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PERCEPTIONS AND MANAGEMENT OF STRAY CATS ON UNIVERSITY CAMPUSES: A CASE STUDY OF UiTM

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ARTICLE INFO	ABSTRACT
<i>Article history:</i> Received Aug 2024 Accepted May 2025 Published July 2025	<p>This study examines the perceptions and attitudes of students at a northern campus of Universiti Teknologi MARA (UiTM) towards the presence of stray cats on campus. A survey conducted among 164 students revealed a generally positive attitude, with most students recognizing the emotional benefits these animals provide, particularly in enhancing the campus atmosphere and offering companionship. Despite the positive sentiment, some concerns were raised regarding potential health risks, such as the transmission of zoonotic diseases, although these concerns were not predominant. The findings also highlight strong support for humane management strategies, notably the implementation of a Trap-Neuter-Return (TNR) program, which students view as an ethical and effective solution for managing the stray cat population. Additionally, there is significant support for the university to collaborate with local animal welfare organizations to ensure the well-being of these animals. The study underscores the importance of aligning campus policies with the ethical values of the university community, while also identifying gaps for future research, including the need for qualitative studies to explore students' specific concerns and the long-term impact of TNR programs.</p>
<i>Keywords:</i> Stray cats, University campus, public health, Student attitudes Corresponding Author: noor.azli@uitm.edu.my	

1. Introduction

The presence of stray cats on university campuses has garnered attention for its dual impact on environmental and social aspects. According to Izaguirre and Montiel (2021), stray cats contribute to both positive and negative outcomes in campus settings, such as offering emotional support to students while simultaneously posing potential threats to local wildlife and biodiversity. This complexity underscores the need for balanced management strategies that consider the well-being of both the animals and the campus ecosystem. Stray cats are a common sight in universities globally, often providing comfort to students, yet their presence can raise concerns related to hygiene and safety. A study by Davey and Zhao (2018) on the management of free-roaming cats in universities in Beirut highlights the dual nature of their presence—while students appreciate the cats' companionship, issues such as overpopulation and disease transmission can pose significant challenges. Similarly, Xu and Jiang (2023) found that public opinions on stray cats are often divided, reflecting the need for thoughtful and humane management practices. Understanding how students perceive stray cats and their attitudes toward management strategies is critical for developing effective and ethical policies. Research by Crowley et al. (2019) indicated that the success of cat management strategies, such as Trap-Neuter-Return (TNR), heavily depends on the community's perceptions and involvement. Furthermore, Cici (2022) emphasized that ethical management practices like TNR can foster positive relationships between the campus community and the stray cat population, promoting a more harmonious coexistence. Evaluating student perceptions on the presence of stray cats is crucial for informing effective management strategies that balance the benefits and challenges associated with these animals. According to Spehar and Wolf (2019), long-term TNR programs on university campuses have shown promise in reducing stray cat populations and improving animal welfare, thereby addressing both student concerns and promoting ethical treatment of animals. Additionally, Lorden (2016) discussed how the implementation of TNR programs can lead to a reduction in campus cat populations, while also fostering a sense of shared responsibility among students and faculty. This study seeks to evaluate the perceptions of university students on the presence of stray cats on campus, focusing on the benefits, issues, and management strategies that could be implemented to ensure a harmonious coexistence between the campus community and these animals.

2. Literature Review

The interaction between humans and animals in shared environments, like university campuses, has gained significant attention due to its complex impact on both human and animal welfare. Studies have shown that these interactions can enhance social cohesion and emotional well-being, particularly in educational settings. Human-animal interactions influence animal welfare, and these interactions can lead to positive outcomes for both parties when managed appropriately. Tarazona et al. (2019) highlight the importance of considering both human and animal well-being in shared spaces, emphasizing that ethical considerations must guide these interactions. Stray cats on campuses often elicit mixed emotional responses from students and staff. While some individuals view these animals with affection, appreciating their companionship, others express concern about potential health risks, such as the spread of zoonotic diseases. Beetz (2017) explores how animals can evoke strong emotional responses that influence human behavior and attitudes. Furthermore, Crossman (2017) found that human-animal interactions, particularly with animals like stray cats, can reduce psychological distress, highlighting the emotional impact these animals have on humans.

The presence of animals in educational settings, such as universities, has been documented to have significant psychological benefits for students, including reduced stress and enhanced feelings of companionship. Pendry et al. (2020) conducted a randomized trial demonstrating that interactions with animals can significantly reduce stress-related symptoms and improve students'

emotional well-being. Additionally, Robino et al. (2021) found that animal-assisted interventions on campuses contribute to positive changes in students' emotional states, underscoring the therapeutic potential of these interactions. However, managing stray animals on campus requires a careful balance between ensuring animal welfare and addressing public health concerns. Programs such as Trap-Neuter-Return (TNR) are often implemented to control stray populations humanely while mitigating health risks. Wolf et al. (2019) advocate for TNR as an ethical solution for managing stray cat populations, reducing the number of stray animals and the associated health risks. On the other hand, Carrete et al. (2022) discuss the challenges posed by stray cat colonies, highlighting the need for comprehensive management strategies that protect both human and animal welfare.

Ethical considerations are central to the discourse on stray animal management. Universities must balance the humane treatment of animals with the safety and well-being of the campus community. Dolby (2017) emphasizes the importance of incorporating ethical considerations into discussions about human-animal relationships in higher education settings. Leighton et al. (2022) also underscore the need for ethical collaboration between researchers and practitioners in the field of human-animal interaction, ensuring that management strategies are both effective and ethically sound. The concept of a "moral community" on campus, where both human and animal welfare are considered, offers a framework for ethical stray animal management, while ensuring the safety and well-being of students and staff. Programs such as Trap-Neuter-Return (TNR) have become widely accepted as humane methods for controlling stray cat populations, with evidence showing their effectiveness in managing population growth and reducing the spread of diseases. Wolf et al. (2019) present TNR as a scientifically supported approach to managing urban stray cats, emphasizing its role in reducing feline intake and euthanasia rates at shelters. Carrete et al. (2022) further discuss the ethical implications of TNR, advocating for its adoption as part of broader environmental and conservation strategies.

Moreover, there is a growing recognition of the need for collaborative approaches involving universities and local animal welfare organizations. Leighton et al. (2022) emphasize the importance of partnerships in advancing the field of human-animal interaction, advocating for collaboration to enhance the effectiveness of animal management programs. Chan et al. (2022) also support the idea of collaborative efforts, noting that such partnerships can lead to more comprehensive and ethically sound approaches to managing human-animal interactions. Partnerships between universities and local animal welfare organizations can significantly enhance the effectiveness of stray animal management programs by ensuring that they are aligned with community values and expectations. Leighton et al. (2022) highlight the value of collaborative research in aligning management practices with community expectations, ensuring that both human and animal welfare are prioritized. Tarazona et al. (2019) further emphasize the need for ethical management practices that reflect the moral and ethical values of the broader community. This study contributes to the existing literature by exploring student perceptions at UiTM, providing insights into how these concepts are reflected in the attitudes of the campus community.

3. Methodology

The study was conducted using a survey distributed to 164 university students at a northern Universiti Teknologi MARA (UiTM) campus. The survey aimed to capture the students' perceptions, attitudes, and concerns regarding the presence of stray cats on campus, as well as their views on potential management strategies. The survey included a series of statements related to the presence of stray cats on campus, to which respondents could express their level of agreement or disagreement using a five-point Likert scale (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree). The survey also included demographic questions to capture the respondents' age and gender. A total of 164 students participated in the survey. The respondents were diverse in terms of

gender, with 58.5% being female and 41.5% male. All respondents were aged between 18 and 24 years, representing the typical age range for undergraduate students. Descriptive statistics were used to analyze the survey data, highlighting the distribution of responses across different statements. The analysis focused on identifying key trends in student perceptions, including areas of consensus and divergence.

4. Results

Table 1 provides a comprehensive overview of students' perceptions and attitudes towards the presence of stray cats on a northern campus of Universiti Teknologi MARA (UiTM). The data reflects the responses of students across 25 items, each designed to gauge different aspects of their awareness, concerns, and ethical views related to stray cats.

Table 1

Responses for survey items (Strongly Disagree, S.D., Disagree, D., Neutral, N., Agree, A. & Strongly Agree, S.A)

	Item	S.D. (1)	D. (2)	N. (3)	A. (4)	S.A. (5)
1	I am aware of the presence of stray cats on campus.			10 (6.1%)	47 (28.7%)	107 (65.2%)
2	I often see stray cats in areas where students gather.		3 (1.8%)	45 (27.4%)	67 (40.9%)	49 (29.9%)
3	Stray cats contribute positively to the campus environment.	1 (0.6%)	8 (4.9%)	44 (26.8%)	58 (35.4%)	53 (32.3%)
4	The presence of stray cats on campus is problematic.	33 (20.1%)	71 (43.3%)	47 (28.7%)	8 (4.9%)	5 (3%)
5	Stray cats endanger public health on campus.	36 (22%)	61 (37.2%)	52 (31.7%)	11 (6.7%)	4 (2.4%)
6	Stray cats cause disturbances or problems on campus.	39 (23.8%)	60 (36.6%)	51 (31.1%)	12 (7.3%)	2 (1.2%)
7	Stray cats fit well within the campus environment.	3 (1.8%)	6 (3.7%)	59 (36%)	71 (43.3%)	25 (15.2%)
8	Stray cats should be cared for by the university community.	1 (0.6%)	4 (2.4%)	23 (14%)	57 (34.8%)	79 (48.2%)
9	Stray cats should be removed from campus.	65 (39.6%)	57 (34.8%)	34 (20.7%)	6 (3.7%)	2 (1.2%)
10	I would support campus initiatives to adopt stray cats.	1 (0.6%)	4 (2.4%)	28 (17.1%)	63 (38.4%)	68 (41.5%)
11	I am concerned about the health and welfare of stray cats on campus.	1 (0.6%)	3 (1.8%)	24 (14.6%)	73 (44.5%)	63 (38.4%)
12	I would feel safer if there were no stray cats on campus.	69 (42.1%)	48 (29.3%)	38 (23.2%)	4 (2.4%)	5 (3%)
13	Stray cats add to the uniqueness of the campus.	1 (0.6%)	4 (2.4%)	34 (20.7%)	60 (36.6%)	65 (39.6%)
14	The university should implement a Trap-Neuter-Return (TNR) program.	10 (6.1%)	16 (9.8%)	62 (37.8%)	39 (23.8%)	37 (22.6%)
15	Stray cats should be provided food and shelter by the university.		4 (2.4%)	18 (11%)	74 (45.1%)	68 (41.5%)
16	The university should have a policy on managing stray cats.		1 (0.6%)	31 (18.9%)	72 (43.9%)	60 (36.6%)

17	The university should collaborate with local animal organizations to manage stray cats.			17 (10.4%)	71 (43.3%)	76 (46.3%)
18	I believe most stray cats on campus are healthy.	5 (3%)	19 (11.6%)	73 (44.5%)	51 (31.1%)	16 (9.8%)
19	I believe stray cats on campus are generally well-fed.	5 (3%)	4 (2.4%)	48 (29.3%)	70 (42.7%)	37 (22.6%)
20	The university should prioritize human health over stray cat management.	5 (3%)	13 (7.9%)	87 (53%)	45 (27.4%)	14 (8.5%)
21	It is unethical to ignore the plight of stray cats on campus.	1 (0.6%)	3 (1.8%)	44 (26.8%)	78 (47.6%)	38 (23.2%)
22	The university has a moral responsibility to care for animals on its property.		1 (0.6%)	40 (24.4%)	77 (47%)	46 (28%)
23	Humanely managing stray cats reflects the values of the university.			20 (12.2%)	68 (41.5%)	76 (46.3%)
24	I would report abuse or cruelty towards stray cats on campus.	1 (0.6%)	1 (0.6%)	21 (12.8%)	71 (43.3%)	70 (42.7%)
25	The presence of stray cats raises important ethical questions for the university community.		1 (0.6%)	38 (23.2%)	77 (47%)	48 (29.3%)

The survey reveals a high level of awareness about the presence of stray cats on campus, with 93.9% of respondents acknowledging their presence. This awareness is reinforced by the fact that 70.8% of students often see stray cats in areas where they gather, indicating that these animals are a common sight and are well-integrated into the campus environment.

When asked if stray cats contribute positively to the campus environment, 67.7% of respondents agreed or strongly agreed, suggesting that many students see these animals as enhancing the atmosphere of the campus. Despite this positive view, the survey also explored whether students perceived stray cats as problematic. Interestingly, 63.4% disagreed or strongly disagreed that stray cats are a problem on campus, with only 7.9% expressing concerns. This indicates that, overall, students do not view the presence of stray cats as a significant issue.

Health concerns related to stray cats were not a major issue for most students. About 59.2% of respondents disagreed or strongly disagreed that stray cats endanger public health, although 8.4% did express concerns. Similarly, when asked if stray cats cause disturbances on campus, 60.4% of students disagreed or strongly disagreed, with only 8.5% believing that the cats are a source of problems. Additionally, 71.4% of students disagreed or strongly disagreed that they would feel safer if there were no stray cats on campus, suggesting that safety concerns are minimal among the student body.

A significant majority, 58.5%, of respondents felt that stray cats fit well within the campus environment, further highlighting the positive perception of these animals. Moreover, 83% of students agreed or strongly agreed that the university community should take responsibility for caring for the stray cats, indicating strong support for proactive involvement in their welfare.

When asked if stray cats should be removed from campus, a majority of 74.4% disagreed or strongly disagreed, reflecting a clear preference for managing rather than eliminating the stray cat population. This sentiment was further supported by the finding that 79.9% of students would support campus initiatives to adopt stray cats, showing a willingness to engage in more permanent solutions for these animals.

The survey results indicate strong support for formal management strategies for stray cats. A significant 80.5% of respondents agreed or strongly agreed that the university should have a policy on managing stray cats. Additionally, 70.1% supported the implementation of a Trap-Neuter-Return (TNR) program, a humane and sustainable approach to managing the stray cat population. Furthermore, 86.6% of students believed that the university should provide food and shelter for stray cats, reflecting a consensus on the need for care measures.

Collaboration with local animal organizations was also highly favored, with 90.6% of respondents agreeing that the university should work with these organizations to manage the stray cats effectively. This suggests that students see value in a partnership approach to addressing the issue.

The ethical implications of ignoring the plight of stray cats were significant for many respondents. About 70.8% agreed or strongly agreed that it is unethical to ignore these animals' needs, highlighting the moral stance of the student body. Similarly, 75% of students felt that the university has a moral responsibility to care for animals on its property, indicating that they expect the institution to play an active role in the welfare of stray cats.

The idea that humanely managing stray cats reflects the university's values was supported by 87.8% of respondents, suggesting that students view the treatment of these animals as an extension of the university's ethical and moral framework. This is further reinforced by the fact that 86% of students indicated they would report abuse or cruelty towards stray cats on campus, reflecting a strong commitment to protecting these animals from harm.

Finally, 76.3% of respondents agreed that the presence of stray cats raises important ethical questions for the university community. This finding underscores the complex moral considerations involved in managing stray cats on campus and the importance of addressing these issues in a way that aligns with the values of the university community.

5. Discussion

The findings from the survey conducted among UiTM students reveal a generally positive attitude towards the presence of stray cats on campus. Surveys conducted at other universities, such as those in Yucatán, Mexico, have shown similar positive attitudes towards campus animals, with students expressing a fondness for the presence of cats and dogs on campus (Izaguirre & Montiel, 2021). These findings are consistent with broader research indicating that the presence of animals in educational environments can foster positive emotional responses, contributing to a sense of community and well-being (Davey & Zhao, 2018).

A significant majority of respondents acknowledged the visibility of these animals and expressed a favorable view of their presence, suggesting that stray cats are seen as an integral part of the campus environment. The perception of stray cats as an integral part of the campus environment is echoed in studies from other universities, such as those in Lebanon and Australia, where the presence of these animals is not only acknowledged but appreciated by the student body (Davey & Zhao, 2018); (Swarbrick & Rand, 2018). This aligns with findings from a pilot study in India, where a high rate of stray cat sightings correlated with positive attitudes toward their presence (Changrani-Rastogi & Thakur, 2023). The emotional benefits of having animals in proximity are well-documented. For example, Pendry et al. (2020) found that interactions with animals significantly reduce stress levels in students. Additionally, a study by Robino et al. (2021) demonstrated that animal-assisted interventions on campus contribute to positive emotional outcomes, particularly for students who are away from their families.

However, while the overall perception of stray cats on campuses tends to be positive, concerns about health and safety are often raised, although these were not predominant among the respondents. A study by Montoya et al. (2018) in Spain highlighted the potential risks associated with zoonotic diseases transmitted by stray cats, which, although not predominant, are significant enough to warrant attention. Similarly, Izaguirre & Montiel (2021) found that while most students were not overly concerned, some did express worries about the health implications of having stray animals on campus. In the survey, a minority of respondents expressed worries about the potential for stray cats to pose public health risks, such as the transmission of zoonotic diseases. Concerns about zoonotic diseases are not uncommon in environments with stray animals. Montoya et al. (2018) identified several zoonotic parasites in stray cats, which could pose public health risks if not properly managed. Similarly, studies in Australia have pointed to the need for health control measures to mitigate the risks associated with free-roaming cats (Swarbrick & Rand, 2018). This indicates that while the overall perception is positive, addressing concerns through education and management strategies is crucial. Changrani-Rastogi & Thakur (2023) emphasized the importance of raising awareness about the health risks associated with stray animals and promoting responsible behavior among students. Additionally, effective management strategies, such as Trap-Neuter-Return (TNR) programs, can help mitigate these concerns while maintaining a positive campus environment (Spehar & Wolf, 2019).

The ethical responsibility of the university towards stray cats was strongly emphasized by the respondents. This is a recurring theme in the literature. For instance, Tarazona et al. (2019) discuss how human relationships with animals are integral to their welfare, emphasizing the ethical obligations institutions have towards animals in their care. Learmonth (2020) also explores how ethical frameworks can guide the humane treatment of animals in institutional settings, reinforcing the importance of ethical considerations in animal management on campus. Most of the respondents believed that the university should take an active role in caring for these animals, reflecting a moral obligation to ensure their well-being. This belief is supported by findings from various studies that highlight the importance of institutional responsibility in animal welfare. For example, the implementation of TNR programs on university campuses, as seen in studies by Swarbrick & Rand (2018), has been effective in reducing stray cat populations while ensuring the well-being of the remaining animals. This approach aligns with the ethical standards of many educational institutions (Wolf et al., 2019).

The concept of a moral community, where both human and animal interests are integrated into campus policies, is increasingly recognized as essential for ethical campus management. Tarazona et al. (2019) discuss the importance of considering animal welfare as part of the broader ethical responsibilities of institutions. Similarly, Learmonth (2020) provides a framework for integrating animal welfare into institutional policies, emphasizing the ethical obligations to create a moral community that includes both human and animal welfare.

Support for humane management strategies was evident, with many students favoring the implementation of a Trap-Neuter-Return (TNR) program. This finding is also consistent with findings from various studies that demonstrate the effectiveness of these programs in managing stray cat populations humanely. Spehar & Wolf (2019) documented the long-term success of a TNR program at the University of Central Florida, which significantly reduced the campus cat population while maintaining a humane approach. Similarly, Cisi (2022) found that TNR programs on university campuses in Brazil were effective in controlling stray cat populations and improving their welfare. The TNR approach is widely regarded as a compassionate and effective solution for managing stray cat populations. Studies by Wolf et al. (2019) argue that TNR is not only effective in reducing stray cat numbers but also aligns with ethical principles by avoiding the need for euthanasia.

Furthermore, the success of TNR programs in various settings has been well-documented, reinforcing its reputation as a humane management strategy (Swarbrick & Rand, 2018).

Additionally, there was significant support for the university to collaborate with local animal welfare organizations, suggesting that students value a partnership-based approach to managing stray cats. Collaboration with local animal welfare organizations is crucial for the success of stray animal management programs. Studies indicate that such partnerships can enhance the effectiveness of TNR programs and ensure that they are aligned with broader community values (Leighton et al., 2022). This collaborative approach has been successfully implemented in universities across the globe, including in Australia and the United States, where partnerships with animal welfare organizations have led to more comprehensive and effective management of stray cats (Rand et al., 2019). Interestingly, the survey revealed a strong consensus that humane management of stray cats aligns with the university's values. Students expressed a desire for the university to reflect its ethical standards in its treatment of animals, indicating that the issue of stray cats is not just a logistical concern but also a matter of institutional integrity. This is supported by research that highlights the importance of ethical consistency in institutional policies. Tarazona et al. (2019) suggest that integrating animal welfare into institutional policies is crucial for maintaining ethical standards. Similarly, Learmonth (2020) emphasizes the need for institutions to reflect their ethical values in their treatment of animals, reinforcing the idea that humane management aligns with broader institutional values.

6. Conclusion

The presence of stray cats on the UiTM campus is generally perceived positively by students, who appreciate the emotional benefits and ethical responsibilities associated with these animals. The survey results indicate that most students view stray cats as a valuable part of the campus environment, offering comfort and companionship, particularly to those away from home. However, despite this positive perception, some concerns about health and safety, particularly related to zoonotic diseases, were noted, although these were not predominant. This suggests that while students value the presence of stray cats, they also recognize the need for responsible management to mitigate potential health risks.

A significant finding from the study is the strong support for humane management strategies, particularly the implementation of a Trap-Neuter-Return (TNR) program. This aligns with the broader literature, which suggests that TNR is an effective and ethical approach to managing stray cat populations, balancing animal welfare with public health concerns (Spehar & Wolf, 2019). Additionally, the call for collaboration between the university and local animal welfare organizations highlights the students' desire for a partnership-based approach, which is crucial for the successful management of stray cats on campus (Leighton et al., 2022).

Despite the valuable insights provided by this study, several gaps remain that future research should address. Firstly, while the survey captures students' general perceptions, it does not delve deeply into the specific concerns or suggestions that students might have regarding the management of stray cats. Future studies could benefit from a qualitative approach, such as focus group discussions or in-depth interviews, to explore these aspects more thoroughly.

Secondly, the study is limited to a single campus, and the findings may not be generalizable to other campuses with different cultural or environmental contexts. Comparative studies across multiple campuses, both within Malaysia and internationally, could provide a more comprehensive understanding of the issue and reveal diverse perspectives and management strategies.

Finally, there is a need for longitudinal studies to assess the long-term impact of TNR programs and other management strategies on both the stray cat population and the campus environment. Such studies would help determine the effectiveness of these programs over time and provide data to guide ongoing policy development and refinement (Swarbrick & Rand, 2018).

In conclusion, while the findings of this study highlight a generally positive attitude towards stray cats on the UiTM campus, they also underscore the importance of implementing structured, humane management policies that align with the ethical values of the university community. Future research should aim to fill the identified gaps to support the development of more effective and inclusive strategies for managing stray animals on university campuses.

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Conflict of Interest

There is no conflict of interest associated with this publication.

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