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COLLEGE**
(A CHARTERED UNIVERSITY)

Human-Animal Interaction and its Relationship with Human

Well-being

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Abstract

Human-animal interaction refers to people's deep emotional bonds and close relationships with animals. This bond is associated with human well-being and has a social and psychological impact on the well-being of humans. The purpose of this research was to examine the relationship between human-animal interaction and its relation to the human well-being. Researcher used internationally standardized scales such as the Human-Animal Interaction Scale and the Well-being Scale to identify the relationship between both variables. The hypothesis for the study was that the higher the human-animal interaction, the higher the well-being of humans. This study is cross-sectional quantitative research that used purposive sampling to collect data from 219 students of FCCU. The study finds that there were highly significant positive correlations ($R= 0.385$) between dependent and independent variables which indicate human-animal interaction increases, and well-being tends to increase as well. This research identified the relationships that humans make with animals and showed how those bonds relate to the changes in their social and psychological well-being. The research is significant for creating awareness and developing interventions to improve animal interaction, especially for population groups that sought support for increased well-being.

Keywords: Human-animal interactions, Well-being of humans, Social and psychological well-being

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Introduction

Human-animal Interaction (HAI) is defined as a connection or interaction between an individual and an animal. Human-animal interactions play an important role in the history of humans. According to Bayer, the human-animal bond has existed for almost 15,000 years (The Human-Animal Bond Throughout Time, 2018). Whether hunting, farming, or doing other daily activities, animals protect and serve humanity (Fung et al., 2024). In many ways, interaction with animals affects human social and psychological well-being. A lot of people interact with animals because animals provide them with companionship (Robinson, 2024). People say there is no greater feeling than returning home to a loyal companion (Griffin et al., 2018). In terms of pet's loyal companion, it provides unconditional love, reduces stress, improves heart health, and aids children in emotional and social skills (Griffin et al., 2018).

In this modern world, most people struggle in everyday life. As depression and loneliness are increasing globally they affect the well-being of humans (Qirtas et al., 2023). The study suggests that loneliness can evoke diseases like depression, dementia, and coronary problems (The Human-Animal Bond Throughout Time, 2018). Research has indicated that animals provide a companion and spend time with people which helps them to reduce stress and feel good (Robinson, 2024). Human-animal bonds may have positive effects on and increase opportunities for socializing, and an overall quality of life (Robinson, 2024). Moreover, animal-assisted treatment methods have positive effects on the mental, emotional, and physical well-being of individuals with different disabilities (Johnson, 2020). Because animals provide them with companion animals that significantly improve their social and psychological well-being, this indicates how people interact with animals, shows how their well-being improves, and they see a positive side of life.

Aim of Study

This research aims to investigate human-animal interaction and its effect on the well-being of humans.

Research Question

What are the effects of human-animal interaction on the social and psychological well-being of humans?

Significance of study

The literature has shown that poor mental health is a major concern worldwide. Around one in eight people suffers from a mental health issue, and 703,000 people commit suicide annually worldwide (Ellis et al., 2024). Studies have shown that interaction with animals has a positive impact on well-being, reducing feelings of loneliness and lowering the risk of mortality (Ellis et al., 2024). More than 50% of houses worldwide have companion animals, and many owners say their animals provide social support when they are mentally ill or in distress (Ellis et al., 2024). From a psychological perspective, a study has demonstrated that human-animal attachment reduces blood pressure and anxiety by promoting interactions and alleviating discomfort (Ellis et al., 2024). In terms of behavior, animals teach humans to be responsible and caring. Against this backdrop, this study aims to investigate if human-animal interaction improves human social and psychological Well-being. There is a lack of research on this topic in Pakistan that has failed to emphasize the beneficial effects of animal interaction on the well-being of humans. Therefore, this study aims to fill this gap.

Literature Review

Animals and humans have interacted for thousands of years. Wolves were the first animals tamed by humans (Serpell, 2021). In 2017, research conducted in Saudi Arabia discovered cave drawings showing wolves and early people wearing leashes and collars (Grimm, 2017). The archaeological picture showed humans training dogs before farming indicating that humans may have tamed dogs approximately 10,000 years ago (Grimm, 2017). Early humans used animals for hunting, herding, and transportation, and later domesticated dogs, cats, and horses for therapeutic purposes (Fung et al., 2024). Florence Nightingale first recognized Animal-Assisted Therapy (AAT) in the late 1800s, discovering that small animals could reduce anxiety in psychiatric patients (Ernst, 2014). Later, in 1930, Sigmund Freud supported AAT and used his dog, Jofi, to signal patient tension and help them in communication (Ernst, 2014). Freud believed animals had a special sense that helped people to feel more comfortable. In the 1960s, Boris Levinson discovered that a child with a communication issue was conversing with Levinson's dog, jingles, during psychotherapy sessions (Ernst, 2014). Later, AAT was used in hospitals, rehabilitation centers, and nursing homes. This history indicated that animals have the ability to provide healing, support, and comfort to people who are experiencing physical, mental, and emotional challenges, helping them improve their overall well-being (Ernst, 2014).

Dogs have played many roles e.g. hunting and carrying loads, but their ability to form emotional bonds with humans distinguished them from many other animals (Fung et al., 2024). According to a survey conducted by the American Pet Products Manufacturers Association in 2001, 94% of respondents emphasized that having a dog means having companionship, love, and company (InterAction, 2002). In fact, 48% of families considered animals to be essential

members of their family because they believe animals can bring happiness through their playful behavior and ability to make them smile (InterAction, 2002).

There are many studies on the human-animal bond and its impact on the social and psychological well-being of humans and how it shapes an individual's emotional, mental, and social life. A study indicated that people who interact with animals experience the release of the hormones oxytocin, serotonin, and prolactin which help to improve moods (Olivine, 2024). It helped to reduce many diseases e.g., loneliness, anxiety, Alzheimer's, depression, and post-traumatic stress disorder (Olivine, 2024).

Another study highlighted that animals improve people's overall well-being by reducing stress, enhancing socialization, promoting exercise and fun, and providing unconditional love and devotion (Keegan, 2014). In 2008, an investigation was conducted to see the impact of human-animal interaction on the mental health and wellness of older adults with depression (Keegan, 2014). Before animal invention started, nursing staff conducted questionnaires about mental health and wellness among older adults. Older adults participated in 1.5-hour sessions to interact with various animals. Their interactions with the animals and each other were closely monitored. After six weeks, it showed residents increased social interaction with others and increased responsiveness to the animals. The first questionnaire revealed that they felt sad, low energy, and had minimal interaction with others. However, the second questionnaire revealed that residents were more satisfied, happier, and more sociable due to their interactions with pets (Keegan, 2014). The older adults found the opportunity to see life positively, and many expressed excitement when they saw the animals.

The American Animal Hospital Association conducted a survey of 1,197 pet owners and found that 34% of them discuss their dogs with others, while only 20% discuss their spouses

(InterAction, 2002). When asked who they meet first when returning from work, 78% said their pet, not their spouses (InterAction, 2002). It showed the emotional bond between humans and animals and how they both understand each other's feelings.

Moreover, another research on human-animal studies has shown that animal-assisted therapy can help people overcome anxiety and depression, improve Alzheimer's patients' blood pressure, and increase happiness (InterAction, 2002). A study was conducted to see animal impacts on Alzheimer's patients (InterAction, 2002). The common symptoms of Alzheimer's are a decrease in weight and a diminished appetite. Dr. Alan Beck's research involved observing a group of Alzheimer's patients who sat in front of fish tanks during meals. During their regular mealtimes, patients who watched fish became enthralled, their appetites increased, and their metabolic weight increased. This study had a significant contribution to the expanding scientific knowledge on how humans respond physiologically when interacting with animals and how it promoted the overall well-being of humans (InterAction, 2002).

Another research suggested that people view animal connections as attachment ties (Rockett & Carr, 2014). The expression "man and his best friend" has existed throughout history. It represented attachment between animals and humans. To understand human-animal bonds, Kurdek (2009) used caretakers of animals self-reported perceptions that showed that they felt safer and more stable when they were near those animals and discomfort when apart from them (Rockett & Carr, 2014). It indicated that humans create an emotional attachment with their pets help them in stressful circumstances and provide them with social support.

Some studies disclose that people often felt very close to their pets and considered them as their family members. At the same time, this bond affects their psychological health. A study was conducted on emotional attachment to pets and mental health burdens as people felt more

connected to their pets than others. The study revealed a positive association between emotional attachment to pets and mental health burden, indicating that a stronger emotional attachment to a dog was associated with lower comfort with others, leading to a higher mental health burden. Furthermore, the study found a link between greater anxiety and stronger attachment to a dog (Lass-Hennemann et al., 2022).

In another self-report of 1331 college students who had pets, 31% of respondents were living with their pet and 69% were not living with their pet. The study examined the relationship between owning pets, receiving social support, and experiencing internalizing symptoms among college students (Barker et al., 2020). It was found that attachment to animals provides social support to college students who faced different challenges like adjusting to new situations, forming peer groups, and isolation from family and friends over four years. But at the same time, the study revealed that female students were more mentally attached to animals or missing their pets and had higher internalizing symptoms, which was not observed in male students (Barker et al., 2020).

Theoretical Framework

The theory that can be applied to this study is Attachment Theory. John Bowlby was the first to focus on human emotional bonds and interactions with other humans, especially the emotional bond between parents and children, which has a lasting influence on relationships throughout life. Theory suggests that people are born with the need to create attachments (Cherry, 2023). Similarly, humans and animals create emotional bonds. Research suggests that having a close relationship with animals can have positive effects on mental and emotional health, as well as social and emotional well-being. It can also help alleviate feelings of loneliness, stress, and psychopathology. On the other hand, weaker attachments to pets have the

opposite effect (Ellis et al., 2024). Moreover, according to the researcher, long-domesticated animals form strong attachments with humans, and their strong interaction can create opportunities for individuals to form stable connections with others (Verheggen et al., 2017). It helps humans promote their social and psychological well-being. The study indicated that animals could experience the same relaxation and stress-reducing benefits as people do through social support and connection. Overall, the study highlighted the potential of the human-animal setting to promote secure relationships and offer mutual advantages (Verheggen et al., 2017).

Another theory is the Social Support Theory which refers to the social ties and interactions that may offer individuals emotional aid when they are facing stress or challenges (Jackson,2023). It is the feeling of being loved, cared for, respected, and a part of a network of shared responsibilities. Animals provide emotional intimacy, show care and communicate like people which provides humans support when they face stress or challenges in their lives (Verheggen et al., 2017). This theory suggests that social support plays a crucial role in influencing an individual's well-being, coping strategies, and overall health outcomes.

Another theory that has been used to theorize human-animal interaction is Animal-assisted Therapy (AAT) is an alternative form of treatment in which animals are used in therapy to help patients who are suffering (Koukourikos, et al.,2019). The therapy helped people who were suffering from loneliness, anxiety, Alzheimer's, depression, and post-traumatic stress disorder to reduce their symptoms and bring them back to life. In this therapy, people create bonds with animals to alleviate boredom, increase activity, give companionship, lessen loneliness, increase social contacts, and improve overall human well-being. The result of this therapy shows that humans who have positive connections with animals experience less stress and a more balanced mental and emotional state (Johnson, 2020).

For this study, the most relevant theoretical framework identified is the Biophilia Hypothesis. This hypothesis posits that humans possess an inherent affinity for and reliance on nature. It was initially proposed by Edward O. Wilson in his book, *Biophilia* (Kellert & Wilson, 1995). The biophilia hypothesis suggests that there is a natural inclination for humans to feel drawn to the wonders of the natural world. According to this, every single human being has an innate affection for the natural world. When applied to the human-animal bond, it indicates human affection for animals derives from their instinctive drive to connect with other forms of life (Borgi & Cirulli, 2016). Animals provide a tangible connection to the natural world, enhancing well-being and quality of life. This study mainly supports this hypothesis, showing that spending time with animals can reduce stress, promote relaxation, and improve the overall well-being of humans.

Methodology

Ethical Consideration

The researcher followed all ethical principles strictly, including the anonymity and confidentiality of respondents. The researcher ensured the safety of each respondent's information. The aim of the study and objectives of the study were explained in consent form before starting the survey (Appendix A). The researcher also received ethical clearance from the Ethics Committee of the Sociology Department and the Institutional Review Board of Forman Christian College (a Chartered University). The IRB certificate is also attached as Appendix C.

Research Design

The methodology for this study was survey-based and quantitative in nature. Data was collected from Forman Christian College (Chartered University) after IRB granted permission for data collection. Respondents completed questionnaires assessing their social and psychological well-being when they interacted with animals.

Hypothesis

The higher the level of human-animal interaction, the higher the well-being of humans.

Conceptualization

Independent Variable: Human-Animal Interaction

Human-animal interaction describes the interaction between people and animals. This may include companionship, attachment, and emotional bond.

Dependent Variable: Well-being of humans

The well-being of humans describes the general mental and emotional health of people with their surroundings and social interactions.

Operationalization

Human-Animal Interaction: The research used the Human-Animal Interaction Scale to measure human-animal interaction. It was developed by Angela Fournier, Elizabeth Letson, and Thomas D. Berry. It has 14 items (Fournier et al., 2017).

The well-being of humans: The research used a general well-being scale for this study to measure the well-being of humans. It was developed by Ylenio Longo, Iain Coyne, and Stephen Joseph. It has 14 items (Longo et al., 2018).

Respondents and sample size

The sample for that study was 219 students from FCCU. The purposive sampling technique was used to select the sample. This method ensured that only individuals with regular and meaningful interactions with animals were chosen for the research. This approach was adopted to capture comprehensive insights into how these interactions influenced respondents' perspectives and experiences. By focusing on individuals with frequent animal interactions, the study aimed to highlight specific behavioral and emotional patterns. The inclusion of a diversified sample in terms of demographic characteristics provided a broader understanding of the people's engagement with animals and their impact on well-being.

Data collection

Data was collected during the summer of 2024 through a Google Forms survey for convenience and responses. The survey was sent to the students of FCCU from all departments. The researcher used email and WhatsApp to send surveys.

Instrument

There were 34 items in the survey, which were divided into three parts. The first part of the survey was based on the demographic information of the respondents (items 1–6). The

second part assessed human-animal interaction (items 7–20). And the third part measured the well-being of humans (items 21–34). The researcher used a three-point Likert scale in the second part with scores ranging from 1 (Not at all) to 3 (A great deal). In the third part, the researcher used a five-point Likert scale with scores ranging from 1 (Not at all) to 5 (Very true). The survey questionnaire is attached as Appendix B.

Data Analysis

After collecting data, it was analysed on SPSS. The independent and dependent variables are given below and both variables have reliability and validity.:

Independent variable: For this study, the independent variable is human-animal interaction that measured the interaction between humans and domestic animals. The interaction includes observational interaction, physical interaction and social interaction.

Dependent Variable: The dependent variable for this study is the well-being of humans that measured human social and psychological well-being.

First, descriptive statistics have been used to illustrate the frequencies and percentages of all variables in tables including sociodemographic characteristics and both scales. Next, Shapiro Wilk of Normality has been used to determine whether data is normally distributed or not. If the p-value of the Shapiro-Wilk Test is greater than 0.05 then data is normally distributed. Lastly, the correlation test has been used to determine the relationship between human-animal interaction and human well-being. Correlation significance level at the 0.01 level which indicates the relationship between both variables is positive.

Results

Socio-demographic Results:

Table 1. shows the socio-demographic characteristics of the sample of 219 respondents. The gender distribution is approximately equal, with 48.2% male and 49.1% female respondents, while 2.8% of respondents preferred not to reveal their gender. In terms of age, 74.9% of respondents are between the ages of 21-24, whereas 20.1% are aged between 18-20 years. A smaller percentage of respondents (5.0%) are aged 25 or above. Regarding pet ownership, 56.9% of respondents own pets and 43.1% do not. In which 69.8% live in urban areas, whereas 30.2% live in rural areas.

Table.1

Descriptive Statistics of Socio-Demographic Characteristics (N=219)

Variables	Frequency	Percentage %
Gender		
Male	105	48.2
Female	107	49.1
Prefer not to say	6	2.8
Age		
18-20	44	20.1
21- 24	164	74.9
25 & above	11	5.0
Do you have pets?		
Yes	124	56.9
No	94	43.1
Area		
Urban	150	69.8
Rural	65	30.2

Variable: Human-animal interaction (HAI):

Table 2. shows the different levels of human-animal interaction among the 219 respondents over the past six months. 43.8% of respondents often like to watch animals, and 43.8% moderately do it. Likewise, 38.4% of respondents love to spend time near animals, whereas 37.0% moderately like. And 39.3% of respondents pet animals regularly. Activities like “talking to animals” (37.3%) and “playing with them” (38.1%) demonstrate high participation in terms of social interaction. In terms of physical interactions, holding animals (33.3%), kissing

animals (16.1%), and hugging animals (27.1%) are less common, with 26.9%, 43.6%, and 63.3% of respondents reporting they do not like to hold, hug, and kiss animals. Activities such as “grooming animals” (26.1%) and “feeding animals” (57.3%) are common, while training activities are less common. While 46.1% of respondents regularly take pictures with animals, a significant portion (59.2%) show interaction with animals. Besides, 73.4% of respondents reported never behaving aggressively towards animals.

Table.2
Descriptive Statistics of Human-Animal Interaction

Human-Animal Interaction	Not at all		A moderate amount		A great deal	
	f	%	f	%	f	%
1. Watch the animal (s)	28	12.8	95	43.4	96	43.8
2. Spend time near the animal(s)	54	24.7	81	37.0	84	38.4
3. Pet the animal(s)	62	28.3	71	32.4	86	39.3
4. Talk to the animal(s)	58	26.7	78	35.9	81	37.3
5. Play with the animal(s)	52	23.9	83	38.1	83	38.1
6. Hold the animal(s)	59	26.9	87	39.7	73	33.3
7. Hug the animal(s)	95	43.6	64	29.4	59	27.1
8. Kiss the animal(s)	138	63.3	45	20.6	35	16.1
9. Groom the animal(s)	76	34.9	85	39.0	57	26.1
10. Offer food to the animal(s)"	19	8.7	74	33.9	125	57.3
11. Attempt tricks/training with the animal(s)	79	36.2	59	27.1	80	36.7
12. Take pictures of or with the animal(s)	31	14.2	87	39.7	101	46.1
13. Decline interaction with the animal(s)	129	59.2	60	27.5	29	13.3
14. Behave aggressively toward the animal(s)	160	73.4	29	13.3	29	13.3

Variable: Well-being of humans (WBH):

Table 3. represents the well-being of humans of 219 respondents over the past six months. Most individuals report feeling “happy” (32.9% mostly true, 15.1% very true), “energized” (30.1% mostly true, 14.2% extremely true), “calm” (28.4% mostly true, 17.9% very true), and “optimistic” (32.4% mostly true, 17.9% extremely true). Regarding being absorbed by what they are doing, 35.2% of respondents claim this to be somewhat true, and 17.4% claim this to be extremely true. Many respondents also report feeling “accepted as they are” (32.6% mostly true, 20.6% very true), "in touch with their emotions” (26.9% mostly true, 18.7% extremely

true), and “accepted themselves” (32.6% mostly true, 20.6% extremely true). Many respondents also feel “great about themselves” (29.4% mostly true, 18.8% very true) and “effective in what they do” (27.5% mostly true, 17.9% very true). Whereas around 20% of respondents firmly think they are "improving" or have a "purpose" in life.

Table.3

Descriptive Statistics of Well-being of Humans

Well-being of Human	Not at all true		A bit true		Somewhat true		Mostly true		Very true	
	f	%	f	%	f	%	f	%	f	%
	1. Feel happy	6	2.7	46	21.0	72	32.9	62	28.3	33
2. Feel energetic.	12	5.5	45	20.5	65	29.7	66	30.1	31	14.2
3. Feel calm	11	5.0	42	19.3	62	28.4	64	29.4	39	17.9
4. Feel optimistic	15	6.9	43	19.7	68	31.2	53	24.3	39	17.9
5. Feel absorbed by what you are doing	16	7.3	30	13.7	77	35.2	58	26.5	38	17.4
6. Feel in touch with how you really feel inside.	16	7.3	46	21.0	57	26.0	59	26.9	41	18.7
7. Accept most aspects of yourself.	13	6.0	32	14.7	57	26.1	71	32.6	45	20.6
8. Feel great about yourself.	15	6.9	37	17.0	61	28.0	64	29.4	41	18.8
9. Feel highly effective at what you do.	9	4.1	41	18.8	69	31.7	60	27.5	39	17.9
10. Feel that you were improving	15	6.8	41	18.7	65	29.7	62	28.3	36	16.4
11. Feel you had a purpose	19	8.8	39	18.1	61	28.2	53	24.5	44	20.4
12. Feel/ think that what you do in your life is worthwhile	14	6.4	44	20.1	57	26.0	56	25.6	48	21.9
13. Feel/ think that what you do is consistent with what you believe you should do	16	7.4	30	13.8	67	30.9	65	30.0	39	18.0
14. Feel close and connected to the people around you	15	6.9	34	15.6	59	27.1	68	31.2	42	19.3

Result of Shapiro-Wilk:

Table.4 To determine the relationship between both variables, the first researcher checked the normality of the data using Shapiro-Wilk tests of normality. the p-value of HAI was $p = 0.000$, and the p-value of WBH was $p = 0.014$, which indicates the data is not normally distributed. It indicates a significant normal distribution if $p < 0.05$.

Table.4

Shapiro-Wilk (Tests of Normality)

	Responses	p-value
Human-Animal Interaction (HAI)	209	.000
Well-being of Human (WBH)	210	.014

Results of Spearman's correlation:

Table 5 presents Spearman's correlation (a non-parametric measure) as data does not meet the assumption of normality. The results of Spearman's correlation revealed Spearman's (R = 0.385) between 'HAI' and WBH, which indicates a highly statistically significant positive relationship between the two variables. It means as human-animal interaction increases, well-being increases as well.

Table.5

Spearman's Correlation between HAI and WBH

Independent Variable	Dependent Variable	Spearman's R	p-value
Human-Animal Interaction (HAI)	Well-being of Human (WBH)	0.385	0.01

Discussions

This study aimed to find out the relationship between human-animal interaction and the well-being of students in university. The findings of this study represent a positive relationship between them. This study reveals that the majority of respondents have positive interactions with animals, which can enhance their overall well-being, including mental, emotional, and physical aspects. The existing literature also indicates that engaging with animals increases hormones such as oxytocin, serotonin, and prolactin, which contribute to enhanced mood, reduce stress and anxiety, increase social engagement, and boost emotional resilience (Olivine, 2024).

Human interaction with animals can be explained through the biophilia hypothesis of Edward O. Wilson. According to theory, humans love and interact with animals because they instinctively want to connect with other forms of life (Borgi & Cirulli, 2016). The positive association between human-animal interaction and well-being may arise from humans' intrinsic affection for nature and other life forms. This connection is rooted in our evolutionary past, where humans depended on animals for survival, work, protection, and companionship, which were essential for life (Fung et al., 2024). When animals fulfil an intrinsic human need that contributes to emotional support, comfort, and alleviating stress. Similarly, the findings of the study revealed that humans feel comfortable and contented while they frequently interact with animals.

Moreover, the results of this study show that humans and animals have great social interactions. It indicates that the bond provides humans with social support, and companionship, and reduces loneliness, which strongly indicates its effect on the well-being of respondents that helped them feel better. The results of a study show that older adults with depression who interact with animals, experience increased social interaction and responsiveness (Keegan,

2014). This positive interaction led to increased satisfaction, happiness, and sociability, which allowed older adults to see life positively and express excitement when they saw the animals. Similarly, another study by Dr. Alan Beck found that Alzheimer patients who watched fish tanks were found to have increased appetites contributing to understanding human physiological responses to animals (InterAction, 2002). It demonstrates a substantial positive correlation between human-animal interaction and human well-being. Studies have shown that spending time with animals, whether as pet owners or in some other way, may help alleviate stress and loneliness and improve emotional well-being. Animals give nonjudgmental company and emotional support, helping reduce depression and anxiety.

This study data revealed that more than half of respondents owned pets, and their emotional connection to them contributed to their improved well-being. The same attachment was reported in the self-report of the caretaker of pets; he was emotional with pets (Rockett & Carr, 2014). He felt more at ease when he was near them, and sad when he was away from them. It demonstrated that humans form emotional bonds with their pets, providing them with social and emotional support, which in turn influences human well-being. Similarly, the American Animal Hospital Association surveyed pet owners and discovered that 34% discuss their pets and 20% their spouses. After work, 78% said they see their pet first, not their spouses (InterAction, 2002). This showed how humans and animals share emotions and understand each other, which improves human well-being.

On the other hand, some studies contradict this; they show the significance of emotional attachment with animals but simultaneously reveal that attachment might affect the mental well-being of humans. For example, a study found a positive association between emotional attachment to pets and mental health burden, with stronger attachment to pets leading to lower

comfort and greater anxiety (Lass-Hennemann et al., 2022). Similarly, another self-report from college students with pets revealed that they receive social support from their pets during difficult times and isolation (Barker et al., 2020). However, they also exhibit higher internalizing symptoms, which may contribute to anxiety or mental health issues. It indicates that human-animal interactions have a strong bond, but this bond can affect mental health and increase stress of pet owners which does not consistently lead to improved well-being. However, the findings of this study do not support such findings. The studies revealing diverse dimensions underscore the need for further research to comprehend human-animal interaction comprehensively.

Limitations of the Study

This study has several limitations that should be acknowledged. First, it is contextually based rather than experimental, meaning that the researcher did not implement any animal-assisted therapy to directly observe the interactions between humans and animals. Additionally, the study may be susceptible to potential biases, as individuals who actively engage with animals might have higher levels of well-being for reasons unrelated to their interactions with animals. Another limitation is the inability to determine the directionality of the relationship; it remains unclear whether higher Human-Animal Interaction (HAI) leads to improved well-being or if individuals with higher well-being are simply more inclined to interact with animals.

Furthermore, the quantitative nature of the study may restrict a comprehensive understanding of the relationship between HAI and Well-Being and Happiness (WBH), as it primarily relies on statistical methods that may overlook the subjective experiences and emotional nuances inherent in these interactions. To gain a more holistic understanding of the

connection between human-animal interaction and well-being, a qualitative approach would be more suitable. This method would allow for deeper exploration of the respondents' personal experiences and emotional dimensions, providing richer insights into the impact of animal interactions on human well-being.

Recommendations

This study analyzed the relationship between two variables: human-animal interaction and human well-being, and the results showed a strong positive correlation. Future research can use different variables (e.g., age factor, type of interaction, cultural difference, mental health, and contextual factors) to understand more deeply. For instance, investigate whether human-animal interaction can manage stress levels or not. Also, researchers can examine gender differences to determine which gender, area, and age group have a stronger bond with animals. Although this study gives a basic overview of the relationship between human-animal interaction (HAI) and human well-being, future research should further explore the roles and meanings of this bond among the different groups of people. An in-depth investigation of this bond may reveal more significant effects of HAI on well-being and assist those people. Lastly, the study suggests that animal-assisted therapy can be beneficial for individuals experiencing distress by providing them with social support, social connections, and psychological benefits. Research can also determine whether animal assistance theory is applicable to Pakistani culture or not. Overall, further research will give a better understanding of human-animal bonds.

Conclusion

There are very few studies in Pakistan attempting to examine the relationship between humans and animals. This study is important in identifying the bonds created by humans in animal interaction and also revealing the relationship of that bond with the psychological and social well-being of humans. Also, the research may be significant for creating awareness and developing interventions to improve animal interaction, especially for population groups seeking support for increased well-being. This research highlights evidence-based studies on the human-animal bond, emphasizing how interaction with animals reduces loneliness and stress and is considered beneficial for the overall well-being of humans. Moreover, the result of this study also showed a positive correlation between both variables, which indicates a higher interaction with animals would improve humans' well-being. It demonstrates that animals can alleviate feelings of loneliness, lower stress levels, increase social connections, motivate physical activity and playfulness, and offer unwavering love and affection.

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Appendices

Appendix A: Informed Consent Form

Date: _____

Dear Respondents,

You are invited to take part in a study titled "Human-Animal Interaction and Their Relationship with Human Well-being." The study aims to determine whether there is a relationship between human-animal interaction and its effect on human well-being. Your response will help researcher to better understand the effects of animal interaction on the social and psychological well-being of humans.

The questionnaire will take approximately 5-7 minutes to answer. You are not pressurized to fill the survey, and you can even quit the survey at any time. Researcher will keep your identities confidential and not share them with anyone. Even your answers will be recorded anonymously.

After reading the information provided, you consent to part response in this research project by signing this form.

Thank you!

Researcher: Umme Habiba

BSc. Hon Student, Department of Sociology, Forman Christian College

240522366@formanite.fccollege.edu.pk

Signed consent of the respondent: _____

Appendix B: Survey

Demographic Information						
1.	Gender	Male	Female	Prefer not to say		
2.	Age	18-20	21-24	25 & above		
3.	Do you have pet?	Yes	No			
4.	Area	Urban	Rural			
14-items The Human-Animal Interaction Scale (HAIS)						
Over the past 6 months, How much did You...		Not at all	A moderate amount	A great deal		
For each type of interaction on the left, rate the amount of interaction you experience:						
5.	Watch animal(s)					
6.	Spend time near animal(s)					
7.	Pet animal(s)					
8.	Talk to animal(s)					
9.	Play with animal(s)					
10.	Hold animal(s)					
11.	Hug animal(s)					
12.	Kiss animal(s)					
13.	Groom animal(s)					
14.	Offer food to animal(s)					
15.	Attempt tricks/training with animal(s)					
16.	Take pictures of or with animal(s)					
17.	Decline interaction with animal(s)					
18.	Behave aggressively toward animal(s)					
14-item Scales of General Well-being (14-SGWB)						
Over the past 6 months, How often did You ...		Not at all true	A bit true	Somewhat true	Mostly true	Very true
19.	Feel happy.					
20.	Feel energetic.					
21.	Feel calm.					
22.	Feel optimistic.					
23.	Feel absorbed by what I'm doing.					
24.	Feel in touch with how I really feel inside.					

25.	Accept most aspects of myself.					
26.	Feel great about myself.					
27.	Feel highly effective at what I do.					
28.	Feel that you are improving.					
29.	Feel you had a purpose.					
30.	Feel/ think that what you do in your life is worthwhile					
31.	Feel/ think that What you do is consistent with what you believe you should do.					
32.	Feel close and connected to the people around you.					

Appendix C: IRB Certificate



FORMAN CHRISTIAN COLLEGE
(A CHARTERED UNIVERSITY)

INSTITUTIONAL REVIEW BOARD **APPROVAL CERTIFICATE**

IRB Ref: IRB-626/01-2024

Date: 04-06-2024

Project Title: Human-Animal Interaction and its Relationship with Human Well-being

Principal Investigator: Umme Habiba

Supervisor: Dr. Jawad Tariq

The Institutional Review Board has examined your project in the IRB meeting held on 04-06-2024 and has approved the proposed study. If during the conduct of your research, any changes occur related to participant risk, study design, confidentiality or consent, or any other change then IRB must be notified immediately.

Please be sure to include the IRB reference number in all correspondence.

Dr. Sharoon Hanook
Convener-IRB
Chairperson Department of Statistics
Forman Christian College
(A Chartered University)
Lahore

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