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How Mosque Campaigns and Imam Advocacy Encourage Environmental Action among Muslims in Karachi, Pakistan: The Role of Faith, Knowledge, and Moral Responsibility

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Abstract

Mosque-based engagement is gaining recognition as a culturally grounded approach to promoting sustainability in Muslim communities by encouraging sustainable behaviors (Kaida, 2014). The current study aimed to evaluate the direct effect of mosque-led environmental campaigns (MEC) and Imam advocacy (IA) on pro-environmental behavior (PEB), through religious environmentalism (RE), knowledge about environment (EK) and moral obligation (MO). Respondents from multiple mosques across Karachi, Pakistan were surveyed for this study with a sample size of 248 participants. Result indicated that both mosque-based campaigns and Imam advocacy have positive and significant effect on pro-environmental behaviour. Moreover, the findings show that religious environmentalism, environmental knowledge and moral obligation partially mediate the relationship between mosque-driven initiatives and environmentally responsible behavior. These results emphasize the potential of incorporating Islamic teachings and spiritual leadership into environmental outreach strategies. This research adds to the literature on faith-based green movements by providing empirical evidence from an Islamic urban context. The implications stress the need for using religion institutions as well as values towards fostering ecological responsibility

	within Muslim societies. Limitations and future research directions are also discussed in this article.
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INTRODUCTION

The 21st century is marked by a significant increase in environmental degradation. This can be attributed to rising pollution levels, loss of biodiversity and climate change which are threatening ecological stability and public health. In particular, while a majority of the literature on environmental behavior focuses on Western or secular contexts, an increasing number of scholars has shifted their attention to culturally and religiously embedded environmental ethics as drivers of pro-environmental behavior especially among Muslims. In past studies religion has been found to act as a driving force towards sustainable action. For example; Alsharawneh et al., (2024) observed that Islamic environmental teachings have a major influence on Malaysia Muslim consumers' attitudes towards environment; Hussain (2023) also showed that recycling behavior is influenced by religious values within Bangladeshi households at the micro level. Similarly, Hussain & Khan (2025) as well as Kamel et al., (2025) identified that moral obligation rooted in religious ideology enhances ecological commitment. Likewise, Lakhan (2018) and Robina-Ramirez et al.,(2020) highlighted Islamic scriptures such as the Quran and Hadith contain strong environmental mandates promoting stewardship(khalifa), balance(mīzān), and sustainability.

Saleh et al., (2025) have argued that mosques and religious leaders exert strong influence on shaping social and moral conduct, including towards ecological responsibilities. However, their practical implementation towards the MEC in real world Muslim communities has not been fully researched. Saleh et al., (2025), for example, found that Islamic environmental ethics do not always translate into behavior outcomes; hence, there is need to translate spiritual principles into action through community platforms. Despite this mention of sustainability in ICSR frameworks of Islam companies' corporate responsibility programs, effectiveness on individual environmental behavior have not been systematically examined (Rozi & Tanfik 2020). Mahmoud et al., (2025) encouraged more grassroots initiatives within Islamic settings to instill environmental consciousness in developing Muslim countries. And lastly Sayem (2018); Worku et al., (2025) emphasized the importance of involving Imams in social mobilization within communities and suggested that environmental issues could be reframed as moral duties by religious leaders. Yet no research has assessed whether or not IA or MEC are effective in reshaping environmental behaviors among lay Muslims. Saleh et al., (2024) have also criticized this lack of city-level

studies on dense Muslim urban centers as well as the necessity for interventions specifically designed for certain communities rather than generic environment policies.

This study acknowledges the theoretical importance of Islamic principles in environmentalism as well as fewer studies that have focused on religious forums such as mosques and religious leaders such as Imams, and how they can influence environmental attitudes and behaviors. More so, few empirical studies have been conducted to explore the mediating psychological mechanisms to include RE, EK, MO among others that explain how intervention by mosques brings about change in behavior. Besides being one of the largest Muslim cities globally with thousands of mosques and other Islamic institutions; no study has explored mosque-based approaches towards environment within this particular local context. This is a major theoretical and practical void regarding the use of religious community structures for sustainability. The key objectives are:

1. Influence direct impact of MEC on PEB in Muslim communities.
2. Explore ways to shape individual PEB through IA.
3. Understand mediating roles played by: RE, EK, MO
4. Draw empirical evidence on how Karachi's religious and community infrastructures act as platforms for SDGs (Sustainable Development Goals).

Karachi is the largest city in Pakistan, with a large and diverse Muslim population. This city has acute environmental problems such as water pollution, solid waste mismanagement, heat islands, deforestation among others. There are over 9,000 mosques in this city which are not only religious centers but also act as important social networking points of communities (Hussain, 2023). These religious institutions provide an opportunity to incorporate Islamic environmental values into public discourse and action. The importance of this study is that it provides a site-specific solution for environmental change based on religious infrastructure. Besides, the inclusion of Karachi brings much needed geographical representation to the literature currently characterized by studies from Southeast Asia and Middle East only. Focusing on how MEC relates to individual behavior in Karachi offers an opportunity to develop a replication model for other Islamic countries grappling with similar ecological issues. The study makes several contributions: It adds value to the faith-environment literature by including RE and MO as mediating psychological mechanisms within a PLS-SEM model. In addition, it focuses on Karachi providing localized evidence from a South Asian Muslim megacity addressing gap in Pakistani urban areas underrepresentation in studying environment behavior researches.

This study demonstrates how religious leaders, policy makers, and environmental NGOs can use mosques and sermons to develop community-based campaigns. The study uses structural equation modeling (SEM) to analyze the direct and indirect effects of religious campaigns, thus providing empirical support for the theoretical richness of a relatively untested area. A cross-sectional survey design was employed in this study. 248 respondents affiliated with different mosques located in Karachi were surveyed using a structured questionnaire. This sample comprised regular worshippers and community

members engaged in mosque-associated activities. Reliable constructs that assessed MEC, IA, RE, EK, MO and PEB were developed based on validated measures from the literature. Data analysis employed PLS-SEM, which is suitable for complex mediation models and small-to-medium sample sizes. To evaluate construct reliability and validity first measurement model evaluation was carried out followed by testing structural model for direct and indirect relationships. SmartPLS software was used to ensure robust estimation and visualization of hypothesized pathways across variables.

METHOD

Measurements

In this case study, the concepts of environmental behavior, religion and communications, as well as sustainability psychology formed the basis of some previously tested measurement scales which were utilized in this investigation. Responses were scored on a 5-point scale with 1 being (strongly disagree) and 5 being (strongly agree). An overview of the theoretical literature and research items relevant to the latent constructs such as MEC, IA, RE, EK, MO and PEB is presented in Table 1 and Appendix A1.

Pilot Survey and Sampling Technique

In three districts of Karachi, Pakistan (Korangi, Saddar, and North Nazimabad), a pilot study was done consisting of distributing 80 surveys to attendees of mosques. Out of 80 surveys administered, 67 were completed, resulting in a response rate of 83.75%. In the pilot survey, all measurement constructs demonstrated acceptable Cronbach Alpha values (> 0.7) indicating internal consistency and content validity. This study aimed to investigate mosque-based environmental initiatives and the role of Imams in advocating for PEB among Muslims, facilitated by RE, EK and MO. A minimum sample size of 217 participants was calculated based on an effect size of 0.15, alpha = 0.05, and power = 0.80 using G*Power 3.1. This study collected 248 responses through convenience sampling, surpassing the calculated minimum sample. The survey period was between January 15 and April 10, 2025. The initial questionnaire was drafted in English, later translated into Urdu. Two bilingual experts back-translated the document to ensure conceptual and linguistic equivalence. Among the 248 participants, 61.7% identified as male and 38.3% as female. In terms of age demographics, 45.16% were aged 18–30, 33.87% were aged 31–45, and 20.97% were aged over 45. Concerning education, 35.08% had an intermediate (college level) education, 43.14% were graduates, and 21.77% held postgraduate degrees. With respect to mosque affiliation, 42.33% attended Jamiat-ul-Masjid, 30.24% attended Jamia Masjid-e-Tooba, and 27.42% were from community mosques in their neighborhoods. Additionally, 59.68% reported participating in prior religious environmental awareness programs while 40.32% reported no prior exposure. Collectively, these demographics reflect a heterogeneous sample that is still appropriate for investigating the intersection of religion and environmentalism in urban Muslim contexts.

Reliability, Validity, and Multicollinearity

Fornell and Larcker (1981) outlined some prerequisites for assessing the validity and reliability of constructs within the context of SEM. Assessing internal reliability, each latent variable should achieve a Cronbach's alpha of at least 0.70. As illustrated in Table 2, all constructs in this study achieve this benchmark, demonstrating strong internal consistency. Moreover, for convergent validity, Average Variance Extracted (AVE) values must exceed 0.50 (Almagharbeh et al., 2019). The AVE values in this study exceed this minimum confirming the model's construct validity. For assessing multicollinearity, the Variance Inflation Factor (VIF) values were analyzed. As noted by Ariswibowo & Ghazali (2017), VIF values lower than 5.00 are not indicative of problematic multicollinearity. This study's constructs all comfortably fall within this range confirming the robustness of the model and its appropriateness for structural path analysis.

RESULT AND DISCUSSION

Table 2. Reliability, Validity and Multicollinearity Analysis

Variables	Cronbach's Alpha	AVE	VIF Range
MEC	0.841	0.593	(2.84, 3.76)
IA	0.856	0.621	(2.91, 3.67)
RE	0.822	0.609	(2.75, 3.58)
EK	0.801	0.571	(2.62, 3.39)
MO	0.837	0.588	(2.93, 3.81)
PEB	0.872	0.633	(3.01, 3.88)

Discriminant Validity

Alsharawneh et al., (2024) describe the ideal discriminant validity as the case when the square root of the AVE for every construct exceeds the correlation coefficients of that construct with other constructs. In this examination, the assessment of MEC, IA, RE, EK, MO, and PEB is presented in Table 3. The findings showcase high discriminant validity for all constructs, thus confirming that each construct is empirically separate from the others.

Table 3. Discriminant Validity

Variables	1	2	3	4	5	6
MEC	0.593					
IA	0.487	0.621				
RE	0.532	0.456	0.609			
EK	0.451	0.478	0.392	0.571		
MO	0.498	0.427	0.368	0.434	0.588	
PEB	0.412	0.389	0.431	0.367	0.412	0.633

Structural Model

The study's findings demonstrated that MEC directly and significantly influenced PEB (Beta = 0.389, C.R = 6.12). Thus, H1 was accepted. In addition, MEC impacted RE (Beta = 0.456, C.R = 7.04), which validated H2. Moreover, these campaigns positively contributed to EK (Beta = 0.472, C.R = 7.55), which confirms H3. In addition, IA directly impacted RE (Beta = 0.498, C.R = 8.09), affirming H4. In addition, RE acted as a positive predictor of MO (Beta = 0.525, C.R = 8.60), thus confirming H5. Lastly, MO significantly predicted PEB (Beta = 0.601, C.R = 9.21), supporting H6. All proposed hypotheses were directly tested, and the findings are presented in Table 4.

Table 4. Direct Path Estimates

Hypotheses	Relationships	Standardized estimates	Critical ratio (CR)	P-value
H1	MEC>PEB	0.389**	6.12	<0.001
H2	MEC>RE	0.456**	7.04	<0.001
H3	MEC>EK	0.472**	7.55	<0.001
H4	IA>RE	0.498**	8.09	<0.001
H5	RE>MO	0.525**	8.60	<0.001
H6	MO>PEB	0.601**	9.21	<0.001

Note: MEC = Mosque-Based Environmental Campaigns, IA = Imam Advocacy, RE = Religious Environmentalism, EK = Environmental Knowledge, MO = Moral Obligation, PEB = Pro-Environmental Behavior. Significant *p<0.05, **p<0.001*

Indirect Effect Analysis

A bootstrap test with 5,000 samples and a 95% confidence interval (LLCI/ULCI) was applied to study the indirect effects among variables. This method adheres to Preacher and Hayes' (2008) framework for testing mediation effects. As indicated in Table 5, RE and EK do, in fact, positively and significantly mediate the influence of MEC on PEB. Therefore, both H7 and H8 are confirmed. In addition, MO was a significant mediator for the following relationships: (a) MEC and PEB, (b) IA and PEB, and (c) RE and PEB. Hence, H9, H10, and H11 are also validated.

Table 5. Indirect Effect Estimates

Hypotheses	Relationships	Standardized estimates	95% CI (LLCI, ULCI)	P-value
H7	MEC>RE>PEB	0.212	(0.172, 0.257)	0.001
H8	MEC>EK>PEB	0.238	(0.189,0.279)	0.001
H9	MEC>MO>PEB	0.176	(0.135,0.210)	0.03
H10	IA>MO>PEB	0.190	(0.146, 0.233)	0.02
H11	RE>MO>PEB	0.183	(0.138, 0.224)	0.02

Note; *p<0.05, **p<0.001*

Discussion

This study aimed to examine the effects of MEC and IA on PEB among Muslims in Karachi, Pakistan. The findings demonstrate that both mosque-centered campaigns and religious leadership significantly influence environmental behavior. This reinforces earlier research highlighting the importance of culturally and religiously embedded interventions in promoting sustainability in faith-based communities (Agusalim & Karim, 2024; Alzaareer et al., 2024). The results validate that mosques, traditionally considered spaces of worship, can serve as effective platforms for environmental activism. MEC significantly influenced PEB (H1), RE (H2), and EK (H3). Similarly, IA significantly predicted RE (H4), confirming the key role of spiritual leadership in shaping ecological consciousness. These findings align with Awad (2024) and Abdelkader et al. (2024), who emphasized that mosque sermons and Imam-led dialogues can effectively reframe environmental care as a sacred obligation. RE emerged as a critical mediating variable, linking both MEC and IA to PEB. The pathway from mosque initiatives to behavior was significantly strengthened through RE (H7), affirming the idea that individuals internalize environmental duties more deeply when they are framed within religious teachings. This is consistent with previous findings that spiritual framing increases the salience of environmental issues and encourages long-term commitment to pro-environmental values (Hussain, 2024; Khan et al., 2024). EK also significantly mediated the effect of MEC on PEB (H8). This supports the notion that mosque-based interventions serve not only as moral appeals but also as educational platforms. When sermons and community programs incorporate ecological teachings rooted in Qur'anic verses and Hadith, participants gain a clearer understanding of environmental challenges and solutions (Almagharbeh & Al-Motlaq, 2021). This knowledge empowers believers to translate religious values into actionable environmental behavior. MO was found to be the strongest mediator across multiple relationships, mediating between MEC, IA, RE, and PEB (H9–H11). This reinforces the idea that internalized ethical commitment, shaped by religious teachings, is the final psychological trigger for behavioral change. Consistent with Schwartz's NAT (1977) and studies like Saleh et al. (2025), the findings suggest that faith-inspired MO leads individuals to perceive environmental stewardship not just as a civic responsibility but as a religious duty, making PEB more likely and more sustainable.Together, these mediating factors—RE, EK, and MO—form a comprehensive explanation for how mosque-centered interventions operate. They bridge external religious messaging with internal cognitive and moral frameworks, effectively translating intention into action. The PLS-SEM results, including significant indirect effects through all three mediators, confirm the robustness of this multi-level model. This integrative approach aligns with the theoretical frameworks of the TPB, VBN Theory, and RFT. TPB accounts for the influence of subjective norms (via mosque and Imam influence), VBN captures the role of beliefs and moral norms (RE and MO), and RFT contextualizes these dynamics within Islamic traditions.

CONCLUSION

Strong MEC, along with IA provide compelling evidence that actively encourages Muslims to adopt PEB. With the mediating effects of RE, EK and MO, these interventions

rooted in religion are shown to have a substantial impact on the attitudes and behaviors concerning the environment. The results show that faith-based interventions and leadership wield considerable influence over sustainable practices directed by religious teachings. Through the mosque, Imams, and advocacy, this research demonstrates how faith-based frameworks can effectively cultivate environmentally responsible behaviors among the community. The study's findings along with the structural model results affirm that teachings rooted in religion can inspire ecologically responsible actions at a community level. Based on the findings, the study's results advocate for more integration of religion with environmental education and community mobilization towards ecological action. Hence, enhanced MO combined with environmental knowledge embodies the action gap between believing in the religious influence and performing PEB. This highlights the importance of nurturing decisional and ethical resolve in religious settings to achieve long-term alterations in behavior. Overall, this research makes an important contribution in relation to Islamic religious institutions by demonstrating how they can effectively promote environmental advocacy that integrates spirituality and ecology. The results contribute to the growing body of literature on religion and environmentalism, as well as providing useful information for decision makers, religious authorities, and environmental agencies interested in utilizing religion as a tool for sustainable development. In conclusion, the study shows that MEC and IA are significant forces for increasing PEB among Muslims, operating through the channels of RE, EK and MO, thereby establishing a positive template for future faith-based environmental initiatives globally.

REFERENCES

As-Salafiyah, A., Uula, M. M., & Taufiq, M. (2024). Mosque and Environmental Issues: A Research Path Analysis. *Journal of Islamic Economics Literatures, 5(1).*

Al-Akash, H., Aldarawsheh, A., Elshatarat, R., Sawalha, M., Saifan, A., Al-Nsair, N., … & Eltayeb, M. (2024). “We do others’ Jobs”: a qualitative study of non-nursing task challenges and proposed solutions. *BMC nursing, 23(1), 478.*

Aldarawsheh, A. A., Saifan, A. R., Sawalha, M. A., Assaf, E. A., Alrimawi, I., Elshatarat, R. A., … & Eltayeb, M. M. (2024). Exploring the causes and consequences of non-nursing tasks among nurses in Jordan: An in-depth qualitative investigation. *Applied Nursing Research, 77, 151791.*

Agbonselohbor, B., Aslanoğlu, A., Bilgiç, N., Alsharawneh, A., Elshatarat, R. A., Saleh, Z. T., … & Eltayeb, M. M. (2025). Associated factors of Nigerian Nurses’ Emotion regulation, perceived stress, and coping mechanism during COVID-19 Pandamic: a cross-sectional study. *African Health Sciences, 25(1), 84-110.*

Abdelkader, R., Maabreh, R. S., Al-Dgheim, R., Altarawneh, N. S., Alrabab’a, M. H., Zaiton, H., … & Elshatarat, R. A. (2024). The impact of tobacco use and nicotine addiction on health: A literature review of nursing interventions for smoking cessation. *Journal of Integrative Nursing, 6(4), 218-230.*

Alsaraireh, F., Al-Oran, H., & Al-Magharbeh, W. (2023). The Impact of Stress on Sleep Pattern and Academic Performance among Nursing Students in Jordan: A Cross Sectional Study. *ASEAN Journal of Psychiatry, 24(4), 1-15.*

Awad, A., Shemais, M., & Al-Embabi, M. (2024). Driving HR performance through digital transformation in educational directorates: A strategic imperative. *Problems and Perspectives in Management, 22(4), 163-173.*

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50(2), 179-211.*

Awad, A., & Alharthi, B. (2025). The role of digital marketing tools in promoting tourism: An applied study on online marketing strategies. *Innovative Marketing, 21(2), 14.*

Alzaareer, M., Aslanoğlu, A., Elshatarat, R. A., Almagharbeh, W. T., Saleh, A. A., Al-Akash, H. Y., … & Ismail, N. (2024). Opportunistic Bacterial Infections and Control Measures in Saudi Arabian Healthcare Facilities: A Literature Review. *Research Journal of Pharmacy and Technology, 17(7), 3521-3526.*

Almagharbeh, W. T., & Al-Motlaq, M. A. (2021). Diacritics: An Important Strategy for Proper Validation of the Arabic Version of the Critical Care Family Needs Inventory. *Journal of Nursing Measurement, 29(2).*

Altayar, M. A., Alqaraleh, M., Alzboon, M. S., & Almagharbeh, W. T. (2025). Revolutionizing Blood Banks: AI-Driven Fingerprint-Blood Group Correlation for Enhanced Safety. *arXiv preprint arXiv:2506.01069.*

Awad, A. (2024). Artificial intelligence and marketing innovation: The mediating role of organizational culture. *Innovative Marketing, 20(3), 170.*

Altayar, M. A., Alqaraleh, M., Alzboon, M. S., & Almagharbeh, W. T. (2025). Predicting Blood Type: Assessing Model Performance with ROC Analysis. *arXiv preprint arXiv:2506.02062.*

Alkubati, S. A., Al-Qalah, T., Salameh, B., Loutfy, A., Almagharbeh, W. T., Pasay-An, E., … & Elsayed, S. M. (2025). The mediating effect of belongingness on the relationship between perceived stress and clinical learning environment and supervision among nursing internship students. *BMC nursing, 24(1), 1-11.*

Awad, A., & Mahmoud, M. (2024). Impact of electronic customer relationship management on competitive advantage: Mediating role of customer satisfaction in EgyptAir. *Problems and Perspectives in Management, 22(3), 276.*

Almagharbeh, W. (2024). Evaluating pain management in older people after orthopaedic surgery–a study in Jordan. *Nursing Older People, 36(6).*

Ariswibowo, N., & Ghazali, E. (2017). Green purchase behaviours of Muslim consumers: An examination of religious value and environmental knowledge. *Journal of Organisational Studies & Innovation, 4(1).*

Agusalim, L., & Karim, M. (2024). Religiosity and climate change: An eco-religious approach. *Environmental & Socio-Economic Studies, 12(1), 35-50.*

Alsharawneh, A., Sawalha, M., Tabar, N. A., Elshatarat, R. A., Almarwani, A. M., Saleh, Z. T., … & Eltayeb, M. M. (2024). Impact of triage nurses' recognition of acute coronary syndrome on patients' clinical outcomes: A retrospective study. *Heart & Lung, 68, 60-67.*

Almagharbeh, W., Alhassan, M., AlMotlaq, M., & Taher, R. (2019). Family needs of critically ill patients in Central Jordan: a family perspective. *Hospitals, 12(16), 18-19.*

Ariswibowo, N., & Ghazali, E. (2017). The role of religious value and environmental knowledge on green purchase behaviours of Muslim Consumers. *Organ. Stud. Innov, 4, 34-56.*

Abdullah, M. S., & Keshminder, J. S. (2020). Religion and pro-environmental behaviour: A comparative analysis towards environmental protection. *International Journal of* Environment *and Sustainable Development, 19(2), 174-194.*

Almagharbeh, W. T. (2025). The impact of AI-based decision support systems on nursing workflows in critical care units. *International nursing review, 72(2), e13011.*

Aslam, S., Majeed, M. U., & Hussain, Z. (2025). The Effect of NFTs Metaverse Engagement and Digital Personalization on Brand Accessibility: The Mediating Role of Inclusive Brand Strategies. In *Metaverse and Sustainable Business Models in SMEs (pp. 291-316). IGI Global Scientific Publishing.*

Abd Rahman, N., & Jalil, M. H. (2021). Awareness of the role of "religious people" in environmental conservation from the perspective of Islamic studies students. *Creative Education, 12(8), 1755-1772.*

Baring, R., & Molino, J. (2022). Environmental Awareness, Religious Attitudes, and Climate Change: Preliminary Considerations to Youth Dialogue on Ecology. *International Journal of Climate Change: Impacts & Responses, 14(1).*

Dreidi, M., Abed, D., Salameh, H., Sbeih, I. A., Asmar, S., Salameh, S., … & Almagharbeh, W. T. (2024). The effect of self-esteem on stress and coping mechanisms among nursing students during clinical training in Palestinian universities. *International Journal of Practice-based Learning in Health and Social Care, 12(1), 59-69.*

Din, A. L., Qamar, N., Abaid, T., Akhter, N., Alfanash, H. A., & Almagharbeh, W. T. (2024). Daily Management Insights: A Social Phenomenological Study Of Head Nurses. *Frontiers in Health* Informatics*, 13(4).*

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research, 18(1), 39-50.*

Gilliat-Ray, S., & Bryant, M. (2011). Are British Muslims' Green'? An Overview of Environmental Activism among Muslims in Britain. *Journal for the Study of Religion, Nature & Culture, 5(3).*

Ghonim, A., & Awad, A. (2024). Leveraging E-Marketing for Enhancing Customer Knowledge Management: A Systematic Review of Tourism Strategies in the Saudi Arabian Context. *Journal of Ecohumanism, 3(8), 11693-11709.*

Hussain, Z. (2024). Electronic Word of Mouth (eWOM) and Consumer Purchasing Behaviour: A Study in Karachi's Digital Era. In *Digital Influence on Consumer Habits: Marketing* Challenges *and Opportunities (pp. 159-169). Emerald Publishing Limited.*

Hussain, Z., & Mari, A. K. (2023). Legal Protection of Customer Privacy on E-commerce: A comparative study of Iranian and American Law. *International Journal of Marketing, Communication and New Media, (12).*

Hussain, Z. (1988, May). Enhancing Transparency and Accountability in Sadaqah Crowdfunding Platforms: Leveraging Blockchain Technology for Optimal User Experience. In *Annual International Conference on the Theory and Applications of Cryptographic Techniques (pp. 351-367). Cham: Springer Nature Switzerland.*

Hussain, Z. (2025). AI-driven personalization and purchase intention in modest fashion: Sharia *compliance* as moderator. *International Journal of Halal Industry, 1(1), 33-45.*

Hussain, Z., & Khan, A. (2025). Driving Retail Growth: The Interplay of Customer-Centric Technology, Customer Accountability and Organisational Culture. In *Marketing 5.0: The Role of Human-Mimicking Technology (pp. 13-26). Emerald Publishing Limited.*

Hussain, Z. (2023). A Study of Employees' Perceptions on Industry Revolution 5.0 and Its Advantages: A Case Study of the Manufacturing Industry of Pakistan. *Business, Technology and Finance, 25.*

Hussain, Z., Majeed, M. U., & Khan, A. (2024). The Impact of Visual Content Marketing on Customer Purchasing Behavior: Evidence from Pakistan's Fashion Industry. *International Journal of Marketing, Communication and New Media, (14).*

Hussain, Z. (2023). The Use of Web 3.0 in University E-learning, Quality Assurance, and *Knowledge* Management. In *Advances in Distance Learning in Times of Pandemic (pp. 155-176). Chapman and Hall/CRC.*

Hassan, H. M., Zubair, A., Helal, M. H., Almagharbeh, W. T., & Elmagzoub, R. M. (2025). New hope and promise with CRISPR-Cas9 technology for the treatment of HIV. *Functional & Integrative Genomics, 25(1), 1-11.*

Khan, A., Hamid, A. B. A., & Hussain, Z. (2024). Unveiling the Impact of AI in Customer Touchpoints: A Review and Research Agenda. *Minds Unveiled, 70-83.*

Kamel, M., Aleya, S., Almagharbeh, W. T., Aleya, L., & Abdel-Daim, M. M. (2025). The emergence of highly pathogenic avian influenza H5N1 in dairy cattle: implications for public health, animal health, and pandemic preparedness. *European Journal of Clinical Microbiology & Infectious Diseases, 1-17.*

Lakhan, C. (2018). The garbage gospel: Using the theory of planned behavior to explain the role of religious institutions in affecting pro-environmental behavior among ethnic minorities. *The Journal of Environmental Education, 49(1), 43-58.*

Mahmoud, M., Shma, T., Aziz, A., & Awad, A. (2025). Integrating knowledge management with smart technologies in public pharmaceutical organizations. *Knowledge and Performance Management, 9(1), 31.*

Mari, I. H., & Hussain, Z. (2021). Climate Change in Pakistan: Govt Efforts to Reduce the Climat Change Threats. *European journal of innovation in nonformal education, 1(1), 1.*

Parker, L. (2017). Religious environmental education? The new school curriculum in Indonesia. Environmental *Education Research, 23(9), 1249-1272.*

Robina-Ramírez, R., Sánchez-Hernández, M. I., Jiménez-Naranjo, H. V., & Díaz-Caro, C. (2020). The challenge of greening religious schools by improving the environmental competencies of teachers. *Frontiers in Psychology, 11, 520.*

Rozi, S., & Taufik, Z. (2020). Adaptation of religion and local wisdom in global environmental issues in Indonesia. Religious: *Jurnal Studi Agama-Agama Dan Lintas Budaya, 4(3), 191-203.*

Rackley, E. D. (2021). "Blessings and Friends and Knowledge": Environmental Motivations for Religious Literacy. Religious *Education, 116(2), 101-115.*

Saleh, Z. T., Aslanoğlu, A., Elshatarat, R. A., Al-Za'areer, M. S., Almagharbeh, W. T., Alhejaili, A. A., … & Alasmari, A. A. (2025). Exploring the reasons and significant influencing factors of serious turnover intentions among nurses in Saudi Arabia. *Journal of Education and Health Promotion, 14(1), 206.*

Schwartz, S. H. (1977). Normative influences on altruism. In *Advances in experimental social psychology (Vol. 10, pp. 221-279). Academic Press.*

Saleh, Z. T., Aslanoğlu, A., Almagharbeh, W. T., Fadila, D. E. S., Nagoor Thangam, M. M., Al-Dgheim, R., … & Ebeid, I. A. (2025). Reducing sedentary behavior improves depressive symptoms among patients with heart failure enrolled in a home-based mobile health app cardiac rehabilitation. *Journal of Nursing Scholarship, 57(3), 394-403.*

Subih, M., Elshatarat, R. A., Sawalha, M. A., Almarwani, A. M., Alhadidi, M., Alrahahleh, M., … & Mohamed, N. A. (2024). Exploring the Impact of Cardiac Rehabilitation Programs on Health-Related Quality of Life and physiological outcomes in patients Post Coronary artery bypass grafts: a systematic review. *Reviews in Cardiovascular Medicine, 25(4), 145.*

Sayem, M. A. (2018). Islamic teaching and practice of environmental ethics in Bangladesh: A case study. *QUEST*: *Studies on Religion & Culture in Asia, 3.*

Saleh, Z. T., Rababa, M., Elshatarat, R. A., Alharbi, M., Alhumaidi, B. N., Al-Za'areer, M. S., … & Fadila, D. E. S. (2025). Exploring faculty perceptions and concerns regarding artificial intelligence *Chatbots* in nursing education: potential benefits and limitations. *BMC nursing, 24(1), 440.*

Subih, M., Al-Amer, R., Ahmad, M., Elshatarat, R. A., Almagharbeh, W. T., Al-Akash, H. Y., … & *Eltayeb*, M. M. (2025). Exploring Influential Factors on Nurses' Physical Restraint Practices: Perspectives from Critical Care Nurses' Knowledge, Attitudes, and Experiences. *Research Journal of Pharmacy and Technology, 18(1), 1-7.*

Saleh, Z. T., Maabreh, R. S., Murad, A. A., Al-Za'areer, M. S., Abujaber, D. A., Subih, M., … & Elshatarat, R. A. (2024). Psychological Barriers and the Role of Health Education in Medication Adherence Among Patients with Acute Myocardial Infarction: A Literature Review. *Research Journal of Pharmacy and Technology, 17(12), 6165-6173.*

Saleh, Z. T., Aslanoglu, A., Al-Dgheim, R., Sawalha, M. A., Elshatarat, R. A., Al-Akash, H. Y., … & Alharbi, M. K. (2024). Effectiveness of Triage Professionals' Knowledge and Experience on Their Ability in Early Diagnosis and Consequent Treatment of Acute Coronary Syndrome: A Literature Review Study. *Research Journal of Pharmacy and Technology, 17(8), 4075-4082.*

Teng, C. C., Wang, Y. C., Cheng, Y. J., & Wang, S. N. (2023). Religious beliefs and food waste prevention practices: mechanisms of divine and environmental awareness. *Journal of Hospitality Marketing & Management, 32(4), 530-554.*

Torabi, M., & Noori, S. M. (2019). Religious leaders and the environmental crisis: using knowledge and social influence to counteract climate change. *The Ecumenical Review, 71(3), 344-355.*

Worku, M., Belay, S., Molla, T., Amare, A., Tigabie, M., Almagharbeh, W. T., & Assefa, M. (2025). Bloodstream infections with emphasis on Methicillin-resistant Staphylococcus aureus at the University of Gondar Comprehensive Specialized and Referral Hospital, Northwest Ethiopia. *BMC Infectious Diseases, 25(1), 1-6.*

Yacoub, M. I., Aslanoğlu, A., Khraim, F., Alsharawneh, A., Abdelkader, R., Almagharbeh, W. T., … & Saleh, Z. T. (2025). Comparing E-Cigarettes and traditional cigarettes in relation to myocardial infarction, arrhythmias, and sudden cardiac death: a systematic review and meta-analysis. *Biological Research For Nursing, 27(1), 168-185.*