

A LITERATURE REVIEW OF DOMESTIC CATS (*FELIS CATUS*) INTERACTIONS ON EMOTIONAL REGULATION AND MENTAL HEALTH: BIO-PSYCHOLOGICAL AND ISLAMIC PERSPECTIVE

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Abstract

*The global mental health crisis in recent years demanded accessible alternative therapeutic modalities, including interaction with animal, specifically domestic cats (*Felis catus*). This study aimed to integrate the impact of cat interaction on emotional regulation and mental health through bio-psychological reviews and Islamic literature. The method of this study employed a literature review of reputable scientific articles (2015-2025) and classical Islamic religious texts. The result biologically, positive interactions with cats has been associated to increase oxytocin levels and decrease cortisol in humans. Feline affective behaviors, such as snuggling, provided calming effect and a sense of security. In the Islamic perspective, cats held a noble status based on the sunnah of Prophet Muhammad PBUH, which provided religious legitimacy and strengthened the emotional bond of Muslim owners. Despite zoonotic risks, preventive education was found to mitigate owner anxiety. The integration of biological support and spiritual values made interaction with cats an effective non-pharmacological strategy to support psychological well-being.*

Keywords: *Bio-psychological, Felis catus, Mental Health, Islamic Perspective, Emotional Regulation.*

Abstrak

Krisis kesehatan mental global dalam beberapa tahun terakhir menuntut adanya modalitas terapi alternatif yang terjangkau, salah satunya melalui terapi interaksi dengan hewan, termasuk kucing domestik (*Felis catus*). Penelitian ini bertujuan untuk mengintegrasikan dampak interaksi kucing terhadap regulasi emosi dan kesehatan mental melalui tinjauan bio-psikologis dan literatur Islam. Studi ini menggunakan metode tinjauan literatur terhadap artikel ilmiah bereputasi (2015-2025) dan teks keagamaan klasik. Hasil studi ini menunjukkan secara biologis, interaksi positif dengan kucing terbukti meningkatkan kadar oksitosin dan menurunkan kortisol pada manusia. Perilaku afeksi kucing, seperti *snuggling*, memberikan efek menenangkan dan rasa aman. Dalam perspektif Islam, kucing memiliki kedudukan mulia berdasarkan sunnah Nabi Muhammad SAW, yang memberikan legitimasi religius dan memperkuat ikatan emosional pemilik Muslim. Meskipun terdapat risiko zoonosis, edukasi preventif dapat memitigasi kecemasan pemilik. Integrasi antara dukungan biologis dan nilai spiritual menjadikan interaksi dengan kucing sebagai strategi non-farmakologis yang efektif untuk mendukung kesejahteraan psikologis.

Kata Kunci: Bio-psikologis, *Felis catus*, Kesehatan Mental, Perspektif Islam, Regulasi Emosi.

Introduction

There has been a marked increase in global awareness of mental health issues in recent years, reflecting a growing societal understanding of mental health as an integral component of human well-being. This awareness is influenced by a range of external factors, including pandemics, economic recessions and climate change.¹ The prevalence of mental health issues has been further exacerbated by the paradigm shift in human life by the pandemic, which has emphasized the significance of mental well-being, including the importance of social interaction and autonomy in life.² A previous literature review by

¹ Stelios Stylianidis, Pepi Belekou, Lily Evangelia Peppou & Athina Vakalopoulou. "Promoting mental health: From theory to best practice". *Social and Community Psychiatry: Towards a Critical, Patient-Oriented Approach*, 2016: 117-131. https://link.springer.com/chapter/10.1007/978-3-319-28616-7_7

² Brenda K. Wiederhold. "Connecting Through Technology During the Coronavirus Disease 2019 Pandemic: Avoiding "Zoom Fatigue". *Cyberpsychology Behavior and Social Networking.*, 23(7), 2020; 437-438. <https://doi.org/10.1089/cyber.2020.29188.bkw>

Torales et al. revealed that the emergence of the novel strain of severe acute respiratory syndrome (SARS-CoV-2) that causes the disease known as coronavirus diseases 2019 (Covid-19) resulted in a significant increase in psychological distress, anxiety, symptoms of depression, and sleep disturbances, as well as anger and fear, among the general public.³

A substantial increase in the prevalence of anxiety and depression disorders has been observed in national survey data, particularly among adolescents and working-age adults. This finding is particularly salient given that one in three young adults report experiencing mental health challenges.⁴ The mental health crisis is also faced with systemic challenges, ranging from high treatment costs (pharmacology) to limited service facilities and social stigma that hinders access to professional help.⁵ Moreover, the advent of eco-anxiety among adolescents, occasioned by the climate crisis, has introduced a new dimension to the intricacies of mental health concerns that necessitate innovative and accessible remedies.⁶

The restricted accessibility of formal services, such as consultations with psychologists or psychiatrists, has given rise to a range of alternative approaches within the field of human mental health. Among these is the practice of interaction with animals, also known as Animal-Assisted Interaction (AAI). Cross-population research indicates that AAI is effective in reducing negative symptoms in dementia patients and mitigating rumination in individuals diagnosed with depression.⁷ It has been demonstrated that interaction with animals has the capacity to enhance mood, strengthen social skills, and

³ Julio Torales, Marcelo O'Higgins, João Mauricio Castaldelli-Maia, & Antonio Ventriglio. "The outbreak of COVID-19 coronavirus and its impact on global mental health". *International Journal of Social Psychiatry*, 66(4), 2020: 317-320. <https://doi.org/10.1177/0020764020915212>

⁴ Maulana Fikrarifwan, Dita Pramesti & Hanif Fakhurroja. "Semantic Mapping of Mental Health Discourse: A Combined Word2Vec and K-Means Clustering Analysis of Indonesian Social Media". *Lecture Notes in Networks and Systems*, 2025: (pp. 110-122). https://link.springer.com/chapter/10.1007/978-3-032-03740-4_11

⁵ Lafi Munira, Prance Liamputtong, & Pramon Viwattanakulvanid. "Barriers and facilitators to access mental health services among people with mental disorders in Indonesia: A qualitative study". *Belitung Nursing Journal*, 9(2), 2023: 110-117. 2023

⁶ Fransiska Kaligis, Grace Wangge, Gabriela Fernando, Ida Bagus Nyoman Adi Palguna, Billy Pramartira, & Natasha Vania Theresia Purba. "Breaking the silence: unveiling the intersection of climate change and youth mental health in Indonesia". *Medical Journal of Indonesia*, 32(4), 2023: 249-253. <https://doi.org/10.13181/mji.bc.247147>

⁷ Antonella Litta, Debora Benazzi, Piero Carbutti, Antonella Vacca, Anna Maria Nannavecchia, Anna Morelli, Anna Maria Sisto, Elisabetta Attolino, Patrizia Manigrasso, & Maria Nacci. "Animal-Assisted Intervention (Aai) In A Recovery-Oriented Psychiatric Rehabilitation Program". *Psichiatria Danubina*, 36(2), 2024: 371-375.

provide emotional support that enhances overall quality of life in populations such as adolescents and young adults.⁸

One animal that is popular among people for mental health purposes is the domestic cat (*Felis catus*), which plays a unique role in the spectrum of companion animals. Cats have been shown to facilitate the formation of strong attachment bonds, thereby providing their owners with benefits that help them manage stress and loneliness. During periods of social isolation, interaction with cats has been demonstrated to contribute significantly to routine stability and provide meaning in life.⁹ Despite the potential drawbacks associated with felines, such as the risk of zoonotic diseases (e.g., *Toxoplasma*), a comprehensive understanding of feline cognition and behavior can enhance the therapeutic benefits derived from the human-cat relationship.¹⁰

According to the Islamic view, human mental well-being is inseparable from a harmonious relationship with all of Allah's creation. The principle of '*rahmatan lil 'alamin*' (mercy for all creation) emphasise that compassion forms the ethical basis of our interactions with other living beings. This aligns with the Qur'anic commandment in Surah Al-An'am verse 38, which affirms that animals are a community equal to humans in their right to love and protection:

وَمَا مِنْ دَابَّةٍ فِي الْأَرْضِ وَلَا طَيْرٍ يَطِيرُ بِجَنَاحَيْهِ إِلَّا أُمَّمٌ أَمْثَالُكُمْ مَا فَرَّطْنَا فِي الْكِتَابِ مِنْ شَيْءٍ

ثُمَّ إِلَىٰ رَبِّهِمْ يُحْشَرُونَ ﴿٣٨﴾

⁸ Silvio Peluso, Anna De Rosa, Natascia De Lucia, Antonella Antenora, Maddalena Illario, Marcello Esposito, & Giuseppe De Michele. "Animal-Assisted Therapy in Elderly Patients: Evidence and Controversies in Dementia and Psychiatric Disorders and Future Perspectives in Other Neurological Diseases". *Journal of Geriatric Psychiatry and Neurology*, 31(3), 2018: 149-157. <https://doi.org/10.1177/0891988718774634>

⁹ Roxanne D. Hawkins, Chih-Hsin Kuo, Charlotte Robinson. "Young adults' views on the mechanisms underpinning the impact of pets on symptoms of anxiety and depression". *Frontiers in Psychiatry*, 15. 2024. <https://doi.org/10.3389/fpsy.2024.1355317>

¹⁰ Jaroslav Flegr, & Marek Preiss. "Friends with malefit. The effects of keeping dogs and cats, sustaining animal-related injuries and *Toxoplasma* infection on health and quality of life". *PLoS ONE*, 14(11). 2019. <https://doi.org/10.1371/journal.pone.0221988>

There is not a single animal (existing) on the earth or a bird that flies with its two wings, but all are people (also) like you. There is nothing that We have left out in the book, then to their Lord they will be gathered. [QS. Al-An'am (6): 38].

From these verse, instilling compassion (*ar-rahmah*) and good behavior (*ihsan*) towards animals is a moral obligation and a way to achieve spiritual peace and closer relationship with the Creator. The relationships with other living beings (including fellow humans) naturally present their own dynamics, including psychological pressures in the form of anxiety and sadness. These are recognised as part of human life and test our faith and spiritual resilience. This is emphasised in surah Al-Baqarah verse 155:

وَلَنَبْلُوَنَّكُمْ بِشَيْءٍ مِّنَ الْخَوْفِ وَالْجُوعِ وَنَقْصٍ مِّنَ الْأَمْوَالِ وَالْأَنْفُسِ وَالثَّمَرَاتِ وَكَبِّرِ الصَّابِرِينَ ﴿١٥٥﴾

We will certainly test you with some fear and hunger, lacking wealth, souls and fruits. Convey (O Prophet Muhammad,) good news to the patient people. [QS. Al-Baqarah (2): 155].

The cultural significance of cats in human life is deeply rooted in both theology and history, particularly within the context of Islamic civilization. Islamic teachings, as derived from the Qur'an and Sunnah, have established in the ethical foundation for the treatment of animals as living beings that also possess souls. The cultural preferences of Muslim society have been shaped by the historical figure of the Prophet Muhammad PBUH, who is also known to have been an enthusiast of felines. Cats are regarded as noble animals within this cultural context. This phenomenon is a primary factor contributing to the high social acceptance of cats as pets. In addition to providing emotional benefits, cats are regarded as a form of compassion (*Rahmah*) and *ihsan*, which has the capacity to enhance the spiritual peace of their owners.¹¹

Despite the extensive documentation of clinical evidence pertaining to the biological benefits of feline interaction, and the long-standing presence of Islamic literature

¹¹ Dianna Bell. "Companion Animal for a Prophet or Witch: Changing Place of House Cats in Contemporary Mali". *Society and Animals*, 27(4), 2019: 452-463. https://brill.com/view/journals/soan/27/4/article-p452_5.xml

addressing animal welfare, there have been few attempts to systematically integrate these two fields. The majority of studies are limited in scope, occupying a position between the domains of medical science and religious studies. The following two research questions are thus purpose for investigation: (1) how does human interaction with domestic cats (*Felis catus*) affect emotional regulation and mental health through the systematic integration of modern bio-psychological perspectives and Islamic literature?; and (2) how can a holistic framework be formulated that supports emotional regulation while providing cultural and religious legitimacy for the use of animal interaction as an innovative and accessible complementary therapy for the community?.

The present literature review aims to address the following problems by bridging the gap between medical science and religious studies with regard to human interaction with cats: (1) Integrate the impact of interaction with domestic cats (*Felis catus*) on emotional regulation and mental health through the systematic integration of modern biopsychological perspectives and Islamic literature; and (2) The present research is directed towards formulating a holistic framework that supports emotional regulation, whilst providing cultural and religious legitimacy for the utilization of animal interaction as an innovative and accessible complementary therapy for the community.

Methods

This literature review article was compiled using a comprehensive literature search approach through various globally reputable scientific databases (Scopus and PubMed) in order to respond to the urgency of the mental health crisis. The author established rigorous inclusion criteria to ensure the validity of the data. Keywords used in the selection process included '*Felis catus*', 'Mental Health', 'Emotional Regulation', and 'Islamic Perspective'

To ensure the objectivity, quality, and relevance of the synthesized evidence, a set of stringent inclusion and exclusion criteria was established. These criteria guided the screening process for the bio-psychological evidence and integrated the specific cultural-religious context of the study that shown on table 1:

Table 1. Inclusion and Exclusion Criteria for Literature Selection

Criteria	Inclusion	Exclusion
Publication Period	Literature published between 2015 and 2025.	Literature published prior to 2015 (unless categorized as primary classical religious texts or seminal works).
Document Type	Original research articles, systematic reviews, meta-analyses, and authoritative academic textbooks.	Popular articles, blogs, non-peer-reviewed opinion pieces, and conference abstracts without full-text availability.
Study Focus	Human-cat interaction (HCI), emotional regulation, mental health outcomes, feline behavioral biology, and Islamic perspectives on animal welfare.	Studies focusing on non-feline species or clinical trials unrelated to psychological or mental health outcomes.
Source Credibility	Internationally reputable journals (indexed in Scopus Q1/Q2 or PubMed) and accredited national journals.	Predatory journals or studies with non-transparent methodologies.
Language	Full-text documents available in English or Indonesian.	Articles in languages other than English or Indonesian without official translations.
Religious Sources	Primary Islamic texts (Hadith and Tafsir) and scholarly interpretations regarding the status of cats.	Unverified religious narratives or modern interpretations lacking scholarly consensus.

Moreover, the methodology embraced Islamic literature, thus addressing the research deficit between medical science and religious studies. The quality assessment employed the JBI Critical Appraisal Tools as a framework, ensuring comprehensive and transparent reporting. The quality of each study was evaluated from her method, strength and limitation. This integration resulted in the formulation of a complementary therapy framework that is culturally legitimate for the community.

Discussion

Following a comprehensive search of relevant literature in several databases and considering inclusion and exclusion criteria, 15 articles were identified that met the standards and were then qualitative analyzed to create a discussion integrating domestic

cats with human mental health, as well as considering an Islamic perspective. The literature is shown in Table 2:

Table 2. Result of Journal Article which Founded and Analyzed

Author and Year	Literature Title	Key Finding
Adachi & Tanaka (2022)	<i>Development of a Snuggling Robot That Relieves Human Anxiety</i>	Domestic cat's behavior has been shown to enhance perceptions of likeness that has potential to serves as an alternative to mental health therapy
Andrianto et al. (2024)	<i>Strategy to increase awareness of zoonosis among cat owners through education, vaccination and community strengthening</i>	Cat owners' knowledge of zoonoses is improved through education, vaccination, and community empowerment strategies. Awareness of feline health can be correlated with the prevention of health risk to human, including those that impact mental health
Carlini et al. (2015)	<i>Pet's diseases and owner's anxiety: is the leash an umbilical cord?</i>	The presence of illness in cat pets can be one of the stress sources for owners, with visible physical symptoms eliciting higher levels of anxiety than less visible symptoms
Cordonnier et al. (2023)	<i>Pet cat personality linked to owner-reported predation frequency</i>	The personality of domestic cat (known as feline five) can be correlated with their engage in hunting behavior. Cat personality with high frequency of predation has a potential cause of stress and negative emotions for its owner.
Engles (2018)	<i>Classical Cats: The Rise and Fall of the Sacred Cat</i>	The transition from a sacred to a domestic status signifies a profound and protracted evolution in the psychological relationship between humans and cat
Griffin (2022)	<i>Handling Shelter Cats (Book Chapter dalam Shelter Medicine for Veterinarians and Staff)</i>	Human emotional regulation can be associated with the acquisition of effective techniques for managing aggressive or fearful cats. feline stress is contagious to humans and vice versa, with the potential to impact mental health.
Haftador & Koohsari (2015)	<i>Examination of Human Psychological Needs according to Islamic Teachings</i>	The need for safety, love, self-esteem, knowledge, beauty, self-actualization, and prayer is the natural instinct of humans
Haywood et al. (2021)	<i>Providing Humans with Practical, Best Practice Handling Guidelines During Human-Cat Interactions Increases Cats' Affiliative Behaviour and Reduces Aggression and Signs of Conflict</i>	Human interaction with cat do not automatically contribute to mental-well-being; they must be conducted with the requisite knowledge to achieve the desired psychological outcomes

Koyasu et al. (2022)	<i>Correlations between behavior and hormone concentrations or gut microbiome imply that domestic cats (<i>Felis silvestris catus</i>) living in a group are not like 'groupmates'</i>	Felines that cohabit in groups do not automatically correlate to hormones or gut microbiota that is typically observed in social species. Despite sharing a living environment, cats maintain individual biological profiles. Cortisol and testosterone levels are more closely associated with the frequency of interactions
Nagasawa et al. (2021)	<i>The Urinary Hormonal State of Cats Associated with Social Interaction with Humans</i>	Social interaction between human and domestic cats, including verbal interaction and physical contact, probably significantly to reduce cortisol levels in cats, particularly in those with strong bonds to their owners
Nagasawa et al. (2023)	<i>Effects of Interactions with Cats in Domestic Environment on the Psychological and Physiological State of Their Owners: Associations among Cortisol, Oxytocin, Heart Rate Variability, and Emotions</i>	Interaction with domestic cats (<i>Felis catus</i>) has been marked increase in positive emotions and a concomitant decrease in negative emotions in their owners. From a physiological perspective, this interaction has been shown to decrease urinary cortisol levels (stress) and increase heart rate variability (HRV), indicating activation of the parasympathetic nervous system (relaxation).
Overgauuw et al. (2020)	<i>A One Health Perspective on the Human-Companion Animal Relationship with Emphasis on Zoonotic Aspects</i>	Apart from the psychological benefits that pets, such as cats, provide to their owners, there is also the potential for these animals to act as vectors for zoonoses, which have the capacity to correlate with mental health and certain conditions
Sinmez et al. (2024)	<i>Predictors on mental health of owning cats and dogs</i>	This religious respect strengthens the bond between humans and animals. This has been clinically indicated to reduce symptoms of anxiety, depression, and chronic stress through a calming physical presence
Stull et al. (2015)	<i>Reducing the risk of pet-associated zoonotic infections</i>	The emotional benefits of cats preferred be realised in a sustainable manner if zoonotic risks are effectively managed. In the event of proprietors becoming unwell as a consequence of their felines, this will have a detrimental effect on their mental well-being
Vitale Shreve et al. (2017)	<i>Social interaction, food, scent or toys? A formal assessment of domestic pet and shelter cat (<i>Felis silvestris catus</i>) preferences</i>	The majority of cats, preferably more like social interaction with human over other stimuli. However, this preference is subject to variation depending on the environmental context and the cat's individual history

1. A Biological and Behavioral Analysis of Domestic Cat Human Emotion Regulation Hormones and Mental Health

Domestic cats have been found to exhibit unique social flexibility. Despite their innate solitary and territorial tendencies, these species have demonstrated an ability to adapt to both colony and dense population settings. This is influenced by internal factors, including the effects of cortisol and testosterone levels, which regulate social contact in cats. The composition of microbiome is also a factor, as it has been identified as having a close relationship with mental health and behaviour in cats. However, research in this area is still limited.¹²

Furthermore, the personality or behaviour of cats themselves can be described in a personality framework called The Feline Five, which includes Neuroticism (Fear or negative emotions), Extraversion (Social behaviour), Dominance (Assertiveness), Impulsiveness (Spontaneity), and Agreeableness (Tolerance). Understanding the 'Feline Five' personality framework is essential things for owners to manager expectation, that it has been associated with influencing the quality of emotional regulation within the household or owner, although there has been no definitive validation to date.¹³ The research from Vitale et al. revealed stimulus preferences with specific assessment settings (pet and shelter cats), their interactions with humans is the highest stimulus preference, even surpassing their interest in food. However, each cat still has own unique taste of stimulus upon another cat's environment and previous social history.¹⁴

The interaction between humans and domestic cats creates a reciprocal dynamic that significantly influences the hormonal profiles and streets levels of both organisms. The study's findings include the roles of oxytocin and cortisol as indicators of well-being. In

¹² Hikari Koyasu, Hironobu Takahashi, Moeka Yoneda, Syunpei Naba, Natsumi Sakawa, Ikuto Sasao, Miho Nagasawa, & Takefumi Kikusui. "Correlations between behavior and hormone concentrations or gut microbiome imply that domestic cats (*Felis silvestris catus*)". *PLoS ONE*, 17(7), 2022: e0269589. <https://doi.org/10.1371/journal.pone.0269589>

¹³ Marion Cordonnier, Amira Perrot, Nicolas Ferry, Elsa Bonnaud, & Emmanuelle Baudry. "Pet cat personality linked to owner-reported predation frequency". *cology and Evolution*, 13(1), 2023: e9651. <https://doi.org/10.1002/ece3.9651>

¹⁴ Kristyn R. Vitale Shreve, Lindsay R. Mehrkam, Monique A.R. Udell. "Social interaction, food, scent or toys? A formal assessment of domestic pet and shelter cat (*Felis silvestris catus*) preferences". *Behavioural Processes*, 141(1), 2017: 322-328. <https://doi.org/10.1016/j.beproc.2017.03.016>

humans, interaction with cats has been demonstrated to increase oxytocin levels, which play a significant role in social bonding and stress reduction.¹⁵ This phenomenon has also been observed in felines, with domestic cats receiving positive social interaction displaying higher urinary oxytocin levels and lower cortisol levels in comparison to those not receiving interaction.¹⁶ However, the interaction does not invariably have a calming effect. Indeed, research indicates that free interaction can increase the owner's heart rate, suggesting an arousal effect or positive emotional excitement.

The impact of human-cat interaction is also evident in autonomic nervous system activity and behavioral response. Interaction with felines has been demonstrated to engender a reduction in negative emotional arousal.¹⁷ However, research has also indicated that parasympathetic activation in humans is sometimes found to be higher during conditions of total rest without disturbance. This suggests that interaction is a complex stimulant activity. From a feline perspective, an individual's level of comfort is contingent upon humans demonstrating responsiveness to their body language. The implementation of human-cat interaction (HCI) guidelines that empower cats with control and choice, such as restricting physical contact to their preferred body areas, has been demonstrated to effectively enhance affiliative behavior and mitigate aggression. This finding lends further support to the hypothesis that the quality, as opposed to the quantity, of interaction is a more significant factor in determining an animal's stress level.¹⁸

In the context of feline behavior, studies have identified affectionate behavior, such as snuggling, as a significant factor in influencing human emotional regulation and

¹⁵ Takumi Nagasawa, Yuichi Kimura, Koji Masuda, & Hidehiko Uchiyama. "Effects of Interactions with Cats in Domestic Environment on the Psychological and Physiological State of Their Owners: Associations among Cortisol, Oxytocin, Heart Rate Variability, and Emotions". *Animals*, 13(13), 2023; 2116. <https://doi.org/10.3390/ani13132116>

¹⁶ Lydia K. Rehnberg, Kylie A. Robert, Simon J. Watson, Richard A. Peters. "The effects of social interaction and environmental enrichment on the space use, behaviour and stress of owned housecats facing a novel environment". *Applied Animal Behaviour Science*, 169(1), 2015: 51-61. <https://doi.org/10.1016/j.applanim.2015.06.002>

¹⁷ Takumi Nagasawa, Mitsuaki Ohta, & Hidehiko Uchiyama. "The Urinary Hormonal State of Cats Associated With Social Interaction With Humans". *Frontiers in Veterinary Science*, 8(1), 2021: 680843. <https://doi.org/10.3389/fvets.2021.680843>

¹⁸ Camilla Haywood, Lucia Ripari, Jo Puzzo, Rachel Foreman-Worsley, Lauren R. Finka. "Providing Humans With Practical, Best Practice Handling Guidelines During Human-Cat Interactions Increases Cats' Affiliative Behaviour and Reduces Aggression and Signs of Conflict". *Frontiers in Veterinary Science*, 8(1), 2021: 714143. <https://doi.org/10.3389/fvets.2021.714143>

mental health. During this behaviour, the cat rubs its body against an object or person, thereby providing a psychological calming effect. Indeed, this principle has been adapted into a social robotics design to help reduce anxiety in humans.¹⁹ The effectiveness of cats in promoting stress reduction in their owners can also take the form of their presence as a figure that is physically close to the owner, which can evoke a deep sense of security and comfort for the owner, helping them cope with unfamiliar or stressful environments. Furthermore, the ability of humans to recognize behavioral signals exhibited by cats (e.g. fear, anxiety, and stress) has encouraged the development of low-stress handling techniques. These techniques teach humans to adjust their interactions with cats, including body language and responses to their interlocutors.²⁰ However, a comprehensive review of the extant literature reveals a paucity of studies that specifically address the influence of cat behaviors on human emotional regulation and mental health. Nevertheless, the potential for cat-based interventions to be effective non-pharmacological strategies for mental health remains, provided that they are supported by the development of assessment procedures that meet standards.

In addition to providing psychological benefits, domestic cat ownership also carries public health risks. One such example is zoonotic diseases, which have the potential to adversely impact the mental well-being of their owners. Domestic cats themselves have been identified as potential vectors for various pathogens that can be transmitted to humans, such as rabies, toxoplasmosis, cat scratch disease, and even resistant bacteria like MRSA (Methicillin-resistant *Staphylococcus aureus*). The transmission of the pathogen occurs through various mechanisms, ranging from direct contact (bites and scratches) to indirect contact through contaminated objects or insect vectors.²¹ The existence of this medical risk

¹⁹ Yuga Adachi, & Fumihide Tanaka. "Development of a Snuggling Robot That Relieves Human Anxiety". *ACM/IEEE International Conference on Human-Robot Interaction*, 2022: (pp. 662-664). <https://doi.org/10.1109/HRI53351.2022.9889432>

²⁰ Brenda Griffin. "Handling Shelter Cats". *Animal Behavior for Shelter Veterinarians and Staff*, 2022: (pp. 351-383). <https://doi.org/10.1002/9781119618515.ch14>

²¹ Shivangi Udainiya, Amita Tiwari, Apoorva Mishra, & Amita Dubey. *Zoonotic diseases of dogs and cats*. Introduction to Diseases, Diagnosis, and Management of Dogs and Cats, 2023: (pp. 559-572). <https://doi.org/10.1016/B978-0-443-18548-9.00037-8>

ultimately creates a new stressor in the relationship between humans and animals, where concerns about disease transmission can trigger systemic anxiety in cat owners.²²

The psychological impact of zoonoses is frequently initiated by the limited knowledge and awareness of cat owners.²³ A study demonstrates that disease management in pets can act as a significant source of stress for owners, particularly those aware of the risk in zoonotic diseases, especially those with vulnerable family members such as young children or individuals with low immune systems.²⁴ Another study that according to Overgaauw et al., the manifestation of zoonotic symptoms in humans is not a static risk but is determined by multifactorial variables, including the pet species (including domestic cats), housing conditions, degree of contamination, and most critically, the host's immune status. Epidemiological data identifies specific 'at-risk' populations, notably children under five years of age, the elderly (≥ 65 years), immunocompromised patients, and pregnant women, who face a higher-than-average risk of severe clinical complications.²⁵ Hygiene compliance among owners remains suboptimal. Research indicates that only 8% of cat owners consistently wash their hands after contact with animal. It is noteworthy that demographic factors, including age, gender, and education level, have the capacity to influence the manner in which these stressors manifest.

It has been demonstrated that mitigation strategies, including hygiene practices, regular veterinary visits, and the adoption of safe interaction behaviors, has been associated with efficacious not only in the prevention of physical illness but also in the reduction of owner anxiety.²⁶ Effective risk mitigation should prioritize targeted preventive education

²² Grazia Guidi, Giovanna Carlini, Veronica Marchetti, & Ilaria Lippi. "Pet's diseases and owner's anxiety: Is the leash an umbilical cord?" *Dog Behavior*, 1(3), 2015: 1-5. <https://doi.org/10.4454/db.v1i3.21>

²³ MS Andrianto, H Widyastuti, & N Hidayati. "Strategy to increase awareness of zoonosis among cat owners through education, vaccination and community strengthening". *IOP Conference Series: Earth and Environmental Science*, 2024: (p. 012124). [10.1088/1755-1315/1359/1/012124](https://doi.org/10.1088/1755-1315/1359/1/012124)

²⁴ Mahendra Pal, & Dinaol Tolawak. "A Comprehensive Review on Major Zoonotic Parasites From Dogs and Cats". *International Journal of Medical Parasitology and Epidemiology Sciences*, 4(1), 2023: 3-11. <https://doi.org/10.34172/ijmpes.2023.02>

²⁵ Jason W. Stull, Jason Brophy, J.S. Weese. Reducing the risk of pet-associated zoonotic infections. *Can. Med. Assoc. J.* 187(10), 2015:736-743. <https://doi.org/10.1503/cmaj.141020>

²⁶ Paul A.M. Overgaauw, Claudia M. Vinke, Marjan A.E. van Hagen, 7 Len J.A. Lipman. "A one health perspective on the human-companion animal relationship with emphasis on zoonotic aspects". *International Journal of Environmental Research and Public Health*, 17(11), 2020: 3789. <https://doi.org/10.3390/ijerph17113789>

and the evaluation of contact frequency, ensuring that feline companionship serves as a safe and sustainable non-pharmacological support for mental well-being.

2. The Position of *Felis catus* in Civilization and the Islamic Perspective

Throughout history and across diverse cultural contexts, cats have been subject to fluctuating dynamics in human societies, ranging from veneration to stigmatization. In ancient Egypt, for instance, cats were held in high esteem and were frequently depicted in religious iconography and rituals. In contrast, in Greece and Rome, their function was more aligned with ecological concerns, as they were employed as effective pest controllers.²⁷ However, in medieval Europe era, cats were often associated with witchcraft and superstition, which fueled negative sentiments for centuries.²⁸ In the contemporary era, there has been a shift in societal attitudes towards cats, with them being recognized not only as pest controllers, but also as cherished members of the family unit.

In Islam, it is believed that animals possess souls and are entitled to be treated with compassion. It is also believed that harming animals can have consequences on the Day of Judgement. It is notable that cats, in particular, have been accorded a special place in Islamic culture, largely due to the fact that the Prophet Muhammad was an enthusiast of felines. This had a significant impact on the positive attitude of Muslims towards cats, an attitude that has been perpetuated to the present day.

In general, it is crucial to have an Islamic understanding of compassion for pets (including cats). Animals are Allah SWT's creatures who deserve protection and a decent life, just like humans. They should be free from hunger, thirst, pain and abuse, and able to express their natural behaviors. The primary intention when caring for any animal should be to seek the reward and approval of Allah SWT, while also avoiding His wrath and punishment. In Islam, feeding animals is also a recommended act that is well rewarded. Islam teaches the importance of treating animals with compassion and kindness, including

²⁷ Donald W. Engles. *Classical cats: The rise and fall of the sacred cat*. (London: Routledge, 2018).

²⁸ Marina Geiger Zeman, & Zdenko Zeman. "Memoirs of cross-species friendship or how cats' and humans' lives are interwoven". *Knjizevna Smotra*, 51(103), 2019: 77-90. <https://hrcak.srce.hr/230326>

feeding them properly²⁹. There are numerous arguments regarding the significance of feline affection, including a hadith recorded by Al-Bukhari (Hadith no. 2365) and Muslim (Hadith no. 2242) concerning a woman who was condemned to hell for harming a cat:

عُدِّبَتْ امْرَأَةٌ فِي هِرَّةٍ حَبَسْتَهَا، حَتَّى مَاتَتْ جُوعًا، فَدَخَلَتْ فِيهَا النَّارَ . قَالَ فَقَالَ وَاللَّهِ أَعْلَمُ . لَا أَنْتِ أَطْعَمْتَهَا وَلَا سَقَيْتَهَا حِينَ حَبَسْتِهَا، وَلَا أَنْتِ أَرْسَلْتِهَا فَأَكَلَتْ مِنْ حَشَاشِ الْأَرْضِ

*A woman was thrown into hell because of a cat she had locked up. She did not feed it, nor did she allow it to eat insects on the ground.*³⁰

Another notable narrative pertains to a companion of the Prophet, named Abd Syams, who harboured a profound affinity for felines. Consequently, he was bestowed with the sobriquet Abu Hurairah, a diminutive form (*Tashghir*) of the Arabic word “*hirrun*”, signifying “father of diminutive cat”. Imam Ibn Hajar al-Haitami himself once made the following statement in the book *Al-Fatawa al-Fiqhiyyah al-Kubra* Juz 4 page 240:

*"It is recommended to honour (care for) cats. And it is obligatory for the owner to feed it if the cat cannot find food for itself"*³¹.

In numerous regions where Islam is the predominant religion, this narrative is employed as a theological justification to oppose the practice of animal cruelty. This phenomenon may also provide a rationale for the higher prevalence of cat ownership in Islamic cultures, as compared to dog ownership. A positive attitude towards cats has the potential to establish an ethical foundation for Muslims to treat cats with respect and

²⁹ Oktaviona Oktaviona, Masrukhin Muhsin, & Salim Rosyadi. “Kasih Sayang Manusia Terhadap Hewan Peliharaan Studi Hadis Tematik”. *TADHKIRAH: Jurnal Terapan Hukum Islam Dan Kajian Filsafat Syariah*, 2(2), 2025:115-28. <https://doi.org/10.59841/tadhkirah.v2i2.141>

³⁰ Muhammad bin Ismail Al-Bukhari. *Shahih al-Bukhari*. Kitab al-Musaqah, Bab Fadhl man Saqa al-Bahimah, No. Hadits 2365, (Dar Al-Tasil, 2012); Muslim bin al-Hajjaj. *Shahih Muslim*. Kitab al-Salam, Bab Tahrim Qatl al-Hirrah, No. Hadits 2242, (Dar Al-Tasil, 2014).

³¹ Ibnu Hajar Haitami. *Al-Fatawa Al-Kubro Al-Fiqhiyyah*, jilid 4. (Beirut-Lebanon: Dar al Fikr, 1983).

affection, which then transforms into a form of emotional support in the household environment.³²

Evidence and Hadiths regarding affection for cats have been widely discussed, including by Mula Ali Al-Qari, a prominent Ottoman scholar. In his short treatise *Al-Birrah fi Hubb al-Hirrah* (The Kindness of Loving Cats), reviewed by Musaffa and Hidayati (2024), Mulla Ali al-Qari discusses the phrase 'loving cats is part of faith'.

According to him, the hadiths about cats in circulation do not specifically recommend keeping cats. Rather, they recommend kindness towards cats and discourage mistreatment. While the hadiths state that cats are part of the family, this does not mean that they should be treated as real family members, with the provision of a home, food and excessive care. Overtreating pets can be sinful if it neglects one's primary obligation to one's family. People who don't like cats are not sinning because loving and being kind to cats is not something every Muslim must do.

Apart from that, Mula Ali Al Qari also discussed the history of the Prophet Muhammad, who loved cats. According to him, the Prophet's actions towards cats were humane and not based on a special command to love cats. The prohibition on torturing cats applies not only to cats, but also to other animals, fellow humans, and nature in the form of plants and inanimate objects. A person who treats animals badly will be punished by Allah in the future. This applies not only to cats, but to any animal that is treated cruelly.³³

From a bio-psychological perspective, this religious respect strengthens the bond between humans and animals. This has been clinically indicate to reduce symptoms of anxiety, depression, and chronic stress through a calming physical presence.³⁴ The integration of non-pharmacological medical treatment with animals, including domestic

³² Hassan Rezaee Haftador, & Eshaq Hoseyni Koohsari. "Examination of human psychological needs according to Islamic teachings". *Asian Social Science*, 1(18), 2015: 93-99. <http://dx.doi.org/10.5539/ass.v11n18p93>

³³ Arini Silma Musaffa, & Hidayati Hidayati. "Hadis-hadis kucing dalam pandangan Mula Ali Al-Qari (Kajian Kitab Risalah Al-Birrah Fi Hubb Al Hirrah)". *DIRAYAH: Jurnal Ilmu Hadis*, 5(1), 2024: 24-38. <https://doi.org/10.62359/dirayah.v5i1.355>

³⁴ Çağrı Çağlar Sinmez, Ahmet Metin, Emre Tüfekçi, Ali İlteriş Aykun, & Vehbi Güneş. "Predictors on mental health of owning cats and dogs". *Turkish Journal of Veterinary and Animal Sciences*, 48(4), 2024: 180-189. <https://journals.tubitak.gov.tr/veterinary/vol48/iss4/4/>

cats, with Islamic aspects demonstrates that cultural understanding of animal emotions and behaviour can enhance the efficacy of mental health interventions, particularly for Muslims.³⁵ However, to date, no specific research has been found on the integration of Islamic culture related to cat ownership with human mental health.

Conclusion

Based on the literature review process, conclusion were obtained which include, inference, limitation, and recommendation which are presented below:

1. Inference

A review of the extant literature suggests that domestic cats (*Felis catus*) are a species that combines biological complexity with unique behavioral flexibility characteristics may contribute to human psychological resilience. Evidence from various studies indicate an association between positive behavior of domestic cats and the modulation of human stress-related hormones, thereby positioning the species has a potential to strength their role as supporters of human mental health. From an Islamic perspective, cats are held in high esteem as they were the pets of the Prophet Muhammad PBUH. Consequently, in the modern era, the species is no longer regarded exclusively as a pest controller, but appears to have transitioned as a family member that that can positively correlate the emotional well-being of their owners. However, these psychological and spiritual benefits also engender ethical and ecological responsibilities, particularly in mitigating the risk of zoonotic diseases through preventive education and considering the impact of stray cats on local biodiversity.

2. Limitation

This literature review has several limitations that should be noted. firstly, clinical evidence regarding hormonal changes, such as fluctuations in oxytocin and cortisol, is heterogenous and influenced by varying study designs and samples sizes. secondly, cat behavioral preferences for human interaction depend heavily on environmental context; for

³⁵ Sadique Pathan. "Islamic spirituality and social work interventions: The person-in-relation approach". *International Social Work*, 59(3), 2016: 406-418. <https://doi.org/10.1177/0020872815626993>

example, there are differences between indoor cats and shelter cats. Thirdly, although Islamic literature provides a strong ethical foundation, there is a lack of empirical studies that specifically integrate Islamic cultural practices with clinically measurable mental health outcomes.

3. Recommendation

The following recommendations are derived from this review: the development of animal-based stress management techniques (including *Felis catus*) should be carried out with a more personalized approach. In the clinical context, the integration of cat interaction as a complementary therapy with low-stress handling protocols is imperative to ensure that the increased oxytocin levels observed in humans do not result in elevated cortisol levels in cats. Furthermore, the optimization of the bio-psychological environment in urban dwellings, such as the provision of vertical space and sensory simulation, is strongly recommended. This approach has been biologically indicating to reduce maladaptive behavior in cats, which in turn will create positive feedback for human mental health.

In the domain of research, further consideration is required regarding the association between microbiota, intestines, and brains in cats, which can be integrated with the physical health and behavior of cats, which can directly impact psychosocial dynamics in households. In the context of a more biodiverse realm, the phenotypic diversity of domestic cats can be further studied, where their color, coat, and behavior can indirectly become determining factors in selecting non-pharmacological mental health treatment methods.

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