, we studied a comparison between owners and non-owners of animals on certain aspects related to life: anxiety related to perceived health, life satisfaction and perceived stress.

The hypotheses of the study are:

- (1) There will be differences between pet owners and non-owners regarding health anxiety.
- (2) Pet owners will have a lower perceived stress level than non-owners.
- (3) Pet owners will be more satisfied with life than non-owners.

2. Methodology

2.1. Participants

The study had 856 participants, owners and non-owners of pets. Of these, 95.1% (N = 815) were female with an average age of 28.63 years. The majority of participants, 68.4% (N = 586) have at least one pet, of which 32.2% live in the house where they also have a yard, and approximately 67% in an apartment.

Out of these, 45% have at least one dog, 21% have at least one cat. Among pet owners, 41% walk their animal, and 27.9% walk it 2-3 times a day. 45% of owners perceive their pet as very active (1-3 hours a day), and 51.5% consider its health to be very good.

2.2. Instruments

Health anxiety. To measure health anxiety we used the Health Anxiety Inventory (HAI), the short version. The scale was developed by Warwick and Salkovskis in 1989 and it is based on the cognitive theory of anxiety and hypochondria and has been found to distinguish between patients with hypochondria and non-clinical cases.

The scale has 18 items that are composed each of 4 statements targeting patients suffering from health anxiety, on the one hand, and other anxiety disorders and physically ill patients, on the other hand. The Alpha Cronbach coefficient is .85 which means that the scale has a high internal consistency.

Perceived stress. We used the Perceived Stress Questionnaire (PSQ) developed by Levenstein et al. (1993), a relevant tool in determining the level of perceived stress. The scale contains 30 items, each item having a Likert scale from 1 (Almost never) to 4 (Almost always). The internal consistency was measured with the Alpha Cronbach coefficient (.93), the scale having an excellent level.

Life satisfaction. I used the questionnaire made by Diener (1985), Life Satisfaction Scale (SWLS). The scale is designed from 5 items on a Likert scale from 1 (total disagreement) to 7 (total agreement) to provide an overview of life and measure life satisfaction. The Alpha Cronbach coefficient is .84, which represents a high level of internal consistency

2.3 Procedure

As procedure, a questionnaire was made in Google Forms which contains the scales specified above and it was distributed online. The participants gave their informed consent. After collecting the data, the participants were divided into two groups: pet owners and non-owners.

3. Results

Demographic data

Table 1

			<i>M</i>	<i>SD</i>
Age			28,63	7,68
			<i>N</i>	%
Gender				
Female			815	95,1
Male			41	4,8
Educational level				
high school			213	24,9
secondary			32	3,7
university studies			414	48,3
postgraduate studies			194	22,6
Others			3	0,4
Do you have pets?				
Yes			586	68,4
No			270	31,5
Type of pets				
no pets			295	34,4
Dog			381	44,5
Cat			181	21,1

Health anxiety correlates significantly with perceived stress ($r = .39, p < .001$), but also with life satisfaction ($r = -.29, p < .001$). Perceived stress also correlates significantly with life satisfaction ($r = -.51, p < .001$). These results support the research approach, ie the observation of the differences between pet owners and non-owners regarding these factors.

Table 2

Descriptive statistics, correlation coefficients and fidelity coefficients for the studied variables

Observed variables	<i>M</i>	<i>SD</i>	1	2	3
1. Health anxiety	12.24	6.93	(.85)		
2. Perceived stress	59.92	13.62	.39***	(.93)	
3. Life satisfaction	27.57	5.13	-.29***	-.51***	(.84)

Note. * $p < .05$; ** $p < .01$; *** $p < .001$ (bi-directional); $N = 856$; α Cronbach Coefficients are present on the main diagonal

To verify the first hypothesis that there are differences between pet owners and non-owners regarding health anxiety we used T tests for independent samples. Pet owners ($N = 552$) have a lower level of health anxiety ($M = 10.80, SD = 5.36$) than non-owners ($N = 255, M = 12.00, SD = 5.61$). This difference is statistically significant,

$t(805) = 2.92, p = .002$. The effect size is small, d Cohen = .21.

To see if the second hypothesis is confirmed that animal owners have a lower perceived stress level than non-owners we used T tests for independent samples. Participants ($N = 542$) who have pets have a lower level of perceived stress ($M = 56.08, SD = 10.24$) than participants ($N = 231$) who do not have pets ($M = 58.80, SD = 10, 30$). The differences are statistically significant, $t(771) = 3.37, p < .001$. The effect size is small, d Cohen = .26.

To see if pet owners are more satisfied with life than non-owners, we used T-tests for independent samples. Participants ($N = 570$) who have at least one pet are more satisfied with their life ($M = 28.81, SD = 4.17$) than participants ($N = 248$) who do not have a pet ($M = 26.74, SD = 4.35$). This difference is statistically significant, $t(816) = 6.43, p < .001$. The effect size is average, d Cohen = .49.

Table 3

T test results and descriptive analysis for health anxiety, perceived stress and satisfaction with life depending on owning a pet

	Group						t	df	P
	Group with pets			Group without pets					
	M	SD	n	M	SD	n			
Health anxiety	10.80	5.36	552	12.00	5.61	255	2.92	805	.002
Perceived stress	56.08	10.24	542	58.80	10.30	231	3.37	771	.001
Life satisfaction	28.81	4.17	570	26.74	4.35	248	6.43	816	.001

Note $N=818$

4. Discussions

(1) There will be differences between pet owners and non-owners regarding health anxiety.

The results confirm the first hypothesis of the study. These results are consistent with previous research showing that pets as well as animal-assisted therapy reduce anxiety in general, but especially in hospitalized and chronically ill patients. The relationship between health anxiety and pet ownership has not been directly investigated in the literature, but previous studies found are representative examples that reinforce and support the results of this study.

In some hospitals visits with the patient's pet are allowed. They report a lower level of anxiety, sadness and isolation from these visits. Animal-assisted therapy also helps reduce anxiety, stress, and pain in both adults and hospitalized children (Barchas et al., 2020).

This is possible because animals are seen as sources of support, and when we spend time with them hormones such as dopamine, oxytocin, cortisol are released which lead to these results (Chan & Rico, 2019). It can also help bonding and improving family relationships in difficult situations (Sirbu, A., Vintila, M., Tisu, L., Stefanut, AM, Tudorel, O., Maguran, B., Toma, RA (2020).

(2) Pet owners will have a lower perceived stress level than non-owners.

The theory of social support (O'Haire, 2010) can explain the lower level of perceived stress in those who own a pet compared to non-owners. People who do not receive social support feel the effects of stress more and have a lower life satisfaction. The results of this study are consistent with this theory, with pet owners having a lower perceived stress level than non-owners.

This relationship is proven and supported by experiments performed on both adults and children. Kertes (2016) performed two similar experiments. Placed in a stressful situation in the laboratory, both adults and children expressed a decrease in perceived stress in the presence of a dog than in the presence of a friend / parent. The researcher explains that people see in the pet an unconditional and non-evaluative social support. The same results were obtained in another study conducted on the elderly population (Pachana et al., 2011).

(3) Pet owners will be more satisfied with life than non-owners.

The obtained results confirm the hypothesis and are consistent with the theory of social support. According to this theory, pets provide social support and are considered facilitators of human interaction. This theory emphasizes that animals can reduce loneliness and help increase life satisfaction and psychological well-being (O'Haire, 2010).

Also, the results of previous studies were similar. Bao and Schreer (2016) made a comparison between owners and non-owners which shows that people who have a pet are more satisfied with their lives than those who do not. On the other hand, Mháistir (2013) in the research conducted on the elderly population did not find significant differences between owners and non-owners of pets, but differences depending on the type of animal they have.

The explanations given by the authors of these studies are that the former sample was formed predominantly by young people alone, while in the latter one, it was composed of older people who were married or had partners.

These mixed results can also be caused by the different methodological approaches used in the studies, but also by the field in which they are performed. Some studies are conducted by researchers in the field of psychology, others by those specializing in veterinary medicine, for example, and the results may differ (Utz, 2013).

5. Limitations and future research directions

One limit is the gender ratio. The sample consisted mainly of women.

Another limitation would be that the relationship between the variables should have been studied in more detail.

It would be more interesting to study the relationship between health anxiety and pet ownership. Also, the inclusion of cat or other pet owners in studies would fill the gap in the literature.

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