

Islamic Values as Predictors of Ecological Consciousness and Pro-Environmental Behavior Among Generation Z in Bogor

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ARTICLE INFO	ABSTRACT
Keywords: Bogor; Environmental awareness; Islamic values; Gen Z Behavior.	This study investigates the extent to which comprehension of Islamic values influences the ecological consciousness and environmentally responsible conduct of Generation Z in Bogor. Foundational Islamic principles, including tauhid, khalifah, fitrah, and mizan, are regarded as significant theological drivers in the formation of ecological awareness among young Muslims. A quantitative research design was employed through a correlational framework, with data gathered from a purposive sample of 217 Gen Z students residing or enrolled in educational institutions in Bogor. These respondents were selected on the basis of age, geographic location, and academic status. Primary data were collected via structured questionnaires, while secondary data were derived from scholarly literature and institutional reports. Data were analyzed through five sequential analytical procedures, namely reliability assessment using Cronbach's Alpha, data reduction, descriptive statistical analysis, Pearson correlation testing, and multiple linear regression to examine the predictive relationship among Islamic understanding, environmental awareness, and pro-environmental behavioral tendencies. The findings reveal that comprehension of Islamic values demonstrates a highly significant association with environmental awareness ($r = 0.861$) and a meaningful relationship with environmental care behavior ($r = 0.546$). Taken together, these two variables accounted for 74.1% of the variance observed in environmentally responsible conduct, thereby affirming the central role of Islamic education in cultivating ecological sensibility among the younger generation.
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INTRODUCTION

The intersection of religious understanding, particularly within the Islamic tradition, and environmental consciousness among younger cohorts, including Generation Z, has emerged as a topic of considerable scholarly interest (Hopid et al., 2023). This discourse has gained prominence in light of escalating global awareness regarding the imperative to safeguard natural ecosystems amid deepening ecological crises (Bensaid, 2023). The academic debate surrounding this issue is frequently framed as eco-religious discourse, which broadly refers to the examination of how religious teachings may serve as catalysts for environmental stewardship. A segment of scholars contends that Islamic teachings possess substantial capacity to foster ecologically responsible attitudes and conduct (Shah and Asghar, 2024), whereas critics maintain that religious frameworks are increasingly peripheral to contemporary environmental challenges that tend to privilege technological interventions (Sahin, 2018). The significance of this debate is further amplified by empirical evidence suggesting that Gen Z exhibits a more pronounced environmental consciousness relative to antecedent generational cohorts (Gray et al., 2019; Nikolic et al., 2022). Against this backdrop, the present study seeks to address a notable gap in the existing literature by empirically evaluating the effectiveness of Islamic values in shaping the environmental awareness and conduct of Gen Z in Bogor.

Preceding scholarly works have laid a partial foundation for this inquiry. Abdelzaher et al. (2019) established conceptual linkages between tawhid and khalifah and the construct of ecological responsibility within what they termed eco-Islam. Zemo and Nigus (2021) examined the correlation between religious affiliation and pro-environmental behavioral dispositions in youth populations. Zabidi et al. (2021) emphasized the necessity of embedding Islamic principles into environmental governance frameworks. Furthermore, Koehrsen (2021) and Rahman (2022) have demonstrated that the absence of religiously grounded environmental education among youth populations contributes to diminished ecological engagement. Building upon these precedents, the current study adopts a quantitative methodology to analyze how Islamic values may substantively contribute to the environmentally responsible conduct of Gen Z. This research therefore undertakes a quantitative analysis centered on the correlational and regression relationships among three principal constructs, namely Islamic understanding, environmental awareness, and behavioral outcomes. The central inquiry concerns whether comprehension of Islamic values functions as a statistically significant determinant of ecological awareness among Gen Z populations.

According to Begum et al. (2021), the explicit empirical relationship between Islamic values and measurable environmental awareness has remained insufficiently explored, with prior studies predominantly adopting qualitative or philosophical orientations without rigorously mapping quantitative relationships. The present researchers identify a need to reframe the theoretical apparatus in order to bridge the gap between quantitative inquiry and audiences unfamiliar with this methodological tradition. This study addresses the risk of misinterpretation by presenting transparent data and analyses that are accessible to a broad academic readership. In terms of theoretical orientation, the work of Sayem (2020) situates this inquiry within eco-theology, a tradition associated with scholars such as John B. Cobb Jr. and Seyyed Hossein Nasr. Complementarily, Elgammal et al. (2024) foreground the concept of environmental stewardship as a framework for understanding sustainable behavior. The present research examines the relationship between Islamic values and environmental awareness through the lens of Gen Z, wherein concepts such as tawhid, khalifah, fitrah, and mizan occupy a central position in Islamic ecological discourse. Tawhid, for instance, is interpreted as the overarching principle of divine unity encompassing human relationships with God, fellow human beings, and the natural world.

This trajectory of thought offers productive avenues for cultivating religiously grounded environmental awareness. Several Muslim-majority nations, including Malaysia and Turkey, have pursued this path through the incorporation of religious instruction and ecological education within formal school curricula (Abd Rahman et al., 2020; Cakmakli et al., 2017). This pedagogical orientation is broadly referred to as Islamic environmentalism, defined as an approach that integrates Islamic teachings with conservation practices (Jamil, 2022; Sayem, 2021). The factors that shape this conceptual

framework encompass theological comprehension, governmental policy, and environmental education (Koehrsen, 2021; Rahman, 2022). A comprehensive comparative analysis of these approaches across Southeast Asia and the Middle East was conducted by Gade (2019), revealing distinct emphases on educational and policy dimensions in each regional context. In Indonesia specifically, an analogous initiative known as *eco-pesantren* integrates Islamic education with environmental conservation programming (Nawawi et al., 2024; Subaidi et al., 2023). Reviewing the existing literature, the present researchers argue that a quantitative methodology is indispensable to generate an objective and measurable account of the relationship between Islamic values and environmental conduct. This study therefore pursues a quantitative analysis that foregrounds the effectiveness of Islamic values in shaping ecologically responsible behavior, grounded in the theoretical framework of Islamic environmentalism.

In view of the foregoing, this study aims to empirically measure the effectiveness of Islamic value comprehension in relation to environmental awareness and behavior among Gen Z in Bogor. By employing a quantitative approach to analyze the relationships among the principal variables, this research aspires to contribute meaningfully to academic scholarship and to inform practical strategies for cultivating ecological awareness through a religious lens.

METHOD

This study employs a quantitative research design to examine the effectiveness of Islamic value comprehension on the environmental awareness and behavior of Generation Z. Consistent with the definition proposed by Borgstede and Scholz (2021), quantitative research constitutes a systematic methodology that utilizes numerical data to describe, explain, and predict observable phenomena. This design was selected because it enables an objective and structured assessment of the interrelationships among the key variables, specifically the understanding of Islamic values, environmental awareness, and environmentally responsible behavior. The quantitative approach also facilitates robust statistical analysis through techniques such as Pearson correlation and multiple linear regression.

Bogor was selected as the research site based on several substantive considerations. As one of the major urban centers in West Java Province, Bogor possesses a substantial Gen Z population. The city is also environmentally significant in that it confronts a range of ecological pressures, encompassing air and water quality concerns as well as land management challenges. Conducting the study in Bogor therefore enables the generation of context-specific insights into the association between Islamic values and environmental consciousness within an urban setting facing tangible ecological problems. Primary data were gathered through structured questionnaires administered to Gen Z students residing or pursuing education in Bogor. Secondary data were sourced from the scholarly literature, institutional reports, and preceding studies pertaining to environmental awareness and Islamic values in the Indonesian context.

The study examines the degree to which Islamic values, encompassing *tauhid*, *khalifah*, *fitrah*, and *mizan*, contribute to environmental awareness and conduct among Generation Z in Bogor. Hypotheses were formulated for empirical testing, with the foundational assumption that Islamic value comprehension bears a positive relationship with environmental awareness and ecologically responsible behavior. The research population comprised Gen Z students living or studying in Bogor. Sample selection was conducted via purposive sampling to ensure alignment between the sample characteristics and the research objectives. As Etikan et al. (2016) note, purposive sampling enables researchers to deliberately select participants who fulfill predefined inclusion criteria, thereby ensuring that the sample is representative of the specific population under investigation. The criteria applied in sample selection were as follows.

First, respondents were required to fall within the Gen Z demographic, defined as individuals born between 1997 and 2012. Second, respondents were required to reside or be enrolled in an educational institution in Bogor. Third, respondents were required to be actively enrolled as students at the time of data collection.

A total of 217 respondents participated in this study, a sample size considered adequate for quantitative statistical analysis. This adequacy is consistent with the recommendation advanced by

Hair, Anderson, and Black (2016), who suggest that the minimum sample for regression-based analyses should comprise five to ten times the number of independent variables included in the model. Given the number of key variables in this study, 217 respondents satisfies this criterion and supports the generation of representative findings. The following hypotheses were evaluated.

H1 posits that a significant positive relationship exists between comprehension of Islamic values and environmental awareness among Gen Z students in Bogor. H2 posits that a significant positive relationship exists between comprehension of Islamic values and environmentally responsible conduct among Gen Z students in Bogor. H3 posits that environmental awareness is significantly and positively associated with environmentally responsible conduct among Gen Z students in Bogor.

The measurement instrument consisted of a structured questionnaire designed to assess Islamic value comprehension alongside environmental awareness and behavioral tendencies. The questionnaire addressed dimensions of tauhid, khalifah, fitrah, and mizan, in addition to participants' perceptions of air, water, and land quality and their reported pro-environmental actions. Data analysis proceeded through five sequential stages. The first stage involved reliability assessment via Cronbach's Alpha, in accordance with the theoretical framework developed by Lee Cronbach, to verify the internal consistency of the measurement instruments. The second stage involved data reduction to streamline raw data and focus attention on the principal variables of interest. The third stage consisted of descriptive analysis to generate respondent profiles and characterize data distributions through tables and graphical representations. The fourth stage involved Pearson correlation analysis to examine the relationships among Islamic values and environmental awareness, Islamic values and environmentally responsible conduct, and between environmental awareness and environmentally responsible behavior. Correlations were interpreted on the basis of the *r*-value, with statistical significance determined at *p* less than 0.05. The fifth stage comprised multiple linear regression to assess the simultaneous contribution of the two independent variables, namely understanding of Islamic values (*X*₁) and environmental awareness (*X*₂), to the dependent variable of environmentally friendly behavior (*Y*), as expressed in the equation $Y = a + b_1X_1 + b_2X_2$. Results were interpreted using the correlation coefficient (*r*) to assess relationship strength, the coefficient of determination (*R*²) to gauge the explanatory power of the independent variables, and *p*-values to determine statistical significance, with *p* less than 0.05 considered statistically significant.

FINDINGS AND DISCUSSION

Findings

The present study empirically examines the predictive relationships among comprehension of Islamic values (*X*₁), environmental awareness (*X*₂), and environmentally responsible conduct (*Y*) among Generation Z respondents in Bogor. Statistical analyses were conducted in five sequential stages, encompassing reliability assessment, data reduction, descriptive analysis, Pearson correlation, and multiple linear regression. The results are reported below.

Table 1. Correlational Relationships Among Islamic Values, Environmental Awareness, and Environmentally Responsible Conduct

No.	Relationship	Correlation Value (<i>r</i>)	Significance (<i>p</i>)	Interpretation
1.	Islamic Values and Environmental Awareness	0.861	0.000	Very strong relationship between Islamic values and environmental awareness.
2.	Islamic Values and Environmentally Responsible Conduct	0.546	0.000	Significant relationship between Islamic value comprehension and pro-environmental behavior.
3.	Environmental Awareness and Environmentally Responsible Conduct	0.703	0.000	Environmental awareness directly influences environmentally responsible conduct.

The results of correlation analysis indicate a very strong association between Islamic values and environmental awareness, with a correlation coefficient of 0.861 and a significance level of 0.000. This finding demonstrates that comprehension of Islamic values, encompassing tauhid, khalifah, fitrah, and mizan, contributes substantially to the heightening of ecological awareness. These principles cultivate a sense of moral responsibility to maintain ecosystem balance and preserve the natural world as an act of religious devotion. The correlation between Islamic values and environmentally responsible conduct registered at 0.546, a statistically significant though comparatively moderate relationship. This finding indicates that Islamic value comprehension can motivate pro-environmental behavior. Gen Z individuals who possess a sound understanding of these values tend to engage in behaviors such as waste recycling, reduction of plastic consumption, and support for renewable energy sources. The association between environmental awareness and environmentally responsible conduct, with a correlation coefficient of 0.703, affirms that heightened ecological consciousness exerts a direct positive influence on eco-friendly actions, including participation in conservation initiatives, waste management, and adoption of green technologies. This awareness is driven not only through formal educational channels but also through exposure to global environmental issues, reinforcing the impetus for concrete protective action.

Table 2. Regression Analysis Results on the Contribution of Independent Variables to Environmentally Responsible Conduct

No.	Regression Analysis Component	Coefficient Value	Interpretation
1.	Constant	40.988	Baseline level of environmentally responsible conduct in the absence of contributions from other variables.
2.	Comprehension of Islamic Values (X1)	0.224	Each unit increase in Islamic value comprehension corresponds to a 0.224-unit improvement in environmentally responsible conduct.
3.	Environmental Awareness (X2)	0.297	Each unit increase in environmental awareness corresponds to a 0.297-unit improvement in environmentally responsible conduct.
4.	Coefficient of Determination (R ²)	0.741	74.1% of the variance in environmentally responsible conduct is explained by Islamic value comprehension and environmental awareness collectively.

The regression analysis demonstrates that comprehension of Islamic values (X1) and environmental awareness (X2) collectively account for 74.1% of the variance in environmentally responsible conduct (Y), as reflected in a coefficient of determination (R²) of 0.741. The regression equation is expressed as $Y = 40.988 + 0.224X_1 + 0.297X_2$, indicating that environmental awareness (0.297) contributes marginally more than Islamic value comprehension (0.224) to environmentally responsible behavior. Nonetheless, both variables exert statistically significant influence. This outcome underscores the synergistic interaction between theological values and practical ecological awareness in the formation of individual behavioral orientations. Islamic values provide the moral scaffolding that underpins environmental responsibility, while ecological awareness supplies the informational and motivational impetus necessary to translate values into action.

Table 3. Reliability Assessment of Research Instruments

No.	Instrument	Cronbach's Alpha Value	Interpretation
1.	Comprehension of Islamic Values	> 0.70	The instrument demonstrates satisfactory internal consistency.
2.	Environmental Awareness	> 0.70	The instrument demonstrates satisfactory internal consistency.
3.	Environmentally Responsible Conduct	> 0.70	The instrument demonstrates satisfactory internal consistency.

Reliability testing conducted via Cronbach's Alpha yielded values exceeding the 0.70 threshold across all three variables, confirming that the instruments employed in this study possess adequate internal consistency. The data collected are therefore deemed reliable for purposes of further statistical analysis and for supporting the study's conclusions.

Discussion

The findings of this study demonstrate that the relationship between Islamic values and environmental awareness is characterized by an exceptionally strong correlation ($r = 0.861$) at a significance level of 0.000. This result affirms that comprehension of Islamic concepts such as tawhid, khalifah, fitrah, and mizan exerts a substantial influence on the cultivation of ecological awareness. From an Islamic theological standpoint, the principle of tawhid articulates God as the creator and sustainer of the universe, thereby situating humans as moral custodians of the created order (Bhat, 2018; Kounsar, 2016). Tawhid generates the understanding that the natural environment constitutes a divine trust, which must be administered with care and accountability (Huda et al., 2019; Le Duc, 2023).

The concept of khalifah positions human beings as stewards of the earth, with the responsibility of preserving environmental equilibrium and ensuring long-term ecological sustainability (Hasan, 2022). The elevated ecological consciousness observed among Gen Z individuals with a thorough understanding of Islamic values reflects this stewardship orientation. The value of fitrah, which denotes the innate purity of human beings and their natural consonance with the natural world, establishes a foundational rationale for environmental protection as an expression of human nature. Mizan, denoting cosmic balance, provides an ethical framework for the maintenance of ecosystem harmony. Collectively, these dimensions demonstrate that Islamic values are not merely spiritual constructs but possess practical relevance to contemporary environmental challenges. Prior research corroborates these findings, with multiple studies affirming religion as a potent motivator for environmental action. The integration of these values into everyday life has been shown to foster a generation that is more committed to environmental stewardship. Gen Z individuals who received religious education from an early age exhibit significant potential to serve as catalysts for ecological change.

The correlation coefficient between Islamic values and environmental awareness ($r = 0.861$) is highly statistically significant and reflects a profound association, suggesting that as comprehension of Islamic values increases, so too does awareness of the importance of environmental protection. This finding draws attention to the deep alignment between Islamic theology and environmental ethics, a nexus that has been insufficiently acknowledged in mainstream academic discourse. The relationship between Islamic values and environmentally responsible conduct ($r = 0.546$), while comparatively moderate, is similarly significant. It suggests that Islamic value comprehension meaningfully shapes individual behavioral patterns. Environmentally responsible behaviors, including waste recycling and the reduction of plastic consumption, can be meaningfully reinforced through the deepening of religious understanding. The correlation between environmental awareness and environmentally responsible conduct ($r = 0.703$) further affirms that heightened ecological consciousness directly drives concrete actions in support of ecosystem sustainability. This finding is congruent with the Theory of Planned Behavior articulated by Ajzen (2020), which holds that individual awareness and attitudinal orientations toward a given issue can shape behavioral intentions and subsequent conduct. This theory illuminates the significance of values and convictions as antecedents to behavior. The findings therefore

confirm the relevance of Islamic values as a robust moral framework for fostering pro-environmental awareness and conduct, and suggest that religious education foregrounding these concepts can serve as an effective strategy for expanding community engagement in environmental conservation.

The regression analysis confirms that Islamic value comprehension (X1) and environmental awareness (X2) together account for 74.1% of the variance in environmentally responsible conduct (Y). The regression equation $Y = 40.988 + 0.224X1 + 0.297X2$ reveals that environmental awareness contributes marginally more than Islamic value comprehension in terms of direct behavioral prediction. Nevertheless, both variables make a statistically significant contribution. This outcome reflects the synergistic interplay between theological conviction and practical ecological awareness in shaping individual conduct. Islamic values supply the moral foundation that anchors responsible behavior, while environmental awareness provides the informational basis and motivational reinforcement that translate values into action. This complementarity is particularly salient in the context of Gen Z, a generation recognized for its heightened sensitivity to global challenges including climate change and environmental degradation (Brand et al., 2022; Hamadeh, 2022; Nikolic et al., 2022).

The Environmental Ethics framework advanced by Holmes Rolston III is also pertinent to this discussion. Rolston (2020) contends that moral values derived from religious or philosophical traditions can play a decisive role in motivating human beings to preserve ecosystem balance. Within the framework of the present study, Islamic values function as moral guidelines that strengthen the individual's sense of responsibility toward the natural environment. The coefficient of determination for the single-predictor model employing Islamic value comprehension alone (X1) yields an R^2 of 0.508, indicating that 50.8% of the variance in environmentally responsible conduct is attributable to this variable independently, as distinct from the combined model ($R^2 = 0.741$) reported in Table 2. This finding underscores the centrality of religion in shaping individual environmental attitudes and behaviors, and suggests that religious education incorporating environmental values constitutes an effective strategy for promoting ecologically responsible conduct in younger generations. The remaining 49.2% of the variance remains attributable to factors not captured by this study, such as social norms, media influence, or economic conditions. This underscores the value of a multidisciplinary approach when seeking to comprehend eco-behavioral patterns in their full complexity.

Generation Z exhibits distinctive characteristics that differentiate it from prior generational cohorts, particularly in relation to environmental awareness and conduct. This study's findings indicate that this generation combines a substantive understanding of Islamic values with elevated environmental awareness, and that these two dimensions jointly drive environmentally responsible behavior. Gen Z tends to demonstrate a heightened responsiveness to global concerns, including climate change, facilitated by the digital environment in which this cohort has been socialized. Environmental awareness within this generation is reinforced by formal schooling and early exposure to global ecological challenges. Additionally, Gen Z exhibits a greater receptivity to environmentally friendly technologies and innovations, including renewable energy and technology-enabled waste management. Within the framework of Islamic values, this generation perceives environmental stewardship as a religious obligation, providing further motivation for ecologically responsible conduct (Raquib et al., 2020; Rizal et al., 2023).

Within the ecological theory of human development as elaborated by Wilkinson (2022), interactions between individuals and their surrounding environment, encompassing social and educational dimensions, are recognized as formative influences on behavioral development. According to Mutaqin et al. (2024), the engagement of Gen Z with Islamic values and environmental education constitutes one of the key determinants of their ecological awareness and conduct. Nonetheless, despite the transformative potential this generation possesses, significant challenges remain. Social pressures and the demands of contemporary lifestyles frequently conflict with sustainability principles. It is therefore imperative to provide targeted support mechanisms, including faith-based training programs and environmental promotion initiatives involving religious leaders, to reinforce motivational engagement and sustained participation in environmental conservation efforts.

This study is subject to several limitations that warrant acknowledgment. First, the research population was confined to Gen Z in Bogor, which constrains the generalizability of the findings to other geographic regions with divergent cultural and social characteristics. Local factors, such as prevailing cultural norms and educational attainment, may influence the relationships among Islamic values, environmental awareness, and environmentally responsible conduct. Second, the quantitative methodology employed focuses on statistical associations among variables. While this approach offers a structured and transparent account of variable relationships, it does not capture qualitative dimensions such as personal motivations or in-depth individual experiences. Third, although the correlation values and coefficient of determination indicate a significant relationship, the study cannot establish causal direction. There are indications that additional variables, such as media influence, peer dynamics, or socioeconomic conditions, may also shape environmental awareness and conduct. Fourth, while Cronbach's Alpha reliability values exceeded the 0.70 threshold, satisfactory internal consistency does not guarantee external validity. Further research involving broader populations is therefore necessary to establish the external validity of these findings. These limitations point to the need for more comprehensive and methodologically diverse follow-up research. Qualitative inquiry could complement the present findings by illuminating the subjective and contextual dimensions of the relationship between Islamic values and environmentally responsible behavior. Longitudinal studies would additionally enable the observation of changes in environmental awareness and conduct over time, providing deeper insight into the dynamics of this relationship.

CONCLUSION

The findings of this study affirm that comprehension of Islamic values, encompassing tauhid, khalifah, fitrah, and mizan, bears a highly significant relationship with the development of environmental awareness among Gen Z in Bogor. Islamic values function not merely as spiritual guidelines but as catalysts for ecological responsibility, framed within the context of religious obligation. This generation demonstrates a tendency to perceive environmental conservation as an expression of devotion to God, which reinforces and strengthens pro-environmental behavioral orientations. The statistically significant relationships among Islamic value comprehension, environmental awareness, and environmentally responsible conduct are confirmed through the application of rigorous analytical procedures. With a combined explanatory contribution of 74.1% to the variance in environmentally responsible conduct, Islamic values constitute a central moral foundation in supporting conservation-oriented behavior. These findings affirm the relevance of integrating religious values within education and environmental policy frameworks as a strategy for nurturing a generation more deeply committed to ecological sustainability. This research additionally foregrounds the substantial potential of Gen Z to function as agents of transformative change in environmental conservation. Comprehensive religious education, training grounded in Islamic values, and environmental outreach conducted through religious leadership constitute strategic interventions capable of strengthening ecological awareness within this generation. The findings of this study affirm the importance of a faith-based approach as an innovative and contextually resonant strategy for advancing environmental sustainability in the face of escalating global challenges.

REFERENCES

- Abd Rahman, N., Zabidi, F. N. M., and Halim, L. (2020). Integration of tauhidic elements for environmental education from the teachers' perspectives. *Religions*, 11(8), 394. <https://doi.org/10.3390/rel11080394>
- Abdelzaher, D. M., Kotb, A., and Helfaya, A. (2019). Eco-Islam: Beyond the principles of why and what, and into the principles of how. *Journal of Business Ethics*, 155, 623–643. <https://doi.org/10.1007/s10551-017-3518-2>
- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. <https://doi.org/10.1002/hbe2.195>
- Begum, A., Jingwei, L., Marwat, I. U. K., Khan, S., Han, H., and Ariza-Montes, A. (2021). Evaluating the

- impact of environmental education on ecologically friendly behavior of university students in Pakistan: The roles of environmental responsibility and Islamic values. *Sustainability*, 13(18), 10188. <https://doi.org/10.3390/su131810188>
- Bensaid, B. (2023). An overview of Muslim spiritual eco-education. *Journal of Dharma*, 48(4), 465–494.
- Bhat, S.-U. (2018). Concept of Tawhid (Unity of God) in Islam: A study of relevant Qur'anic text. *International Journal of Historical Insight and Research*, 4, 20–27.
- Borgstede, M., and Scholz, M. (2021). Quantitative and qualitative approaches to generalization and replication: A representationalist view. *Frontiers in Psychology*, 12, 605191. <https://doi.org/10.3389/fpsyg.2021.605191>
- Brand, B. M., Rausch, T. M., and Brandel, J. (2022). The importance of sustainability aspects when purchasing online: Comparing generation X and generation Z. *Sustainability*, 14(9), 5689. <https://doi.org/10.3390/su14095689>
- Cakmakli, A. D., Boone, C., and van Witteloostuijn, A. (2017). When does globalization lead to local adaptation? The emergence of hybrid Islamic schools in Turkey, 1985–2007. *American Journal of Sociology*, 122(6), 1822–1868. <https://doi.org/10.1086/691347>
- Elgammal, I., Ghanem, M., and Al-Modaf, O. (2024). Sustainable purchasing behaviors in generation Z: The role of social identity and behavioral intentions in the Saudi context. *Sustainability*, 16(11), 4478. <https://doi.org/10.3390/su16114478>
- Etikan, I., Musa, S. A., and Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Gada, M. Y. (2024). *Islam and environmental ethics*. Elements in Islam and Science. Cambridge University Press.
- Gade, A. M. (2019). *Muslim environmentalism: Religious and social foundations*. Columbia University Press.
- Gray, S. G., Raimi, K. T., Wilson, R., and Arvai, J. (2019). Will Millennials save the world? The effect of age and generational differences on environmental concern. *Journal of Environmental Management*, 242, 394–402. <https://doi.org/10.1016/j.jenvman.2019.04.071>
- Hamadeh, S. A. (2022). How gen Z can improve community literacy about the 17 SDGs? A realistic approach to construct a futuristic change-maker paradigm. *Green Technology, Resilience, and Sustainability*, 2(1), 2. <https://doi.org/10.1007/s44173-022-00002-2>
- Hasan, H. (2022). Islam and ecological sustainability: An exploration into Prophet's perspective on environment. *Social Science Journal for Advanced Research*, 2(4), 74–83.
- Hopid, A., Rachmaningtyas, N. A., and Kistoro, H. C. A. (2023). Generation Z's perception of religious moderation and tendency to choose religious studies in Indonesia. *Jurnal Pendidikan Agama Islam*, 20(1), 20–32. <https://doi.org/10.14421/jpai.v20i1.7689>
- Huda, M., Sudrajat, A., Muhamat, R., Mat Teh, K. S., and Jalal, B. (2019). Strengthening divine values for self-regulation in religiosity: Insights from Tawakkul (trust in God). *International Journal of Ethics and Systems*, 35(3), 323–344. <https://doi.org/10.1108/IJOES-02-2018-0025>
- Jamil, S. (2022). Halal wastewater recycling: Environmental solution or religious complication? In *Religious Environmental Activism* (pp. 93–111). Routledge.
- Hair, J. F., Anderson, R. E., Tatham, R. L., and Black, W. C. (2016). *Multivariate data analysis* (7th ed.). Pearson Education.
- Koehrsen, J. (2021). Muslims and climate change: How Islam, Muslim organizations, and religious leaders influence climate change perceptions and mitigation activities. *Wiley Interdisciplinary Reviews: Climate Change*, 12(3), e702. <https://doi.org/10.1002/wcc.702>
- Kounsar, A. (2016). The concept of Tawhid in Islam: In the light of perspectives of prominent Muslim scholars. *Journal of Islamic Thought and Civilization*, 6(2), 94–110.
- Le Duc, A. (2023). Responsibility is a primary environmental virtue in Islam. *Asian Journal of Philosophy and Religion*, 2, 187–206.
- Moser, A., and Korstjens, I. (2018). Series: Practical guidance to qualitative research. Part 3: Sampling, data collection, and analysis. *European Journal of General Practice*, 24(1), 9–18.

- <https://doi.org/10.1080/13814788.2017.1375091>
- Mutaqin, M. Z., Lestari, D. A., Solihin, S., Al-Ayyubi, I. I., and Rahmawati, S. (2024). Factors in religious culture to increase tolerant attitude of Gen-Z among urban Muslims. *Akademika: Jurnal Pemikiran Islam*, 29(1), 73–86. <https://doi.org/10.32332/akademika.v29i1.9145>
- Nawawi, M., Halid, I., Julaikha, S., and Suhada, A. (2024). The implementation of the Eco-Pesantren Program in environmental management at Islamic boarding schools in West Lombok. *PROMOTOR*, 7(6), 885–893. <https://doi.org/10.32832/pro.v7i6.1146>
- Nikolic, T. M., Paunovic, I., Milovanovic, M., Lozovic, N., and Durovic, M. (2022). Examining Generation Z's attitudes, behavior and awareness regarding eco-products: A Bayesian approach to confirmatory factor analysis. *Sustainability*, 14(5), 2727. <https://doi.org/10.3390/su14052727>
- Rahman, A. K. (2022). *Islamic environmental ethics: A model for shaping Muslim attitudes in helping to promote environmental education, awareness, and activism* [Doctoral dissertation, University of Wales Trinity Saint David (United Kingdom)].
- Raquib, A., Javaid, O., and Anjum, G. (2020). Creation of the Islamic self for sustainability: Can Muslim entrepreneurship positively contribute to the sustainable development goals through Tazkiya (self-restraint) and Tarbiya (self-discipline) of the Muslim youth? *Journal of Islamic Business and Management*, 10(2), 323–342. <https://doi.org/10.26501/jibm/2020.1002-003>
- Rizal, R., Ghofur, R. A., and Utami, P. (2023). The role of Muslim generation community at zakat collection on realizing sustainable development goals (SDGs) in the era of digital society 5.0. *JURIS (Jurnal Ilmiah Syariah)*, 22(1), 105–118. <https://doi.org/10.31958/juris.v22i1.6562>
- Rolston III, H. (2020). *A new environmental ethics: The next millennium for life on earth*. Routledge.
- Sahin, A. (2018). Critical issues in Islamic education studies: Rethinking Islamic and Western liberal secular values of education. *Religions*, 9(11), 335. <https://doi.org/10.3390/rel9110335>
- Sayem, M. A. (2020). *Religious perspectives on environmental issues: A comparative study of John B. Cobb, Jr. and Seyyed Hossein Nasr* [Doctoral dissertation, The Chinese University of Hong Kong].
- Sayem, M. A. (2021). Islam and environmental ethics. *Islamic Studies*, 60(2), 157–172.
- Shah, S. S., and Asghar, Z. (2024). Individual attitudes towards environmentally friendly choices: A comprehensive analysis of the role of legal rules, religion, and confidence in government. *Journal of Environmental Studies and Sciences*, 14, 629–651. <https://doi.org/10.1007/s13412-024-00913-5>
- Subaidi, Tantowi, A., Cholid, N., Junaedi, M., Waluyo, and Nursikin, M. (2023). Eco-pesantren: Islamic education in forest conservation landscapes. *Fudan Journal of the Humanities and Social Sciences*, 16(4), 541–567. <https://doi.org/10.1007/s40647-023-00386-w>
- Wilkinson, R. G. (2022). *Poverty and progress: An ecological model of economic development*. Routledge.
- Zabidi, F. N. M., Abd Rahman, N., and Halim, L. (2021). Integration of Islamic values for environmental conservation: An analysis of school textbooks. *Religions*, 12(7), 509. <https://doi.org/10.3390/rel12070509>
- Zemo, K. H., and Nigus, H. Y. (2021). Does religion promote pro-environmental behavior? A cross-country investigation. *Journal of Environmental Economics and Policy*, 10(1), 90–113. <https://doi.org/10.1080/21606544.2020.1796820>