

# Perception of the benefits of companion animals during the time of quarantine by COVID-19 in a sample of inhabitants of the city of Medellín, Colombia

## Percepción sobre los beneficios de la compañía de mascotas durante la cuarentena por COVID-19 en una muestra de población de la ciudad de Medellín, Colombia

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### SUMMARY

*The present study aimed to identify the perception of the benefits derived from the company of pets during the quarantine by COVID-19 in a sample of the Medellín city population, Colombia. A quantitative, descriptive, ex post facto study was used, with the participation of 141 people, 73 % women (n=102) and 27 % men (n=39), with an average age of M=35.2 (SD =8.4). The variables of human-animal interaction, emotional closeness with the pet, physical and psychological benefits, and perceived cost were evaluated through an ad-hoc Likert-type questionnaire with Alpha Cronbach 9.79. The results indicate that the study participants have a high perception of the psychological and*

*physical benefits and a high emotional closeness with their pets during the quarantine by COVID-19. This perception was independent of the variables of gender, age, occupation, educational level, economic level, and type of pet. The perception of physical benefits was related to the type of pet, being higher in the case of dogs. It is concluded that the company of pets represented a positive contribution to the mental health of the study participants in the situation of social distancing during quarantine.*

**Keywords:** *Pet company benefits, social distancing, quarantine, COVID-19.*

### RESUMEN

*El presente estudio se orientó a evaluar acerca de la percepción acerca de los beneficios derivados de*

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*la compañía de las mascotas durante la cuarentena obligatoria por COVID-19 en una muestra de habitantes de la ciudad de Medellín, Colombia. Se empleó un estudio cuantitativo, descriptivo, ex post facto, con la participación de 141 personas, siendo 73 % mujeres (n=102) y 27 % hombres (n=39), con la edad promedio de M=35,2 (Dt =8,4). Se evaluaron las variables de interacción humano-animal, cercanía emocional con la mascota, beneficios a nivel físico, psicológico y costo percibido, mediante un cuestionario ad-hoc tipo Likert, que mostró un Alfa Cronbach de 0,79. Los resultados indican un alto grado de percepción por parte de los participantes del estudio sobre los beneficios a nivel psicológico y físico y una alta cercanía emocional con sus mascotas durante el tiempo de cuarentena obligatoria por COVID-19. Dicha valoración alta fue independiente de las variables de género, edad, ocupación, nivel educativo, nivel de ingresos y tipo de mascota. La percepción de beneficios a nivel físico se relacionó con tipo de mascota, siendo más alta en caso de los perros. Se concluye que la compañía de mascotas representó un aporte positivo para la salud mental de los participantes del estudio en la situación de distanciamiento social durante la cuarentena.*

**Palabras clave:** *Beneficios de compañía de mascotas, distanciamiento social, cuarentena, COVID-19.*

## INTRODUCTION

The COVID-19 pandemic that took place at the beginning of 2020 brought with it many changes in people's lives, including major mental health effects (1). Immersed in the pandemic scenario, more specifically within the framework of mandatory confinement and the total cessation of all activities that required some type of displacement or interaction, a series of problems arose in the field of mental health derived from a limitation in freedom of movement, which in a normal context helps to maintain an individual's mental status quo, these problems range from isolated symptoms to anxiety disorders, depression, post-traumatic stress disorder, and sleep disorders (2).

It affirms that those psychosocial alterations that can occur in a state of a sanitary and public health emergency, such as a pandemic, originating from the impossibility to carry out any activity resulting from the disease as such or from the state of isolation, generating in the individual a state

of hopelessness, helplessness and uncertainty with the risk of configuring a state of mourning or a state of anguish due to the stress produced by the same situation (3).

It is also pertinent to take into account that, due to compulsory isolation, the fact of having to abandon habits or change them abruptly, causes psychological and physical effects on the individual as well as the establishment of new unhealthy habits such as bad eating habits, sedentary lifestyle and greater use of screens (4).

In this order of ideas, within the context of social distancing related to the confinement and quarantine to which the world was subjected for almost the entirety of 2020, and considering the devastating effect on mental health produced by this, it is important to focus attention on a human-animal relationship issue, because animals of different breeds have lived with humans throughout history and have become part of the culture and daily coexistence, often being considered as members of families that they share the lives of their owners for many years and that in turn help to elaborate certain personal duels as social support (5). Throughout history, the impact of animals on mental and physical health in older adults plays a fundamental role because it constitutes support and accompaniment to the human being, to the human-animal relationship (6).

The authors highlight that pets considerably reduce psychological conditions, as well as the feeling of loneliness, and enhance the intimate feeling of conservation of life, especially in situations of uncertainty. When the individual is in the state associated with coping with losses or we are in a state of mind related to stress and anxiety, pets represent a source of accompaniment that reinforces self-esteem and a sense of belonging to oneself and others. In cancer patients, pets manage to improve survival, improving the quality of life and health of these patients (7).

Those responsible for companion pets can perceive that these offer benefits for mental, social, and physical well-being within the framework of a commitment to the subject's health (8). Based on the theory of social exchange, refers to the benefit of the human-animal bond in three spheres: social interaction, emotional

bond, and perceived cost. Among the benefits contained in this theory are acceptance, affection, love, social support, improvements in social skills, and positive effects on physiological and psychological aspects.

Pets have been found to provide some protection against cardiovascular disease by regulating the functioning of the respiratory systems, heart rates, stress, and anxiety. Petting a pet decreases the concentration of cortisol in the body and increases dopamine, endorphin, prolactin, and oxytocin, thus triggering a feeling of tranquillity and calm that is reflected in the mood of each individual. For children, the company of pets helps to develop a healthy affection, conveying a sense of tranquillity and well-being, in addition to this, interaction with pets allows to reduce feelings of loneliness and anxiety in social relationships (9).

Likewise, the company of pets is beneficial in moments of social anxiety or high levels of stress, enabling the production of oxytocin, a hormone that serves to mitigate these negative states and helps to reduce the symptoms linked to this moment, thus favouring the social interaction to the extent that the attention paid to social signals increases, since this hormone is directly related to attachment, parental behaviours, and social relationships, in addition to the benefits as an antidepressant element in mental health in the confinement of the pandemic COVID-19 or in some adults who have suffered from an organic disease (10).

Despite the above, the few backgrounds information available on the subject show contradictory results regarding the benefits provided by the company of animals during the mandatory quarantine of the COVID-19 pandemic.

On the one hand, some studies present benefits derived from the company of pets during the quarantine where it is recognized that they were of significant help in terms of different psychological problems, the feeling of loneliness and feelings of anguish, helping to release tension, change the environment and slightly alter the routine imposed by the virus, thus fostering the desire to improve and preserve life in people with physiological afflictions (11). For older adults,

they represented significant support, allowing them to mitigate the feeling of abandonment and possible symptoms of depression resulting from confinement, as well as allowing them to maintain a more active lifestyle (12).

The authors highlight that during the time of social distancing within the framework of the COVID-19 pandemic, contact with animals, both companion and not, has helped owners maintain a routine, purpose, and meaning in uncertain situations, being a source of emotional support (13). Within this order of ideas, during the time of the quarantine, a significant increase in the adoption of animals, preferably dogs, and cats, could be seen, helping their custodians to reduce states of anxiety and stress observed in confinement (14).

However, aspects of concern were also evidenced, such as, for example, an alleged assumption about the contagion and transmission of the virus by animals, increased maintenance costs for pets, difficulties in health care for pets, mourning for the death of pets during quarantine, concerns for the welfare of the animal in the context of situations of increased work of their owners during the pandemic, among other aspects that increased the stress of the owners (15).

Likewise, some studies indicate an increase in behavioural problems in domestic animals, such as increased irritability, nervousness, and demand for attention, which produced a negative effect on the owners, worsening, in turn, the animal's behaviour (16).

During the quarantine period in Spain there was an almost three-fold increase in consultations in pediatric emergencies due to dog bites, which could be related to the fact that, in the confinement situation, the animals of the company were more exposed to contact with children in the family, which could lead to increased risk of bites, scratches or other injuries (17).

In this regard, differences between dogs and cats have been observed as the most frequent companion pets in homes. It seems that the dogs had a higher level of problems than the cats during the quarantine period, which was also associated with the behaviour of their guardians and with a greater number of inactive family members. The study by Bowen et al. (16) highlights that.

As can be seen, previous studies indicate the presence of contradiction from the point of view of possible benefits that can be derived from the company of pets during the quarantine, which raises the need to delve into the subject, considering, in addition, that in the Colombian context, we find ourselves with a little approach to this particular situation that also took place within homes and that, in many cases, could be decisive when facing said mandatory confinement during 2020. In this regard, the statistics from national surveys indicate that in Colombia 6 out of 10 families have a pet, with cities like Bogotá, Medellín, and Cali having the highest percentage; where, likewise, greater pet ownership is observed in the female gender,

As our climate continues to change, more disasters, including pandemics, are likely, highlighting the importance of research into the benefits that can be derived from animal companionship in these potentially critical mental health situations of human beings.

The present study was oriented to investigate the perception of a group of people from the city of Medellín about the benefits of companion animals during the mandatory quarantine time, directing attention to aspects such as the frequency of human-animal interaction, the emotional closeness with the pet, the physical and psychological benefit from the relationship with the pet, and the cost/benefit of keeping the pet during the pandemic. The previous aspects were contrasted according to sociodemographic variables of gender, age, type of pet, occupation, income level, and educational level.

## METHODOLOGY

Research with a quantitative approach, descriptive level, cross-section, and non-experimental method, ex post facto.

### Participants

The study involved 141 people from Medellín, Colombia. The sample was selected intentionally, making a call on social networks, and inviting people over 18 years of age who during the

mandatory isolation period due to COVID-19 in 2020 had the company of a pet. The entire sample was made up of 73 % women (n=102) and 27 % men (n=39). The average age was  $M=35.2$  ( $SD=8.4$ ), with a higher percentage of age in the range between 26-35 years (41.8 %). 24 % were students, 68 % were professionals, and 8 % were housewives. Regarding the educational level, 57 % were university students, 28 % technical and/or technologists, and 15 % with the secondary level. In the income level, the participants were located 63 % in the range of 1 to 2 minimum wages, 27 % from 2 to 4 minimum wages, and 10 % in the range greater than 4 minimum wages. 36 % of the participants had a cat as a pet, 46 % a dog, and 18 % both.

### Instruments

For the collection of information in the present study, an ad-hoc Likert-type questionnaire was designed, consisting of 24 questions, with a response option between 1 (never), 2 (almost never), 3 (sometimes), and 4 (almost always), 5 (always). The scale was composed of the following subscales that evaluated: human-animal interaction during quarantine; emotional closeness with the pet during quarantine; physical benefits; psychological benefits and perceived cost.

Initially, the scale was applied to 5 people to verify their comprehension of the questions. As a second step, the scale was subjected to expert judgment, and Cohen's Kappa concordance index was calculated for the measures of sufficiency, coherence, relevance, and clarity of item writing, whose value ranged between 0.870 and 0.930 (p-value between 0.0001 and 0.019), indicating a high degree of agreement between the judges. Finally, it was applied in a pilot test to 45 people and the internal consistency coefficient of Alpha Cronbach was calculated, which presented a value of 0.796, indicating a good internal consistency of the scale. The calculation of the item-scale correlation showed an adequate correlation of all the items with the entire scale.

Likewise, a sociodemographic survey was used for the variables of gender, age, occupation, level of education, income level, and type of pet.

**Procedure**

To collect the information, the call was made on social networks, inviting the inhabitants of the municipality of Envigado, Colombia, who had the accompaniment of a pet during the pandemic, to participate in the study, those who responded to the call, were he sent them the questionnaire online. The study was carried out considering the procedural and ethical guidelines corresponding to Resolution 8430 of the Colombian Ministry of Health, which regulates research with human beings, and the Psychologist’s Code of Ethics (MPS, 2009). The informed consent was signed by all the participants. The study was supported by the Ethics Committee of the Envigado University Institution, within the framework of which it was carried out.

**Data analysis**

Since the study variables had a non-normal distribution, the Mann-Whitney U statistic was used for the inter-group comparative analysis according to sociodemographic variables in the case of two groups and Kruskal-Wallis for more than two groups. Spearman correlation was used to establish the correlation between variables. Statistical significance was established with a  $p < 0.05$  value. The data were processed with the statistical package SPSS version 25 for Windows.

**RESULTS**

The descriptive data of the study variables allow us to observe that the score in the perception

of emotional closeness with the pet during the quarantine was at a high level (M 4.4 (SD 0.7), as well as the perception of the benefits to psychological level from the relationship with the pet during the quarantine (M 4 (SD 0.8) (Table 1).

The perception of the frequency of human-animal interaction during the quarantine was located at the medium-high level (M 3.7 (SD 0.6), followed by the perception of the physical benefit from the relationship with the pet during the quarantine, which was located at the medium level (M 2.7(SD 1.3). And, finally, a low level was observed in the scores of the variable perception of the cost of pet maintenance during the pandemic (M 1.6 (SD 0.6).

The comparison of study variables according to gender did not reveal the presence of statistically significant differences in the variable scores, except for the perception variable on the cost of pet maintenance, indicating a statistically significant difference with higher scores for the female gender ( $p=0.013$ ) (Table 2).

The comparison of study variables according to age groups did not show the presence of statistically significant differences in the scores of any variable (Table 3).

The comparison of study variables according to the type of pet showed the presence of statistically significant differences in the scores of two variables: interaction frequency ( $p=0.0001$ ) and physical benefits ( $p=0.0001$ ) (Table 4).

Dog owners reported a higher perception of the frequency of human-animal interaction during quarantine, followed by owners with both pets, the score for this variable being lower for cat owners.

Table 1. Perception of the study sample on the benefits of companion animals during the mandatory quarantine period

Variable	Mean (SD)
Perception of the frequency of human-animal interaction during quarantine	3.7 (.6)
Perception of emotional closeness with the pet during quarantine	4.4 (0.7)
Perception of the physical benefit from the relationship with the pet during quarantine	2.7(1.3)
Perception of the benefits at a psychological level from the relationship with the pet during the quarantine	4(0.8)
Perception of the cost of pet maintenance during the pandemic	1.6 (0.6)

Own source

Table 2. Comparison of study variables according to gender groups

Variable	Female Median (IR)	Male Median (IR)	W for Mann-Whitney	P
Perception of the frequency of human-animal interaction during quarantine	3.7 (0.8)	3.7(0.9)	1 762,500	0.295
Perception of emotional closeness with the pet during quarantine	4.7(1)	4.7(1)	1 869,500	0.567
Perception of the physical benefit from the relationship with the pet during quarantine	2.5(2.5)	3(3)	1 834,500	0.468
Perception of the benefits at a psychological level from the relationship with the pet during the quarantine	4.2(1.2)	4.2(1.4)	1 722,000	0.216
Perception of the cost of pet maintenance during the pandemic	1.3(0.7)	1.8(0.8)	1 456,500	0.013

Own source

Table 3. Comparison of study variables according to age groups

Variable	18-25 Median (IR)	26-35 Median (IR)	36-50 Median (IR)	Over 50 Median (IR)	Kruscal-Wallis	P
Perception of the frequency of human-animal interaction during quarantine	3.7 (0.8)	3.8(0.9)	3.7(0.7)	3.9(0.7)	1362,500	0.395
Perception of emotional closeness with the pet during quarantine	4.7(1)	4.7(1)	4.6(0.9)	4.7(0.8)	1638,500	0.467
Perception of the physical benefit from the relationship with the pet during quarantine	2.5(2.5)	2.8(0.6)	2.6(0.7)	2.5(1)	1524,500	0.368
Perception of the benefits at a psychological level from the relationship with the pet during the quarantine	4.2(1.2)	4.2(1.4)	4.3(0.6)	4.1(0.5)	1722,000	0.216
Perception of the cost of pet maintenance during the pandemic	1.3(0.7)	1.4(0.8)	1.2(0.7)	1.40(.9)	1056,500	0.213

Own source

Regarding the perception of the benefit at a physical level from the relationship with the pet during the quarantine, the highest score was

reported by dog owners, followed by owners of both types of pets, obtaining the lowest score for the owners of cats.

PERCEPTION OF THE BENEFITS OF COMPANION ANIMALS

Table 4. Comparison of study variables according to pet type groups

<b>Variable</b>	<b>Cat Median (IR)</b>	<b>Dog Median (IR)</b>	<b>Both Median (IR)</b>	<b>Chi- Square</b>	<b>P</b>
Perception of the frequency of human-animal interaction during quarantine	3.1(0.6)	4(0.6)	3.8(0.6)	54,718	0.0001
Perception of emotional closeness with the pet during quarantine	4.6(0.7)	4.6(1)	4.5(.7)	5,763	0.156
Perception of the physical benefit from the relationship with the pet during quarantine	1(0.5)	3.5(1.6)	3(1.5)	54,892	0.0001
Perception of the benefits at a psychological level from the relationship with the pet during the quarantine	4.2(1)	4.2(1.1)	3.6(2.1)	3,249	0.197
Perception of the cost of pet maintenance during the pandemic	1.3(0.8)	1.6(0.8)	1.3(0.8)	1,091	0.580

Own source

The comparison of study variables according to the type of occupation of the owner did not

show the presence of statistically significant differences in any variable (Table 5).

Table 5. Comparison of study variables according to occupation groups

<b>Own source</b>	<b>Student Median (IR)</b>	<b>Employed Median (IR)</b>	<b>Housewife Median (IR)</b>	<b>Retired Median (IR)</b>	<b>Chi- Square</b>	<b>P</b>
Perception of the frequency of human-animal interaction during quarantine	3.7(0.8)	3.7(0.8)	3.6(0.8)	3.1(0.4)	0.251	0.969
Perception of emotional closeness with the pet during quarantine	4.7(1)	4.7(0.9)	4.7(1.2)	3.3(0.9)	3.387	0.336
Perception of the physical benefit from the relationship with the pet during quarantine	2.7(0.9)	3(0.8)	1.7(1.2)	1(1.3)	1.489	0.685
Perception of the benefits at a psychological level from the relationship with the pet during the quarantine	4.2(.9)	4.4(1.2)	3.8(0.9)	3.4(0.9)	2.250	0.522
Perception of the cost of pet maintenance during the pandemic	1.3(0.9)	1.5(0.8)	1.4(0.5)	1.2(0.9)	2.322	0.508

Own source

The comparison of study variables according to the educational level of the owners did not show

the presence of statistically significant differences in the scores of any variable (Table 6).

Table 6. Comparison of study variables according to income level groups

Variable	1-2 smlv Median (IR)	2-4 smlv Median (IR)	More than 4 smlv Median (IR)	Chi- Square	P
Perception of the frequency of human-animal interaction during quarantine	3.6(.8)	3.6(0.8)	4(0.9)	3,180	0.204
Perception of emotional closeness with the pet during quarantine	4.7(1)	4.3(1)	4.6(0.9)	2,291	0.318
Perception of the physical benefit from the relationship with the pet during quarantine	3(0.9)	3(0.9)	3(1)	0.801	0.670
Perception of the benefits at a psychological level from the relationship with the pet during the quarantine	4.2(1.1)	4.2(1.2)	4.4(1.3)	0.271	0.873
Perception of the cost of pet maintenance during the pandemic	1.5(0.7)	1.6(0.9)	1.6(1)	0.003	0.999

Own source

The comparison of study variables according to the educational level of the owners did not show

the presence of statistically significant differences in the scores of any variable (Table 7).

Table 7. Comparison of study variables according to educational level groups

Variable	baccalaureate Median (IR)	technician/technologist Median (IR)	University Median (IR)	Chi- Square	P
Perception of the frequency of human-animal interaction during quarantine	3.7(0.8)	3.7(0.7)	3.7(0.8)	0.844	0.656
Perception of emotional closeness with the pet during quarantine	5(0.8)	4.7(0.8)	4.7(0.9)	2.458	0.293
Perception of the physical benefit from the relationship with the pet during quarantine	3(1.2)	2.8(0.9)	2.8(0.9)	1.317	0.518
Perception of the benefits at a psychological level from the relationship with the pet during the quarantine	4.4(1.3)	4.4(1)	4.2(1.3)	2.571	0.277
Perception of the cost of pet maintenance during the pandemic	1.3(1.1)	1.3(0.7)	1.5(0.8)	1.257	0.533

Own source



## DISCUSSION

In the first place, the higher prevalence of the female gender in the study participants is striking, with women (n=102) surpassing men two and a half times (n=39). However, this fact is related to the statistical data at the national level in Colombia, which indicates a higher percentage for the female gender in terms of pet ownership (18,19).

At the general level of the study sample, the results showed a high level in the scores in the perception of emotional closeness with the pet during the quarantine and in the perception of the psychological benefits from the relationship with the pet during the quarantine, indicating a high valuation by the owners regarding the positive emotional contribution that their pets gave them during the mandatory quarantine during the COVID-19 pandemic.

This high valuation was independent of gender, age, type of occupation, income level, educational level, or type of pet they owned. The foregoing shows that, at a general level, the company of pets allowed the participants of the present study to combat their feelings of loneliness, sadness, and depression during the quarantine, to fall asleep better, to have more discipline, and to better organize their schedules, while just like getting distracted and not worrying about the issues that generated stress, among others. Participants reported that their pet has provided them with joy and positive emotions during the quarantine. Sharing the home and time during the quarantine has made it possible for owners to strengthen affective ties towards their pets, which, at the same time allowed them to improve the perception of their states of stress. In this regard, people with dog-assisted therapy in older adults with Alzheimer's-type neurocognitive disorder obtain higher levels of mental health than those who consider them as guardians (20).

The results of the present study agree with other authors who affirm that the company of pets provides high psychological benefits to their owners, reducing the symptoms of psychological disorders such as depression, and anxiety and facilitating states of mourning through the unconditional company. On the other hand, animal-assisted intervention

processes have become an important piece as complementary therapies with excellent results in the improvement of patients with neurological damage (21).

Similarly, in a study in Ecuador during mandatory confinement, indicate the presence of great benefits derived from the company of pets at the level of security and emotional stability, company, and feeling of happiness (22). They showed that the company of pets helped to mitigate the effects of stress and anxiety, improve the ability to maintain a regular schedule, have a sense of purpose and meaning, and cope with uncertainty, a product of confinement during the COVID-19 quarantine (19).

Regarding the perception of the frequency of human-animal interaction during quarantine, the participants in this study reported a medium-high score, indicating that during the mandatory quarantine, they frequently carried out different types of activities related to their pets, such as: playing with their pet, caress it, walk it, give prizes, bathe it, share rest spaces, among others.

No statistically significant difference was identified regarding the interaction of the owners with their pets for the variables of gender, age, type of occupation, income level, and education. However, the difference was observed according to the type of pet, indicating higher scores for dogs, compared to cats. This may be related to the natural behaviour of different species and the interaction characteristics that these animals establish with their owners. In this regard, the authors indicate that the way dogs and cats interact with their owners is different in that dogs are more active, interact and seek attention from humans more frequently and intensely than cats, these being more independent.

Regarding the perception of the benefit at the physical level from the relationship with the pet during the quarantine, the study participants reported average scores, indicating the positive effect that the company of their pet had by stimulating the practice of physical exercise and helping to stay more active in other activities during quarantine. These results confirm what was found in other studies indicating that the pet company was motivated to perform physical activities during the quarantine to the participants of their study in Ecuador.

As in the previous variable, the participants indicated the presence of this positive effect regardless of their gender, age, type of occupation, income, and educational level. But the type of pet was related to the perception of the benefit at the physical level, indicating higher scores for dogs than for cats. The foregoing is also due to the differences in the characteristics of the animals, related to the satisfaction of their vital needs, where dogs demand greater physical activity, the need for walks in the open air, parks, and special areas.

As well as a greater perception of loneliness (25), which may be related to their greater perception of potential benefits derived from the company of pets and a consequent lower perception of difficulties during maintenance and care, and attention to pets.

Likewise, in the case of dogs, a higher score was obtained than for cats in terms of maintenance costs, although without a statistically significant difference, a fact that may be related to a greater demand for care and expenses related to the maintenance of a pet. On the other hand, this difference in the perception of the higher cost for dogs may be related to the fact that, according to some studies, dogs raised their stress levels during the quarantine, due to the confinement (26-29), and their custodians opted for alternatives to care for them more carefully.

## CONCLUSIONS

It can be concluded that the company of pets during the time of social distancing due to the mandatory quarantine by COVID-19, has provided significant psychological and physical benefits for the study participants. This positive perception was reported regardless of sociodemographic factors such as income level, educational level, age, gender, occupation, or type of pet, showing that the human-animal relationship represents a significant factor for the well-being of their owners, especially in the situation critical to his mental health, presented during the pandemic.

Regarding the limitations of this study, it is necessary to indicate, on the one hand, the

presence of a difference in the distribution of participants according to gender, with the group of women being the largest compared to men, a fact that could interfere with the validity of results found. Due to the above, it is recommended to expand this study achieving an equitable participation of both genders.

## Interest conflict

The authors of this paper declare that they have no conflict of interest in a contractual or personal labor type that could cause an unintentional bias in the investigative process carried out.

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## REFERENCES

1. Bao Y, Sun Y, Meng S, Shi J, Lu L. 2019-nCoV epidemic: Addressing mental health care to empower society. *Lancet*. 2020;395(10224):e37-8.
2. Prieto Molinari DE, Aguirre Bravo GL, De Pierola I, Victoria-De Bona GL, Merea Silva LA, et al. Depression and anxiety during mandatory isolation by COVID-19 in Metropolitan Lima. *Lib Rev Peru Psicol*. 2020;26(2):e425.
3. Ramírez-Ortiz J, Castro-Quintero D, Lerma-Córdoba C, Yela-Ceballos F, Escobar-Córdoba F. Mental health consequences of the COVID-19 pandemic associated with social isolation. *Colomb J Anesthesiol*. 2020;48(4).
4. Wang ZH, Yang HL, Yang YQ, Liu D, Li ZH, Zhang XR, et al. Prevalence of anxiety and depression symptoms, and knowledge demands and psychological interventions in university students during the COVID-19 epidemic: A large cross-sectional study. *J Affect Disorder*. 2020;275:188-193.
5. Bowen J, Bulbena A, Fatjó J. The value of companion dogs as a source of social support for their owners: results of a representative sample prior to the pandemic and a convenience sample obtained during the confinement by COVID-19 in Spain. *Frontiers in Psychiatry*. 2021;12:622060.
6. Gee NR, Mueller MK. A systematic review of research on pet ownership and animal interactions among older adults. *Anthrozoa*. 2019;32(2):183-207.

PERCEPTION OF THE BENEFITS OF COMPANION ANIMALS

7. Trigg J. Examining the role of pets in the physical and mental well-being of cancer survivors. *J Psychos Oncol.* 2022;40(6):834-853.
8. Zablan K, Melvin G, Hayley A. Older Adult Companion Animal-Owner Wellbeing During the COVID-19 Pandemic: A Qualitative Exploration. *Anthrozoös.* 2022;36(2):237-256.
9. Chin-Hao Chan M, Schonert-Reichl KA, Binfet JT. Human-animal interactions and the promotion of social and emotional competencies: a scoping review. *Anthrozoa.* 2022;35(5):647-692.
10. Bolstad CJ, Porter B, Brown CJ, Kennedy RE, Nadorff MR. The Relation Between Pet Ownership, Anxiety, and Depressive Symptoms in Late Life: Propensity Score Matched Analyses. *Anthrozoos.* 2021;34(5):671-684.
11. Beltran FS. Does having pets help you cope with the isolation caused by the coronavirus? The conversation. 2020. Available in: <http://theconversation.com/tenermascotas-ayuda-a-sobrellevar-el-aislamiento-por-el-coronavirus-129809>
12. Applebaum JW, Ellison C, Struckmeyer L, Zsembik BA, McDonald SE. The impact of pets on the daily lives of older adults during the COVID-19 pandemic. *Public Health Front.* 2021;9:652610.
13. Kogan LR, Currin-McCulloch J, Bussolari C, Packman W, Erdman P. The psychosocial influence of companion animals on positive and negative affect during the COVID-19 pandemic. *Animals (Basel).* 2021;11(7):2084.
14. Ratschen E, Shoesmith E, Shahab L, Silva K, Kale D, Toner P, et al. Human-animal relationships and interactions during the lockdown phase of COVID-19 in the UK: Investigating links to mental health and loneliness. *PLoS One.* 2020;15(9): e0239397.
15. Jalongo MR. Pet ownership in times of COVID-19: the canine and feline companions of young children. *Early Child Educ J.* 2021:1-11.
16. Bowen J, García E, Darder P, Argüelles J, Fatjó J. The effects of the Spanish confinement due to COVID-19 on people, their pets and the human-animal bond. *J Vet Behav.* 2020;40:75-91.
17. Dixon CA, Mistry RD. Dog bites in children increase during coronavirus disease-2019: a case to improve prevention. *J Pediatric.* 2020;225:231-232.
18. Álvarez-Cejudo G. Benefits of animal-assisted intervention in the classroom. *Papeles Salmantinos de Educación.* 2019;(23):167-202.
19. Guevara L. Six out of every 10 households in the country have pets according to Brandstrat. The Republic newspaper. Available from: <https://www.larepublica.co/consumo/seis-de-cada-10-hogares-del-pais-tienen-mascota-segun-brandstrat-2829114>
20. Rubio A. Sensory stimulation in people with Alzheimer's from Occupational Therapy. Systematic Review Sensory stimulation in people with Alzheimer's disease from Occupational Therapy. Systematic review. Unizar.es. Available from: <https://zaguan.unizar.es/record/106805/files/TAZ-TFM-2021-180.pdf>
21. Eizaguirre B, Alonso R, López PA, Díaz Videla M. View of Animal Assisted Interventions in Patients with Multiple Sclerosis. *Calidad de Vida y Salud.* 2020;13:175-183.
22. Patiño Rodas K. Living with companion animals in contemporary culture, benefits perceived by custodians as a result of living with companion animals, during confinement by COVID-19. Casa Grande University: Faculty of Administration and Political Science; 2020. Available from: <http://dspace.casagrande.edu.ec:8080/handle/ucasagrande/2547>
23. Arboleda M. Humans, dogs and cats. Social characterization of the possession of canines and cats in Medellín. [Grade work], University of Antioquia, Faculty of Social and Human Sciences, Department of Anthropology. 2019. Available from: [https://bibliotecadigital.udea.edu.co/bitstream/10495/13602/1/ArboledaMarielena\\_2019\\_HumanosPerrosGatos.pdf](https://bibliotecadigital.udea.edu.co/bitstream/10495/13602/1/ArboledaMarielena_2019_HumanosPerrosGatos.pdf)
24. Calderon Puentes N, Gomez Carreno MN. Efectos psicológicos asociados a la tenencia de animales de compañía. 2021. Available from: <http://hdl.handle.net/20.500.12749/13881>.
25. Hughes MJ, Verreynne ML, Harpur P, Pachana NA. Companion animals and health in older populations: a systematic review. *Clin Gerontol.* 2020;43(4):365-77.
26. Balluerka N, Gomez J, Dolores M, Gorostiaga A, Espada J, Padilla J, et al. Consecuencias psicológicas de la COVID-19 y el confinamiento. Informe de investigación. Bilbao, Servicio de Publicaciones de la Universidad del País Vasco. 2020;210:551-534.
27. Cudris-Torres L, Barrios-Núñez A, Bonilla-Cruz NJ. Coronavirus: epidemia emocional y social. *Arch Ven Farmacol Terap.* 2020;39(3):309-312.
28. Bonilla-Cruz DN-J, Cudris-Torres L, Mendoza-Rincón B-M, Gamboa-Aldana A-S, Forgiony-Santos J. Health Strategies in Latin America for the Elderly in relation to COVID-19. *Gac Méd Caracas.* 2020;128(2S):S301-S311.
29. Cudris-Torres DL, Olivella-López G, Cuenca-Calderón SE, Barrios-Núñez Álvaro, Bonilla-Cruz NJ, Bustos-Arcón V, et al. Financial management and satisfaction with life in Colombians during confinement by COVID-19. *Gac Méd Caracas.* 2020;128(2S):S312-S319.