ORIGINAL RESEARCH

The Effect of Pet Ownership on Quality of Life and Personality Traits in Individuals

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Abstract

Background

The management of chronic diseases is important in managing global health and reducing mortality. The management of chronic diseases is an important factor affecting the quality of life. The perception of chronic diseases reveals the management of the disease process, reactions the individual reveals, and the differences in coping styles. Different approaches to events arise from different personality traits. In addition to medical treatment, psychosocial treatments/interventions are recommended in compliance with chronic diseases that reduce the quality of life and the management of symptoms. One of these intervention methods is animal-supported interventions based on human-animal interaction.

Aim

This study aimed to examine the effect of pet ownership on quality of life and personality traits in individuals with chronic diseases.

Methods

Data were collected in face-to-face interviews in a private hospital in İstanbul, Turkiye between October 2021 and 2022. A descriptive characteristics information form, the Eysenck Personality Questionnaire Revised-Abbreviated (EPQR-A, and the Quality-of-Life Scale Short Form (SF-12) were used for data collection.

Results

In the study, there was a significance between the SF12-Mental composite score of individuals with chronic diseases who were not with their pets and stated that they had difficulty in pet care. There was also a significance between those who stated that they had difficulty in pet care and SF12-Physical composite score, extraversion, and lie subscales. There was a significance between SF12-Mental composite score and those who had a dog, cat, hamster, or rabbit and between SF12-Physical composite score and those who had a dog, cat, or hamster.

Conclusions

The status of being with their pets, having difficulty in their care, and thinking that pets limited their lives affect the quality of life of people with chronic diseases. In addition, the personality traits of these patients change according to the pets they have and their quality of life is affected.

Keywords: chronic diseases, quality of life, personality, psychosocial therapies, pets

Introduction

Chronic diseases are complex diseases that last for at least three months, require medical intervention, restrain the activities of daily living, and cause various symptoms[1,2]. The individual with a chronic disease has to adapt to the new status and conditions. However, disease symptoms and the burden they cause can affect the quality of life[3]. Even only having a chronic disease may be sufficient for decreased quality of life, personality traits of the individual also play a role in the disease perception and management[4,5].

Personality is the continuous behavioral patterns that distinguish the individual from others and determine the individual's perceptions, learning, thinking, and coping strategies[6]. The perception of chronic disease, the management of the disease process, the reactions revealed, and the differences in coping strategies may vary according to personality traits[7].

Besides medical treatment, psychosocial therapies/interventions are recommended for adaptation to chronic diseases and symptom management[8]. One of these intervention methods is animal-supported interventions based on the human-animal interaction.

Background

Worldwide, chronic diseases are among the important health problems. The World Health Organization has stated that the most common chronic diseases are cardiovascular system diseases, cancers, and chronic respiratory diseases[9]. Chronic diseases are also responsible for 73% of deaths worldwide[10]. The management of chronic diseases is important in managing global health and reducing mortality[11]. The primary action to be taken within the scope of protection and development of global health includes the diagnosis and control of chronic diseases and the individual is intended to take an active role and responsibility in the self-care in order to alleviate the negative course of the disease[9]. The management of chronic diseases is an important factor

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affecting the quality of life.

The World Health Organization has defined quality of life as individuals' "perceptions of their position in life in the relation to their goals, expectations, standards and, interest I the context of the culture and value systems in which they live[11]." Quality of life is impacted by the symptom burden of chronic diseases and one's participation in self-care. In a meta-analysis, it has been stated that morbidities are associated with decreased quality of life. In particular, multimorbidity is an important factor that reduces the quality of life[12].On the other hand, it has been stated that individuals with a high quality of life are more likely to participate in self-care activities[13]. Perception and management of chronic diseases are associated with not only the quality of life but also personality traits[4,5].

Different experts have proposed different definitions of personality. Most recently, Bergner defined personality as the tendencies that one has (innate and acquired) and the consistent characteristics that one shows as different from society[14]. As understood from the definition, the personality traits of people are the reflections of some traits in life. Therefore, personality traits affect the perception of stressful circumstances, such as illness, as dangerous or safe[6]. The perception of chronic diseases reveals the management of the disease process, reactions the individual reveals, and the differences in coping styles[7]. Different approaches to events arise from different personality traits. In addition, making sense of the disease affects compliance with the disease and treatment, leading to psychosocial difficulties and a decrease in the quality of life[12].

In addition to medical treatment, psychosocial treatments/interventions are recommended in compliance with chronic diseases that reduce the quality of life and the management of symptoms[8,15]. One of these intervention methods is animal-supported interventions based on human-animal interaction. It has been reported in the literature that pet ownership and pet responsibility have positive effects on the life of the individual[16-22]. In these studies, it has been stated that pet ownership improves the expression of emotions, communication, and self-care[17], reduces anxiety and stress levels[18,19], improves the perception of health[18], increases exercise[16], and strengthens coping with loneliness[18]. Due to all these factors, it is thought that pet ownership can reduce disease symptoms and facilitate disease control in people with chronic diseases.

Although studies on the use of animal-supported interventions in the care and treatment of chronic diseases are common in the international literature[23-26], the number of such studies is limited in our country[27,28]. In a study, it has been stated that non-pet owners experience symptoms/difficulties of chronic diseases more frequently than pet owners[29]. Animal-supported interventions consist of activities in which an animal participates in the treatment process according to certain criteria, include targeted interventions, increase the quality of life of the individual, are educating and entertaining, and increase motivation[30]. Current literature reveals that interaction with any animal is a supportive treatment method for symptom management and skills of coping with chronic diseases[31,32] In studies conducted with individuals with chronic diseases, it has been stated that pet owners experience less depression and anxiety and can establish more social relationships compared to non-owners, and that animal-supported interventions have biopsychosocial positive effects in reducing depressive symptoms[31,32].

The aim of this study is to examine the effects of pet ownership on quality of life and personality traits in individuals with chronic diseases. The research questions to be addressed in this study are as follows:

• Does pet ownership significantly affect the quality of life of individuals with chronic diseases?

• Does pet ownership have an impact on the personality traits of individuals with chronic diseases?

• How are the quality of life and personality traits of pet owners related to the type of pet, duration of ownership, and reasons for separation from the pet?

• What is the relationship between the quality of life of pet owners and the type of pet, duration of ownership, and reasons for separation from the pet?

Methods

Aim

This study aimed to examine the effect of pet ownership on the quality of life and personality traits in individuals with chronic diseases.

Study design

Descriptive and cross-sectional study was conducted.

Participants

Inclusion criteria:

- Being over 18 years of age
- Having at least one chronic disease
- Having a pet
- Being a literate

Exclusion criteria:

- Having a communication problem (hearing, mental etc.)

Removal criteria:

- Participants withdrew from the study at any time.

The population of the research consisted of all patients who applied to the internal units of a private hospital between October 2021 and October 2022. The sample of the study consisted of patients who applied to a private hospital in Istanbul and agreed to participate in the study after the purpose of the study was explained. All patients who met the inclusion and exclusion criteria were included without any sample calculation. The annual number of patients applying to the internal medicine outpaient clinic is 850. Of these patients, 230 were excluded from the study since they did not meet the inclusion criteria and 98 refused to participate in the study. The study was completed with 264 patients.

Data collection

The study data were collected face-to-face between October 2021 and October 2022. Data collection was carried out by two researchers (DB, SD) residing in Istanbul, who visited hospitals. Questionnaires were distributed to patients who consented to participate in the study, and sufficient time was provided for completion. The researchers remained in the room during this process. Participants were able to ask questions whenever they encountered difficulties or needed clarification. Once the participant indicated that they had completed the questionnaire, it was collected by the researchers.

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Data instruments

A sociodemographic characteristics information form, the Eysenck Personality Questionnaire Revised-Abbreviated (EPQR-A), and the Quality-of-Life Scale Short Form were used for data collection.

Information form: The form consists of 8 questions regarding the characteristics of the participants such as age, gender, and marital status. In addition, it includes 6 questions regarding the duration of pet ownership, the type of pet owned, and the effect of pet ownership on life.

Eysenck Personality Questionnaire Revised-Abbreviated (EPQR-A): The validity and reliability of the scale were established by Karanci et al. It consists of 24 items and evaluates personality in 3 main factors: extraversion, neuroticism, and psychoticism. In addition, the lie subscale aims to prevent bias during the application of the questionnaire and control its validity. In the scale, each factor is evaluated with 6 items, and participants are asked to answer yes (1) and no (0). The score obtainable from each personality trait varies between 0 and 6. The neuroticism subscale includes items 1, 9, 11, 14, 18, and 21; the extraversion subscale includes items 2, 4, 13, 15, 20, and 23; the psychoticism subscale includes items 3, 6, 8, 12, 16, and 22. The lie subscale includes items 5, 7, 10, 17, 19, and 24. In the Turkish adaptation study of the scale, the internal consistency coefficient was .78, .65, .42, and .64 and the test-retest consistency was .84, .82, .69, and .69 for the extraversion, neuroticism, psychoticism, and lie subscales, respectively. Higher scores indicate a greater intensity and prominence of the corresponding personality trait (extraversion, neuroticism, psychoticism) in the individual[33]. Cronbach Alpha value of the scale in this study was determined as 0.529

Quality of Life Scale Short Form (SF-12): The validity and reliability study for Turkey was conducted by Ataoglu, Ankarali, and Ankarali (2017).34 The SF-12 is composed of 12 questions which measure eight health domains to assess physical and mental health. Physical health-related sub-domains include General Health (GH), Physical Functioning (PF), Role Physical (RP), and Bodily Pain (BP). Mental health-related scales include Vitality (VT), Social Functioning (SF), Role Emotional (RE), and Mental Health (MH). Two summary scores—physical and mental health composite—were calculated. The score to be obtained from each sub-domain and summary scores varies between 0 and 100. A higher score indicates a better QoL. Cronbach Alpha value of the QOL-MCS in this study was determined as 0.655. Cronbach Alpha value of the QOL-PCS in this study was determined as 0.566.

Data analysis

Data were entered into and analyzed using SPSS version 22.0 (SPSS Inc., Chicago, IL, USA). Descriptive statistics were used to report the sociodemographic and animal interaction information.

The Kolmogorov-Smirnov test was used for normality distribution in order to determine the type of tests used in comparisons. The Eysenck personality trait scale and SF-12 composite scores weren't found to be compliant with the normal distribution; therefore, comparisons regarding personality trait were carried out using the non-parametric tests (t-test, Mann-Whitney U test, and Kruskal-Wallis), and for non-parametric variables, using the Kruskal–Wallis test with Dunn-Bonferroni post-test.

Ethical considerations

Prior to data collection, approval was obtained from the ethics committee of the İstanbul Atlas University (27.09.2021-8460). The purpose of the study was explained to the participants who met the inclusion criteria of the research, and their verbal and written consent was taken. The principles of the Declaration of Helsinki were adhered to throughout the study.

Results

Demographic characteristics of patients

The mean age of the participants was 43.58±14.77. Of the participants, 77.7% were female; 58.7% had at least an undergraduate degree; 61% were married; 54.9% were employed; 52.3% had an income equal to their expenses; 72.7% were smokers; 77.3 did not use alcohol, from existing chronic diseases; those with endocrine diseases %22, cardiovascular disease %26.5, respiratory disease %9.8, gastro-intestinal disease %3.4, hematological disease %3.4, Musculo-skeletal system disease %6.8, neuro-psychiatric disease %33.3, auto-immune disease %7.2. (Table 1).

Distribution of characteristics related to the participants' level of interaction with animals

The mean duration of pet ownership of the participants was 8.03±5.73 years. Of the participants, 51.1% were still with the pets they owned; 31.1% had to leave due to the death of their pets; 43.6% had a cat; 54.2% stated that having a pet facilitated to cope with their disease; 67.8% thought that having a pet would be effective in managing the chronic disease, coping with the symptoms of the disease, and improving the quality of life (Table 2).

Evaluation of the relationship between pet ownership and chronic disease management, quality of life, and personality traits

There was a statistically significant negative between SF-12-Mental Composite Score (QoL-MCS) and those who were not yet with the pet they had ($p=0.01$). There was a statistically significant negative between those who were separated from their pets due to difficulty in pet care and the QoL-MCS, SF-12-Physical Composite Score (QoL-PCS), extraversion, and lie subscales ($p<0.05$). There was a statistically significant negative between QoL-PCS and those who were separated from their pets due to difficulty in pet care and those who marked the other as the reason for separation from their pets ($p<0.05$). There was a statistically significant negative between the extraversion and lie subscales and having difficulty in pet care ($p<0.05$). There was a statistically significant positive between those who had a dog and the QoL-MCS, QoL-PCS, extraversion, and psychoticism subscales ($p<0.05$). There was a statistically significant positive between those who had a cat or hamster and the QoL-MCS and QoL-PCS dimensions ($p<0.05$). There was a statistically significant positive between those who had a rabbit and QoL-MCS ($p<0.05$). There was a statistically significant positive between those who stated that having a pet restained their lives and QoL-PCS ($p<0.05$) (Table 3). There was a statistically significant negative between QoL-MCS and those not yet with their pet ($p=0.01$).

There was a statistically significant negative between those who separated from their pets due to difficulties in pet care and the QoL-MCS, QoL-PCS, extraversion, and lying subscales ($p<0.05$).

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Table 1. Distribution of sociodemographic data of the participants (N=264)

Age (X±SD, Min-Max) (43.58±14.77, 18-86)			**n**	**%**
Gender		Male Female	59 205	22.3 77.7
Education		Primary school High school Undergraduate	57 52 155	21.6 19.7 58.7
Marital status		Single Married	103 161	39 61
Working status		Working Retired Unemployed	145 48 71	54.9 18.2 26.9
Economic situation		Income > Expense Income = Expense Income < Expense	57 138 69	21.6 52.3 26.1
Smoke		Yes No	72 192	27.3 72.7
Alcohol		Yes No	60 204	22.7 77.3
Chronic diseases*	**Endocrine disease**	Yes No	58 206	22 78
	Cardiovascular disease	Yes No	70 194	26.5 73.5
	Respiratory disease	Yes No	26 238	9.8 90.2
	Gastro-intestinal disease	Yes No	9 255	3.4 96.6
	Hematological disease	Yes No	9 255	3.4 96.6
	Musculo-skeletal system disease	Yes No	18 246	6.8 93.2
	Neuro-psychiatric disease	Yes No	88 176	33.3 66.7
	Auto-immune disease	Yes No	19 245	7.2 92.8
	Other	Yes No	4 260	1.5 260

*More than one option is marked.

Table 2. Distribution of characteristics related to the participants' level of interaction with animals

Duration of pet ownership (X±SD, Min-Max) (8.03±5.73, 3-30) (Year)			
		n	**%**
Were she/he still with pets of her/his own?	Yes	135	51.1
	No	129	48.9
If not reason for leave	Due to the death	82	31.1
	Difficulty in care	21	8.0
	Worsening of symptoms	10	3.8
	Loss of animal	9	3.4
	Other	7	2.7
What animals did she/he take care of in the past or now?*	Dog	80	30.3
	Cat	115	43.6
	Bird	108	40.9
	Hamster	12	4.5
	Rabbit	21	8
	Turtle	31	11.7
	Farm animal	27	10.2
The effect of having an animal on the disease*	It made me easier to cope with.	143	54.2
	Good for my loneliness.	119	45.1
	I feel calmer.	127	48.1
	I feel more empathetic.	82	31.1
	I sense more conversation.	56	21.2
	It increased my commitment to life.	101	38.3
	It increased mt physical activity.	62	23.5
	Increased my responsibilities.	123	46.6
	Restricted my life.	35	13.3
Does he/she think that having a pet will be effective in managing chronic illness, coping with illness symptoms, and improving quality of life?	Yes	179	67.8
	No	30	11.4
	Not sure	55	20.8

*More than one option is marked.

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Table 3. Evaluation of the relationship between pet ownership, managing chronic disease, quality of life, and personality traits.

		QoL-MCS	QoL-PCS	Extraversion	Neuroticism	Psychoticism	Lie
Are you with the animal you care for?	Yes	144.21	133.3	124.51	135.30	130.3	134
	No	121.31	131.73	140.14	129.83	134.6	131.07
Z_{MVU}/p		-1.63/**0.01**	-0.44/0.86	-0.82/0.08	-0.58/0.55	-0.51/0.63	-0.96/0.74
If not, the reason for the separation? (n=129)							
Death of the animal	Yes	128.99	113.61	132.91	132.45	128.40	142.84
	No	134	133.17	132.33	132.52	134.25/0.57	128.09
Z_{MVU}/p		-0.49/0.72	-0.75/0.71	-0.05/0.27	-0.00/0.15	-0.59/0.57	-1.50/0.26
Difficulty in care	Yes	138.86	116.94	146.78	94.33	141.17	170
	No	133.19	133.05	132	133.85	132.19	131.18
Z_{MVU}/p		-0.75/**0.00**	-0.62/**0.03**	-0.59/**0.03**	-1.54/0.07	-0.35/0.83	-1.56/**0.03**
Worsening the symptoms	Yes	89.75	89.15	147.85	128.05	144.55	102.80
	No	134.18	134.21	131.90	132.68	132.03	133.67
Z_{MVU}/p		-1.8/0.9	-1.8/0.98	-0.67/0.79	-1.19/0.45	-0.52/0.1	-1.31/0.97
Loss of animal	Yes	113.61	116.94	146.78	94.33	141.17	170.
	No	133.17	133.05	132	133.85	132.19	131.18
Z_{MVU}/p		-0.75/0.98	-62/0.99	-0.59/0.82	-1.54/0.99	-0.35/0.72	-1.5/0.82
Other	Yes	124.14	155.00	119.57	157.43	177.93	115.71
	No	132.73	131.89	132.89	131.82	131.26	132.96
Z_{MVU}/p		-0.29/0.99	-0.79/**0.000**	-0.47/0.74	-0.88/0.60	-1.65/0.63	-0.61/0.74
What animals did she/he take care of in the past or now*							
Dog	Z_{MVU}/p	132.53/**0.02**	135.72/**0.00**	129.73/**0.01**	131.09/0.21	134.55/**0.04**	127.22/0.33
Cat	Z_{MVU}/p	97.16/**0.05**	96.23/**0.05**	107.41/0.71	121.5/0.67	11.0/0.11	94.9/0.63
Bird	Z_{MVU}/p	121.0/0.52	125.24/0.39	110.0/0.94	105.7/0.33	103.6/**0.05**	117.4/0.28
Fish	Z_{MVU}/p	119.32/0.98	116.97/1.00	112.25/0.16	106.3/0.6	116.1/0.7	107.3/0.67
Hamster	Z_{MVU}/p	108.54/**0.00**	119.21/**0.01**	99.36/0.26	106.4/0.86	136.6/0.46	118.5/0.86
Rabbit	Z_{MVU}/p	103.65/**0.00**	102.91/0.14	132.35/0.9	110.9/0.73	94.8/0.87	101.7/0.1
Turtle	Z_{MVU}/p	102.3/0.78	108.7/0.09	130.4/0.22	124.6/0.59	120.2/0.44	87.8/0.59
Farm animal	Z_{MVU}/p	135.44/0.8	154.87/0.91	126.63/0.32	121.13/0.29	152.72/0.84	129.54/0.13
The effect of having an animal on the disease*							
It made me easier to cope with.	Z_{MVU}/p	130.79/0.86	131.19/0.81	133.49/0.64	131.64/0.32	131.28/0.88	133.15/0.27
Good for my loneliness.	Z_{MVU}/p	134.96/0.56	132.0/0.46	137.57/0.55	130.55/0.55	131.05/0.9	131.66/0.4
I feel calmer.	Z_{MVU}/p	133.81/0.51	131.91/0.36	132.76/0.77	123.21/0.1	126.7/0.19	132.09/0.12
I feel more empathetic.	Z_{MVU}/p	135.54/0.46	131.50/0.33	131.41/0.41	130.71/0.87	124.77/0.63	141.06/0.22
I sense more conversation.	Z_{MVU}/p	135.77/0.66	133.01/0.37	116.35/0.06	134.25/0.91	138.94/0.43	150.56/0.33
It increased my commitment to life.	Z_{MVU}/p	137.48/0.52	133.32/0.37	132.79/0.92	130.95/0.97	135.18/0.31	138.20/0.68
It increased mt physical activity	Z_{MVU}/p	124.35/0.82	121.51/0.19	133.53/0.27	129.77/0.85	131.41/0.57	121.27/0.42
Increased my responsibilities.	Z_{MVU}/p	133.45/0.61	132.23/0.55	133.80/0.69	132.84/0.99	129.49/0.74	135.80/0.78
Restricted my life.	Z_{MVU}/p	133.54/0.6	135.69/**0.00**	122.51/0.32	113.74/0.83	141.87/0.66	140.53/0.85
Does he/she think that having a pet will be effective in managing chronic illness, coping with illness symptoms, and improving quality of life?	Yes	133.68	135.18	131.65	128.96	132.59	135.47
	No	155.02	140.88	126	130.48	132.50	137.92
	Not sure	116.38	119.22	138.8	145.11	132.2	119.88
	p*	0.07	0.32	0.72	0.37	0.99	0.33

*KW **MVU

It was found that those who were separated from their pets due to difficulty in cairng fro them had high QoL-MCS and extraversion, but low QoL-PCS ($p<0.05$). There was a statistically significant negative difference in QoL-PCS between those who separated from their pet due to difficulty in care and those who marked the other as the reason for separation from their pet ($p<0.05$). It was found that those who marked the other for separation from the animal had high QoL-PCS. There was statistically significant positive between those with dogs and the QoL-MCS, QoL-PCS, extraversion, and psychoticism subscales ($p<0.05$). There was statistically significant positive between the QoL-MCS and QoL-PCS subscales of those who had cats or hamsters ($p<0.05$). There was statistically significant positive between QoL-MCS and those with rabbits ($p<0.05$). There was a significance between those who stated that having a pet restained their lives and QoL-PCS ($p<0.05$) (Table 3).

Discussion

Understanding the nature of the relationship between human health and pets is important for the welfare of both humans and animals and in determining the interaction between them. The relationships established with pets, which have become an integral part of our lives today, reveal data about personality and psychosocial health. Many studies in the literature have focused on the positive effect of healthy relationships with animals on physiological and psychosocial health. The findings of these studies were discussed under separate headings in terms of participants' characteristics, human/animal interaction levels, pet ownership, chronic disease management, quality of life, and personality traits. The findings of the study reveal data regarding the relationship between individuals' interactions with animals and quality of life and personality traits.

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Evaluation of the Sociodemographic Data of the Participants

Human-animal interaction can affect individuals in many dimensions. Some studies have examined sociodemographic variables among pet owners[16,35]. In previous studies, pet owners were generally aged over 25, were at least high school graduates and were employed and had a moderate or high-income level[16]. The majority of the sample of this study consisted of middle-aged individuals who had an undergraduate degree, who were married, who were employed, and who had an income equal to their expenses. These characteristics are similar to the characteristics of the pet owners reported in the literature.

Previous studies have reported that the general health status of pet owners was better[35], that their rate of smoking was statistically significantly lower[16,36], that participants quit smoking after interacting with a pet[37], and that having a pet motivated people to quit smoking[36]. In our study, the number of individuals who were smokers and alcohol users among the participants was determined to be quite low. This finding supports the literature knowledge.

Evaluation of Characteristics Regarding the Level of Interaction with Pets

The type of pet and the bond/interaction with it are important in pet ownership. In a study conducted with individuals who owned a pet in Turkey, it has been stated that 54.9% of the participants had a cat, 37.3% had a dog, and 7.8% owned both a cat and a dog[38]. Similarly, Fraser et al. (2020) determined that cats (42.9%) and dogs (29.5%) were the most owned pets[39]. In our study, it was determined that cats, birds, and dogs were preferred as pets, respectively. According to this finding, pets owned in this study are consistent with those reported in the literature. The common characteristic of these animals is that they are easy to care for at home and that human-animal interaction can be easily established. Paquette (2010) defined some animal characteristics within the scope of health promotion in human-animal interactions and stated that dogs can be preferred since they are popular for a long time, cats are easy-going, tactile, and adaptable, and rabbits and hamsters are tactile and portable[40]. Regarding this information, cats, birds, and dogs are frequently preferred animals as pets.

In studies conducted with pet owners, it has been stated that individuals considered their pets as individuals at home, established attachment to them, and experienced sadness and mourning in case of separation[41,42]. In our study, it was determined that most of the participants loved animals and were still together with their pets, that the duration of pet ownership was more than five years, and that for those who separated from their pets, the reason for separation was the death of the pet. Based on these findings, it can be suggested that after the interaction of the pet owners with the pet they owned began, an attachment was formed and continued for many years and such interactions ended for compelling reasons.

In studies conducted on human-animal interaction, it has been stated that interacting with animals facilitates coping in people[43], calms people by reducing the stress level[44] and reduces the feeling of loneliness[45,46]. In our study, the participants mostly stated that owning a pet made it easier for them to cope, calmed them down, increased their responsibilities, and eliminated their loneliness. This might be associated with the psychosocial effects that occur as a result of psychological stimulation, and affective-emotional and psychosomatic mechanisms[47] which explain human-animal interaction.

One of the benefits of human-animal interaction is the physical, mental, and social effects in the management of chronic diseases[29,48]. In a study conducted with 39,995 participants in Sweden, it has been reported that those who owned pets experienced the symptoms and/or difficulties of hypertension, diabetes, and cardiovascular diseases less frequently than those who did not[49]. In a 12-year follow-up study, it has been reported that dog owners had a lower risk of cardiovascular disease, and that dog ownership was associated with a lower mortality rate compared to the general population[50]. In qualitative studies, it has been stated that pets contribute to the ability to cope with depression or negative mood in pet owners[42,45]. In our study, most of the participants thought that having a pet would be effective in managing their chronic disease, coping with the disease symptoms, and increasing their quality of life.

Evaluation of the Relationship Between Pet Ownership and Chronic Disease Management, Quality of Life, and Personality Traits

It was determined that mental quality of life was associated with the status of being with the pet and past or current ownership of a dog, cat, hamster, or rabbit. In the literature, it has been stated that interacting with animals positively affects mental health[20-22]. In 38% of the studies included in a systematic review evaluating the effect of pet ownership on health, attachment to a cat or a dog was associated with a positive effect on mental health. In some of the studies included in the same study, it has been stated that there was a significant correlation between mental health and pet ownership[51]. In our study, it was determined that there was a relationship between the mental quality of life and those who had a cat, dog, hamster, or rabbit in the past or present. It is thought that this might be due to the fact that these animals have a tactile effect due to their nature and have a greater role in the interaction. In Maslow's pyramid of basic needs, loving, being loved, belonging, and being able to establish a secure bond are important needs. It is thought that the bond established through human/animal interaction can be effective in protecting and improving mental health due to its characteristics such as unconditional love, reduced feelings of loneliness, and simple verbal or nonverbal transfer of emotions.

Another finding associated with mental quality of life was the separation from the pet due to difficulties in pet care. In the literature, it has been reported that the mental health of pet owners was adversely impacted by the fact that they had pets with behavioral problems and that the individuals were too old to meet the care needs of the pet. In the same study, it has been reported that the majority of people experienced negative emotions, sadness, disappointment, anger, guilt, and shame. In this study, although the caregiver burden was not directly measured, it was concluded that the experiences of the participants reflected the burden[52]. In the relevant study, the participants who stated that they experienced these negative emotions were individuals who still lived with their pets. In our study, the mental quality of life of individuals separated from their animals was found to be high. It is understood that being with behavioral problems is a factor that increases mental burden[52]. In our study, it can be said

that those who were separated from their animals due to strain felt mentally relaxed and their mental quality of life increased as they moved away from the source that increased the burden. It is thought that the individuals participating in the current study might have difficulties in pet care for similar reasons and that their mental quality of life might be affected.

In our study, it was determined that having difficulty in pet care, being separated from the pet, and past/current ownership of a dog, cat or hamster were associated with the physical quality of life. According to the physical and game-playing mechanism that emerges based on human-animal interaction, spending time with the animal and playing games increase the physical activity of the individual. The physical activities of pet owners who walk with their dogs and play games with their cats increase[47]. Previous studies have reported that those pet owners have more physical activity[16,43]. Increasing physical activity improves general health and quality of life[53]. In cases where there are restrictions such as pandemics, a decrease has been reported in the physical activity levels of pet owners. In case of restrictions, the biggest stressors experienced by pet owners have been reported as physical concerns for the pet, including not being able to take the dog for a walk for dog owners and access to veterinary care and medication for cat owners[43]. Despite the positive effects of pet ownership on physical and mental health reported in the literature, it can increase the pressure on pet owners, especially in cases of restrictions such as pandemics. This study was carried out in the post-pandemic period; thus, it can be interpreted that the effects of restrictions on pet owners remained during the study period. It is also thought that the limitation of physical activities might be associated with the physical difficulties that pet owners had and the difficulties in pet care. In the study, the common characteristic of the animals, which had a significant relationship with the physical quality of life, was that they required active physical care such as walking outside, litter, and cage cleaning. It is thought that the pet owners might feel that their life was restrained and thus their physical quality of life might be decreased since these animals require physical care.

In this study, it was determined that there was a relationship between extrovert personality traits and dog owners and having difficulty in pet care. Dog care requires various responsibilities. In a qualitative study conducted with dog owners, it has been stated that the individual has various responsibilities such as raising, entertaining the dog, taking it for a walk, and interacting with it and that taking the dog for a walk was perceived as a duty for pet owners[54]. Going out to take the dog for a walk creates an opportunity to socialize with people, on the other hand, the responsibility of taking the dog out can lead to difficulties in pet care. It is thought that these findings might be associated with more responsibilities in dog care. People can socialize by interacting with others when they go out to take their dogs for a walk. On the other hand, the responsibility of taking their dogs out and walking every day can lead to limitations in other social activities for extroverts. It was determined that the psychoticism subscale was associated with personality traits and past/current ownership of a dog or bird. People with psychotic personality traits are selfish, insensitive, egocentric, and aggressive and do not pay attention to the welfare and rights of others[55]. In a study conducted in our country, it has been stated that there was a significance between pet owners and non-pet owners in terms of the psychoticism subscale[56]. It is thought that this finding might be associated with the cultural interpretation of dog and bird figures. In psychiatry, wild animals are unconsciously used to represent passionate urges and fears. Individuals who are unconsciously dominated by these emotions may have figures of a feared father, a predatory animal, a dog, or a wild horse in their dreams, art, or surroundings[57]. Considering predatory and wild dog and bird species, this finding can be attributed to the characteristic feature of psychoticism.

In our study, a significant difference was determined between the lie subscale and having difficulty in pet care. People often tend to manifest themselves in a positive way to avoid receiving negative judgments. This concept reflects people's need to receive the approval of the community in an acceptable way and can influence their response to the scale[58]. It is thought that the patients participating in this study might have difficulty in animal care for similar reasons. The results of our study reveal that the quality of life of people with chronic disease is affected by the fact that they are with their pets, have difficulty caring for them, and think that it limits their lives. In addition, although the personality characteristics of these patients vary depending on the animal they feed, their qulity of life is also affected. Although it is stated in the literature that keeping animals has positive effects on the quality of life and the process of coping with chronic disease[23,24], our study does not support this finding. It is thought that the reason for this may be related to the fact that the study was conducted post-pandemic period and the sample was limited. It is recommended that similar studies evaluating the effect of owning a pet on coping with chronic disease and the quality of life of individuals be conducted on a larger sample size.

Limitations

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This study was conducted in the immediate post-pandemic period. During the pandemic period, people were hesitant to keep animals because the relationship between keeping pets and COVID-19 was not clear. The fact that this study was conducted right after the pandemic when this was not yet clear, may have affected people's views on animal care. The findings cannot be generalized to times when there is no pandemic. Apart from that, it has some limitations. The fact that the study was carried out at a single hospital complicates the generalizability of the results. On the other hand, it is thought that there are few studies on the interaction between pets and patients in our country; therefore, this study will contribute to the literature. Another limitation is that the study was conducted in Istanbul, where mostly white-collar workers live and do not deal with agriculture and animal breeding. In the studies to be carried out in the rural areas of the country, it will be possible to reach data on those who own more livestock than pets.

Conclusion

The pets owned, the status of being with their pets, the reasons for separation, the difficulties in pet care, and the thought that pets restrain their life affect the quality of life of individuals. In addition, although the personality traits of these patients change according to the pets they own, their quality of life is affected.

Declaration of Competing Interest

The authors declare that they have no conflicts of interest.

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