

# EXPLORING THE NEXUS BETWEEN RELIGIOSITY AND ENVIRONMENTAL BEHAVIORS INCLUDING WASTE MANAGEMENT AND ACTIVE ENVIRONMENTALISM: EMPIRICAL FINDINGS FROM TURKISH AND JORDANIAN MUSLIM SAMPLES

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**Abstract**

This article investigates the nuanced interplay between religiosity and environmental behaviors, specifically waste management and active environmentalism, within the context of two distinct Muslim societies. Drawing upon correlational survey methodology and employing questionnaire techniques, data were collected from 355 individuals aged 18 to 59, with a demographic composition comprising 50.4% Turkish Muslims ( $N=179$ ) and 49.6% Jordanian Muslims ( $N=176$ ). The mean age of the sample is 25.6 ( $SD= 7.75$ ). Utilizing measures such as the "Environmental Behavior Scale", and "Brief Religiosity Scale", the study sheds light on the differential impact of religiosity on environmental practices across socio-cultural contexts. Results revealed a positive correlation between religiosity and both waste management and active environmentalism among the Jordanian sample, whereas a positive association was observed solely between religiosity and waste management within the Turkish sample. The implications of these findings are discussed, alongside recommendations for future research endeavors in this domain.

**Keywords:** Psychology of Religion, Religiosity, Climate Change, Global Warming, Environmental Behavior Scale, Waste Management, Active Environmentalism.

**Dindarlık ile Çevreci Davranışlar Arasındaki İlişkinin İncelenmesi:  
Türk ve Ürdünlü Örneklemeler Üzerine Nicel Bir Araştırma****Geniş Özet**

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**Arka Plan**

Bu çalışma, dindarlık ile çevre dostu davranışlar arasındaki ilişkileri, özellikle israfa kaçınma ve aktif çevreciliği odak noktasına alarak incelemektedir. Bu çalışmada, dindarlık, bireylerin önemli kararlar alırken (sosyal ilişkiler, giyim tercihleri, beslenme alışkanlıkları ve arkadaş seçimi gibi) dini öğretileri dikkate alma sıklığı ile operasyonel olarak tanımlanmaktadır. İsrafa kaçınma, bireylerin enerji tasarruflu teknolojileri kullanma ve su, gıda ile enerji tasarrufu yapma eğilimlerini kapsamaktadır. Aktif çevrecilik, çevre sorunları üzerine bilgilendirme toplantılarına katılım ve kirliliğe karşı protestolar gibi çevre dostu davranışları içermektedir.

**Amaçlar ve Hipotezler**

Bu çalışmanın amacı, dindarlık ile hem aktif çevrecilik hem de israfa kaçınma arasındaki potansiyel olumlu ilişkiyi Türk ve Ürdünlü Müslüman örneklemeleri üzerinden incelemektir. Dindarlık ile çeşitli çevreci davranış boyutları arasındaki ilişkileri keşfetmeyi hedeflemektedir. Dindarlık ve çevre dostu davranışlar arasındaki ilişki, Yahudi-Hristiyan geleneğinde kapsamlı bir şekilde incelenmişken, İslam ülkelerinde bu konuda yapılan araştırmalar sınırlıdır. Özellikle, farklı Müslüman ülkelerde dindarlığın çevresel davranışlardaki rolünü inceleyen karşılaştırmalı çalışmalar neredeyse yoktur. Bu bağlamda, bu araştırma literatürdeki bu boşluğu doldurmayı amaçlamaktadır. Mevcut çalışmada aşağıdaki hipotezler formüle edilmiş ve ampirik olarak test edilmiştir.

H1: Türk Müslümanlarının, Ürdünlü akranlarına kıyasla daha düşük dindarlık seviyelerine sahip olmaları beklenmektedir.

H2: Türk Müslümanlarının, Ürdünlü Müslümanlardan daha yüksek düzeyde aktif çevrecilik ve israfa kaçınma eğilimi göstermeleri öngörülmektedir.

H3: Hem Türk hem de Ürdünlü Müslüman örnekleminde dindarlık ile hem aktif çevrecilik hem de israftan kaçınma eğilimi arasında pozitif bir ilişki beklenmektedir.

#### Yöntem

Bu araştırma kesitsel bir çalışmadır ve araştırmacılar veri toplamak için tarama yöntemi ve anket tekniğini kullanmışlardır. Hipotezleri test etmek için Pearson korelasyonu, çoklu regresyon analizi (enter yöntemi) ve tanımlayıcı istatistiksel analizler gerçekleştirilmiştir. Veriler, Türkiye (İstanbul) ve Ürdün (Amman)'dan lisans öğrencilerinden küme örnekleme teknikleriyle toplanmıştır. Örneklemin %50,4'ü (N=179) Türk Müslümanları, %49,6'sı (N=176) ise Ürdünlü Müslümanlardır. Çalışma verileri, Ocak 2022'de Türkiye ve Ürdün'den Sünni Müslümanlardan toplanmıştır. Öğrencilere üniversite dersleri sırasında Kısa İslami Dindarlık Ölçeği ve Çevresel Davranışlar Ölçeği içeren formlar dağıtılmıştır.

#### Sonuçlar

Araştırmanın bulguları, Ürdünlü Müslümanlar ile Türk Müslümanları arasında dindarlık açısından anlamlı bir fark olmadığını göstermiştir. Araştırma bulguları, israftan kaçınma boyutunda ulusal farklılıkların etkisini doğrulamış, ancak aktif çevrecilikte böyle bir etki bulamamıştır. Dolayısıyla, bu bulgular Araştırma Hipotezi 2'ye kısmi destek sağlamıştır. Bulgular, Ürdün örnekleminde dindarlık ile hem atık yönetimi hem de aktif çevrecilik arasında pozitif bir korelasyon olduğunu, Türk örnekleminde ise yalnızca dindarlık ile atık yönetimi arasında pozitif bir ilişki gözlemlendiğini ortaya koymuştur. Bu bulgular ayrıca Araştırma Hipotezi 3'ü kısmen desteklemiştir.

**Anahtar Kelimeler:** Dindarlık, İklim Değişikliği, Küresel Isınma, Çevresel Davranış Ölçeği, Atık Yönetimi, Aktif Çevrecilik.

## Introduction

Across a spectrum of religious traditions, numerous teachings underscore the interconnection between human beings and the environment, with adherents often expressing a favorable perspective toward nature within their faith. Within Buddhism, Christianity, Hinduism, and Islam, among others, diverse religious beliefs emphasize the paramount significance of environmental stewardship. Their sacred scriptures urge adherents to embrace the responsibility of being custodians, ensuring the protection of the Earth and its diverse biodiversity.<sup>1</sup> Indeed, teachings and writings concerning the relationship between humanity and nature are preva-

<sup>1</sup> E. Woodrum - T. Hoban, 'Theology and Religiosity Effects on Environmentalism', *Review of Religious Research* 35/3 (1994), 193-206; Ali Ayten, *Doğa Bize Emanet: Dinî ve Psikolojik Yönleriyle İnsan-Doğa İlişkisi. [Nature as Amanah: Exploring the Relationship Between Humanity and the Environment from Religious and Psychological Perspectives]* (İstanbul: İz Yayıncılık, 2021), 38-42.

lent across the majority of religions, with many emphasizing the importance of nature and its protection. Yet, recent studies suggest that different denominations and groups within Judeo-Christian traditions hold varying attitudes towards environmental stewardship and the dominion ethic.

Thus, in the literature on environmentalism and religiosity, there are multifaceted debates and conflicting findings. The relationship between religion and environmentalism in the Judeo-Christian West lacks clear understanding, and some of the findings of studies reveal a contradictory result that most religious beliefs have negative effects on private environmental behaviors but at the same time have positive effects on public environmental behaviors. While some studies emphasize the positive aspects<sup>2</sup> of religiosity on environmentalism, most appear to suggest a more negative impact. It is noteworthy that despite the abundance of studies examining the Judeo-Christian perspective on religion and the environment, scant attention has been devoted to exploring the non-Judaic Christian viewpoint on this subject, especially with more and more data on the ground level. In fact, an examination of primary Islamic sources reveals numerous Qur'anic verses and Prophetic traditions emphasizing the importance of environmental protection, including directives to plant trees and conserve natural resources.<sup>3</sup> Moreover, many Muslim scholars, in their theological and philosophical writings, characterize nature as a "Living Revelation" that leads people to recognize the existence of God.<sup>4</sup>

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In contemporary times, the interplay between environmentalism and religiosity has emerged as a significant area of research across disciplines such as the sociology of religion, psychology of religion, religious education, and environmental studies. In these aforementioned fields, the subject of the environment has been studied with various facets such as environmental behaviors, environmental orientations, purchasing environmentally friendly products, environmental engagement, environmental values, environ-

<sup>2</sup> Y. Yang - S. Huang, 'Religious Beliefs and Environmental Behaviors in China', *Religions* 9/72 (2018), 9.

<sup>3</sup> M. Izzī Dien, *The Environmental Dimensions of Islam*. (Cambridge: The Lutterworth Press, UK, 2000), 25-35.

<sup>4</sup> Seyyid Hüseyin Nasr, *İnsan ve Tabiat [The Human Being and Nature]* (İstanbul: 1982, Yeryüzü Yayınları), 13-20.

mental concern, etc.<sup>5</sup> The subject of environmental behaviors has been studied in relation to various variables such as personality, ideology, lifestyle, socioeconomic status, and religiosity/spirituality.<sup>6</sup> These issues have been subjects of study and debate for a considerable period. Yet, as stated earlier, the bulk of scholarly investigations on this subject have predominantly centered on Judeo-Christian samples. Thus, research in the psychology of religion and the sociology of religion concerning the environment has involved the analysis of largely Judeo-Christians drawn from Western societies. For instance, Briguglio, Garcia-Muñoz & Neuman<sup>7</sup> investigated the relationship between religiosity, spirituality, and environmental engagement. Their study revealed that while the ritualistic dimension of Roman Catholic religiosity (e.g., church attendance) demonstrated no discernible impact on environmental engagement, conversely, the social dimension of religiosity (e.g., involvement in socio-cultural religious activities) and self-assessed spirituality exhibited a positive correlation with environmental engagement. Another recent study is that of Arli, Pentecost & Thaichon,<sup>8</sup> which delved into a conservative Christian religious group. Their findings indicated that while consumers within this religious group exhibited motivation, commitment, and a deep affinity for nature stemming from their religious beliefs, their religiosity did not necessarily translate into environmentally friendly behaviors. In other words, although their religiosity heightened their attitudes toward the environment, it did not correspondingly increase their engagement in environmental behaviors. Thus, there is a clear imperative for further research to extend beyond the Judeo-Christian contexts in order to attain a more comprehensive understanding of the relationship between religiosity and environmental attitudes. Furthermore, conducting cross-cultural studies across the Muslim world is imperative to comprehensively grasp the intricacies

<sup>5</sup> Ayten, *Doğa Bize Emanet*, 33; Ayşe Büşra Aydemir, 'Yetişkinlerde İklim Değişikliği Endişesi Dini Başa Çıkma ve Dindarlık İlişkisi [The Link Between Religiosity, Religious Coping and Worry about Climate Change: A Study on Adults] (Master Thesis, İstanbul: Marmara University Social Science Institute, 2022).

<sup>6</sup> Ayten, *Doğa Bize Emanet*, 130-132.

<sup>7</sup> Marie Briguglio- Teresa Garcia Muñoz- Shoshana Neuman, 'Environmental Engagement, Religion and Spirituality in the Context of Secularization' *Environ. Res. Lett.* 15 (2020), 10.

<sup>8</sup> Denni Arli- Robin Pentecost - Park Thaichon, 'Does religion make consumers more environmentally friendly?' *Marketing Intelligence and Planning* 39/8 (2021), 1034.

of the relationship between religiosity and environmentalism, as well as environmental behaviors. This necessity arises from the diverse modernization, industrialization, and urbanization processes unique to individual nations within the Muslim world, which contribute to the complexity of these dynamics.

Expanding research that endeavors to encompass non-Judeo-Christian traditions will facilitate a broader examination of cultural and religious influences on environmental beliefs and behaviors. This inclusive approach will enable scholars to uncover diverse perspectives, practices, and dynamics that may not be adequately captured within the current literature. Ultimately, such research holds the potential to enhance our understanding of the complex interplay between religion, culture, and environmentalism on a global scale. In fact, recent studies have unveiled compelling findings that provide a more comprehensive understanding of this issue. For example, some research conducted in nations with Hindu and Muslim majorities suggests a decreased inclination to address climate change. Conversely, regions with larger populations of religiously unaffiliated individuals are seen to play a significant role in contributing to climate change, notably through dealing with heightened greenhouse gas emissions. These recent revelations underscore the importance of not only exploring diverse religious perspectives but also cultural perspectives to fully grasp the complexities of environmental attitudes and behaviors.<sup>9</sup> Indeed, recent investigations into environmental values and behaviors have explored a plethora of factors, encompassing gender, age, socioeconomic status, ideological backgrounds, religiosity, personality, and lifestyle. For instance, Karimi, Liobikiene & Alitavakoli<sup>10</sup> in a study conducted in the city of Qom, Iran, on a sample of Muslims, indicated that there is a direct and indirect relationship between religiosity and pro-environmental behaviors and also there is a link between religiosity and pro-environmental intentions. Moreover, in a study of cultural activities such as religious celebrations and practices in Nigeria, the study found eleven variables that represented important ways in which religious activities caused environmental

<sup>9</sup> V.Skirbekk et al., 'Religious Affiliation and Environmental Challenges in the 21st Century'. *Journal of Religion and Demography* 7 (2017), 20.

<sup>10</sup> Karimi, Liobikiene & Alitavakoli, 'The Effect of Religiosity on Pro-environmental Behavior Based on the Theory of Planned Behavior: A Cross-Sectional Study among Iranian Rural Female Facilitators', *Frontiers in Psychology* 13 (2022), 1.

discomfort. It found that “religious activities have negatively impacted the urban environment.”<sup>11</sup> A further study conducted in China exploring the relationship between religious beliefs and environmental behaviors found that while most religious beliefs negatively impact private environmental behaviors, they tend to positively influence general environmental behaviors.<sup>12</sup>

Thus, the present study aims to investigate the potential positive relationship between religiosity and both active environmentalism and waste management within Turkish and Jordanian Muslim communities, exploring correlations between religiosity and dimensions of environmental behaviors. Therefore, the current research seeks to expand on this general inquiry by collecting more data from the broader Muslim world to gain a comprehensive understanding of Muslim environmental attitudes and contribute to a broader comprehension of human perceptions regarding the environment. For instance, a study conducted by al-Hodhaif<sup>13</sup> among physical education students at Qassim University in the Kingdom of Saudi Arabia found a strong positive correlation between religiosity and environmental values among participants. Notably, a study investigating the influence of religious values on environmental behavior among Christians and Muslims in Nigeria challenged Lynn White's (1967) thesis of "dominion-over-nature," revealing a strong opposition to the dominion-over-nature theology among both groups.<sup>14</sup> Yet it is important to note that despite significant empirical research on the relationship between environmentalism and religiosity, findings have often been inconclusive or shown a negative correlation. For instance, a study found that consumers with high levels of intrinsic and extrinsic religiousness are more likely to be motivated by economic factors, suggesting that religiosity does not necessarily correlate with increased environmental friendli-

<sup>11</sup> T. O. Ogunbode - F. E. Oyekan, 'Religious Practices and Its Impacts on a Sustainable Urban Environment in Nigeria: The Way Forward', *Hindawi The Scientific World Journal* (2023), 6.

<sup>12</sup> Yang - Huang, 'Religious Beliefs and Environmental Behaviors in China', 9.

<sup>13</sup> Fahd al-Hodhaif, 'Environmental Values Among Students of Physical Education and Movement Sciences at Qassim University and Their Relationship to The Level of Religiosity', *Journal of The Faculty of Education- Ain Shams University :Education And Psychology* 35/9 (2019) 603.

<sup>14</sup> M. Shehu, 'Religious Influence on Environmental Attitudes and Behavior: Dominion or Stewardship?' *Annals of Social Sciences & Management Studies* 8/2 (2023), 9-10.

ness.<sup>15</sup> Another study indicated that a majority of religious individuals exhibit a lesser commitment toward environmental issues and climate change.<sup>16</sup> Yet, Ayten & Hussain's<sup>17</sup> cross-cultural studies on minority British Muslims in the UK and majority Muslims in Turkey showed a positive correlation between religiosity and waste management within both samples. Research conducted on both Jewish-Christian samples<sup>18</sup> and Muslim samples<sup>19</sup> has revealed that religiosity fosters a perception of stewardship and conscientiousness, encouraging pro-environmental behaviors. Baylor & Brandhorst<sup>20</sup> found that the sense of stewardship instilled by religion and trust in sacred scriptures positively supports environmentally friendly behaviors. Additionally, Çiçek & Ayten<sup>21</sup> observed that religiosity positively influences the purchasing of environmentally friendly products.

However, other studies indicate no significant relationship between religiosity and environmentalism.<sup>22</sup> Thus, due to differing results from environmental studies on religiosity, the literature demonstrates mixed findings. However, it is important to continue to highlight that the majority of this literature is still based on Judeo-Christian samples, as research has predominantly focused on Europe and the USA. With more studies taking place in non-Judeo-

<sup>15</sup> Arli- Pentecost - Thaichon, 'Does religion make consumers more environmentally friendly?', 1034.

<sup>16</sup> D. Arli - P. van Esch- Y. Cui, 'Who Cares More About the Environment, Those with an Intrinsic, an Extrinsic, a Quest, or an Atheistic Religious Orientation? Investigating the Effect of Religious Ad Appeals on Attitudes Toward the Environment', *Journal of Business Ethics* 185 (2023), 441-442.

<sup>17</sup> Ali Ayten- Amjad Hussain, 'The Relationship Between Religiosity, Environmental Orientation and Environmental Behaviors: An Empirical Study with Turkish and British Muslim Samples', *Marmara Üniversitesi İlahiyat Fakültesi Dergisi* 53/2 (2017), 27-44.

<sup>18</sup> R. J. Baylor - S. R. Brandhorst, 'Religiosity and Environmental Attitudes: Engagement in Proenvironmental Behavior', *Journal of Psychological Research* 20/2 (2015), 58-64.

<sup>19</sup> Ali Ayten, "Sahip olma'mi 'Emanet Görme' mi? Çevre bilinci ve dindarlık üzerine bir araştırma [Possession or Custodianship: An Empirical study on the relationship between environmental orientation, environmental behaviours, and religiosity]", *Din Bilimleri Akademik Araştırma Dergisi* 10/2 (2010), 203-233.

<sup>20</sup> Baylor - Brandhorst, 'Religiosity and Environmental Attitudes', 58.

<sup>21</sup> Şule Çiçek - Ali. Ayten, 'Religiosity, Economic Status, Environmental Concern, and Perceived Behavioral Effectiveness as Predictors of Buying Environmentally Friendly Products: A Quantitative Study of Turkish Muslims' *İlahiyat Studies* 14/2 (2023), 395-417.

<sup>22</sup> Aydemir, 'Yetişkinlerde İklim Değişikliği Endişesi...' 67.



Christian contexts, researchers anticipate the literature will begin to show a more positive relationship between religiosity and environmentalism. Moreover, the current research will offer a cross-cultural comparison of diverse environmental behavior amongst Muslim samples. The present study sought to address the aforementioned gaps in the existing literature. Consequently, based on these objectives and the extant literature, the following hypotheses were formulated and empirically tested in the research.

H<sub>1</sub>: Turkish Muslims are anticipated to exhibit lower scores in religiosity compared to their Jordanian counterparts.

H<sub>2</sub>: It is expected that Turkish Muslims will demonstrate higher scores in both active environmentalism and waste management compared to Jordanian Muslims.

H<sub>3</sub>: There will be a positive relationship between religiosity and both active environmentalism and waste management within both Turkish and Jordanian Muslim samples.

## Method

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The current study employed the survey method, questionnaire technique, and correlational design to investigate the relationship between religiosity and environmental behaviors, specifically focusing on waste management and active environmentalism. Data analysis was conducted utilizing independent sample t-tests, Pearson's correlation, and regression analysis.

## Participants

The sample consists of 355 university students recruited from İstanbul (Turkey) and Amman (Jordan) through cluster sampling techniques. 50.4 % ( $N= 179$ ) of the sample are Turkish Muslims and 49.6 % ( $N= 176$ ) are Jordanian Muslims. The gender of the participants is as follows; 54.4 % ( $N= 193$ ) are females and 45.6 % ( $N= 162$ ) are males. 77% ( $N=273$ ) of the sample are single and 23% ( $N=82$ ) are married. Participants' ages range between 18 to 59 years old. The mean age of the sample is 25.6 ( $SD= 7.75$ ).

## Measures

*Demographic Variables Form.* The researchers added four questions on the form concerning the respondents' nationality, gender, age, and marital status.

*Religiosity.* In order to assess the level of religiosity of the respondents, The Brief Islamic Religiosity Scale (BIRS) was utilized in this current research study. Ayten<sup>23</sup> developed the scale and carried out the analyses of validation and reliability for the Turkish form. Moreover, Ayten & Yıldız<sup>24</sup> modified the scale further by adding a fifth column and Ayten & Hardal<sup>25</sup> carried out the confirmatory factor analysis for the scale. The BIRS contains 10 items. The scale was further translated by researchers into the Arabic script to be used for the Jordanian sample. In the current survey, researchers conducted a new reliability analysis and found that Cronbach's alpha coefficients of the measurement were satisfactory for both the Jordanian and the Turkish samples [Turkish Script of Religiosity Scale  $\alpha = .831$ ; Arabic Script of Religiosity Scale  $\alpha = .669$ ].

*Environmental Behavior Scale (EBS).* To evaluate the degree of environmental behaviors among the participants, the Environmental Behavior Scale (EBS) was employed. Initially developed and validated by Ayten,<sup>26</sup> the scale underwent subsequent adaptation and validation for employment with Turkish and British Muslim populations by Ayten and Hussain.<sup>27</sup> The measurement entails 14 items and two sub-dimensions entitled 'active environmentalism' and 'waste management'. In the present investigation, the scale was linguistically translated into Arabic by the researchers to accommodate the Jordanian sample. Furthermore, within this study, a novel reliability analysis was conducted by the researchers, revealing satisfactory Cronbach's alpha coefficients for both the Jordanian and Turkish samples [Arabic Script of EOS total  $\alpha = .856$ , Turkish Script of EBS total  $\alpha = .810$ ; Arabic Script of active environmental-

<sup>23</sup> Ali Ayten, *Prososyal Davranışlarda Dindarlık ve Empatinin Rolü* [The Role of Religiosity and Empathy on Prosocial Behaviors]. (Doctorate Thesis, Istanbul: Marmara University, 2009), 100.

<sup>24</sup> Ali Ayten - Refik Yıldız, 'Dindarlık, Hayat Memnuniyeti İlişkisinde Dinî Başa Çıkmanın Rolü Nedir? Emekliler Üzerinde Bir Araştırma [What is the Role of Religious Coping Activities on the Relationship between Religiosity and Life Satisfaction? A Study On Retirees]' *Din Bilimleri Akademik Araştırma Dergisi* 16/1 (2016), 281-308.

<sup>25</sup> Ali Ayten - Fatma Hardal, 'Ruhsal Rahatsızlıklara Yönelik Bilgi Düzeyi ve Dindarlığın Ruhsal Rahatsızlıklara İlişkin Damgalama İle İlişkisi: Üniversite Öğrencileri Üzerine Nicel Bir Araştırma [The Links between the level of knowledge on mental health diseases, religiosity, and stigmatization: A Quantitative Study among Undergraduate Students]' *Dinbilimleri Akademik Araştırma Dergisi* 20/2 (2020), 551-571.

<sup>26</sup> Ayten, 'Sahip olma'mı 'Emanet Görme' mi', 211-15.

<sup>27</sup> Ayten- Hussain, The Relationship Between Religiosity, Environmental Orientation and Environmental Behaviors, 27-44.

ism sub-dimension  $\alpha = ,877$ ; Turkish Script of active environmentalism sub-dimension  $\alpha = ,810$ ; Arabic Script of waste management sub-dimension  $\alpha = ,696$ ; Turkish Script of waste management sub-dimension  $\alpha = ,653$ ].

### **Procedure**

The data for this study was collected from Sunni Muslims from Turkey and Jordan during the month of January in the year 2022. In Turkey, the data was collected from students of the theology faculty at Marmara University located in Istanbul, and from students of engineering faculty at Al-Balqa'a Applied University located in Amman. Cluster sampling was used to collect samples from both locations. Questionnaires containing the *Brief Islamic Religiosity Scale*, and the *Environmental Behaviors Scale* were distributed to participants within the universities during their classes.

Researchers informed the participants about the objectives of the study and the importance of their participation, as well as by making some clarifications when the participants brought up some inquiries related to the questionnaire. It took about 25 minutes for the participants to respond to the survey form. Participation was voluntary and there were no objections or problems related to the questions while the questionnaires were being filled in.

### **Results**

#### **Divergent Levels of Religiosity and Environmental Behaviors across Nationalities**

An independent sample t-test was performed to assess Research Hypothesis 1, investigating the disparities between Turkish Muslims and Jordanian Muslims concerning levels of religiosity (e.g., the influence of religion on social interactions, adherence to religious rituals such as Quran reading, prayer, fasting, etc.) and dimensions of environmental behaviors (e.g., energy conservation, water conservation, sustainable food practices, recycling, advocacy for environmental causes, tree planting, etc.). Table 1 displays the ranges, means, and standard deviations of the primary variables in the study.

Table 1. Range, mean, and standard deviations for Turkish and Jordanian Muslims.

	Turkish Muslims (N=179)			Jordanian Muslims (N=176)		
	Range	M	SD	Range	M	SD
1. Active environmentalism	1-5	2.68	0.716	1-5	2.62	1.041
2. Waste management	2.4-5	4.22**	0.510	1.2-5	3.84**	0.749
3. Religiosity (total)	1.7-5	4.46	0.457	3-5	4.51	0.360

\*\*  $p < .001$

As depicted in Table 1, Jordanian Muslims exhibited higher levels of religiosity compared to their Turkish counterparts. However, the disparity in religiosity between the two groups did not achieve statistical significance ( $p > .05$ ). Conversely, Turkish Muslims demonstrated higher scores on two sub-dimensions of environmental behaviors—active environmentalism and waste management—compared to Jordanian Muslims. The distinction between the two groups reached statistical significance ( $p < .05$ ) only for the waste management sub-dimension.

These findings suggest that national differences did not significantly influence religiosity. Moreover, they did not support Research Hypothesis 1, which posited that Jordanian Muslims would score higher than Turkish Muslims in religiosity. Additionally, the findings confirmed the impact of national differences in waste management ( $t(355) = -5.561$ ;  $p < 0.01$ ), but not in active environmentalism ( $t(355) = -0.527$ ;  $p > .05$ ). Consequently, these findings offer partial support for Research Hypothesis 2, suggesting that Turkish Muslims exhibit elevated levels of both active environmentalism and waste management practices relative to their counterparts in the Jordanian Muslim community.

**Correlational Analyses for the Main Variables of Study for both Turkish and Jordanian Samples.**

The researchers conducted correlation analysis to examine the links between the main variables of their study. In Table 2, they presented a correlation matrix that includes these variables. They found significant positive correlations between religiosity and waste management ( $r = 0.242$ ;  $p < 0.01$ ), as well as between religiosity

and active environmentalism ( $r = 0.262$ ;  $p < 0.01$ ) within the Jordanian sample. However, within the Turkish sample, they only found a significant positive correlation between religiosity and waste management ( $r = 0.2429$ ;  $p < 0.01$ ), while there was no statistically significant correlation between religiosity and active environmentalism ( $r = 0.031$ ;  $p > 0.05$ )

Table 2. Correlation Matrix

Turkish Sample (N=179)			Jordanian Sample (N=176)		
Variable	WM	AE	Variable	WM	AE
Religiosity	.249**	.031	Religiosity	.242**	.262**

Note: WM=Waste Management, AE=Active Environmentalism \*\* $p < 0.01$

These findings largely supported hypothesis H3, which suggests a positive relationship between religiosity and both active environmentalism and waste management within both Turkish and Jordanian Muslim samples.

#### *The Effect of religiosity on environmental behavior*

In the present study, the method of simple linear regression analysis was employed to examine the potential impact of religiosity on environmental behaviors, specifically focusing on waste management and active environmental behaviors. Religiosity served as the independent variable in this statistical model, while waste management and active environmentalism were considered dependent variables. The findings of the regression analysis are delineated in Table 3, offering comprehensive insights into the relationships between religiosity and environmental behaviors, as outlined below:

Table 3. Regression Analysis for Religiosity on Environmental Behaviors (Waste Management and Active Environmental Behaviors)

Turkish Sample (N=179)		Jordanian Sample (N=176)	
IV: Religiosity		IV: Religiosity	
	$\beta=.249^{**}$ $t=3.419$		$\beta=.242^{**}$ $t=3.288$
DV: Waste management	$\Delta R^2 = .057^{**}$ F=11.68	DV: Waste management	$\Delta R^2 = .053^{**}$ F=10.81
DV: Active Environmentalism	$\beta=.031$ $t=.418$ $\Delta R^2 = .005$ F=.175	DV: Active Environmentalism	$\beta=.262^{**}$ $t=3.576$ $\Delta R^2 = .063^{**}$ F=12.78

Note. IV: Independent Variable; DV: Dependent Variable \*\*p<0.01

The findings presented in Table 3 reveal significant insights into the relationship between religiosity and environmental behaviors within both Jordanian and Turkish samples. In the Jordanian context, religiosity emerged as a noteworthy predictor of both waste management and active environmentalism. However, its explanatory power was found to be relatively modest, elucidating merely 5% and 6% of the variances in waste management and active environmentalism, respectively, within the Jordanian sample.

Regarding beta coefficients, a positive association was discerned between religiosity and both waste management ( $\beta = .242$ ,  $t = 3.288$ ,  $p = .000$ ) and active environmentalism ( $\beta = .262$ ,  $t = 3.576$ ,  $p = .000$ ) among Jordanian participants. These results suggest that religiosity exerts a positive influence on both waste management practices and active engagement in environmental issues within the Jordanian context.

Conversely, within the Turkish sample, religiosity emerged as a significant predictor solely for waste management, failing to demonstrate a significant relationship with active environmentalism. Religiosity accounted for 5% of the variance in waste management within the Turkish sample. The beta coefficient analysis revealed a significant positive correlation between religiosity and waste management ( $\beta = .249$ ,  $t = 3.419$ ,  $p = .000$ ), while no significant association was observed between religiosity and active environmentalism ( $\beta = .031$ ,  $t = .418$ ,  $p > .05$ ) within the Turkish context.

In summary, the regression analysis findings provide partial support to hypothesis 3, indicating that while religiosity positively impacts waste management practices in both the Jordanian and Turkish contexts, its influence on active environmentalism is observed solely within the Jordanian sample.

### **Discussion and Conclusion**

Numerous investigations within the domains of psychology and sociology of religion have delved into the nexus between religiosity and environmental behaviors, encompassing waste management and active environmental engagement, such as participation in protest organizations addressing environmental issues and climate change, as well as the procurement of environmentally sustainable products. Nevertheless, a predominant focus on Judeo-Christian cohorts characterizes extant literature, with scant attention afforded to cross-cultural inquiries within Muslim societies. This research endeavors to address this gap by elucidating the interplay between religiosity and environmental attitudes within traditions beyond the Judeo-Christian milieu. Specifically, it seeks to furnish empirical insights into the interface of religiosity and environmental comportment within diverse Muslim cultures, thereby augmenting the corpus of cross-cultural scholarship in this domain. To this end, the study recruited samples from distinct Muslim cohorts situated in Jordan and Turkey. In addition to exploring the association between religiosity and environmental behaviors, including waste management and active environmentalism, the investigation aspired to enhance academic understanding of the nuanced dynamics at play within Muslim communities in relation to environmental stewardship.

The findings of the study revealed that national distinctions did not exert a statistically significant influence on the religiosity levels of individuals. Notably, despite Jordanian participants hailing from an engineering faculty and their Turkish counterparts from a Theology faculty, no significant disparity emerged between the two groups. This means that the cohort studying engineering compared to the cohort studying theology shows no difference in their religious attitudes and behaviors. This observation prompts us to conclude that the prevailing influence of the Arab culture on Jordanian students might predominantly shape their religious attitudes and

behaviors.<sup>28</sup> Thus, this outcome diverges from the expectations outlined in Research Hypothesis 1, which hypothesized higher religiosity scores among Jordanian Muslims compared to their Turkish counterparts.

Moreover, the research outcomes underscored the impact of national distinctions on waste management practices, albeit not on active environmentalism. Turkish Muslims demonstrated superior waste management behaviors, encompassing prudent resource utilization such as paper, water, energy, and food conservation, relative to their Jordanian counterparts. Consequently, these findings provide partial validation for Research Hypothesis 2, positing heightened levels of both active environmentalism and waste management practices among Turkish Muslims compared to their Jordanian counterparts within the Muslim community.

The inquiry into the influence of religiosity on environmental behavior, encompassing waste management and active environmentalism, has garnered attention across numerous studies. However, prevailing investigations have predominantly focused on elucidating this relationship within Judeo-Christian samples.<sup>29</sup> While some studies have extended their analyses to incorporate data from Muslim populations,<sup>30</sup> a dearth of cross-cultural inquiries within Muslim communities persists.<sup>31</sup> Insights gleaned from these investigations have yielded varied findings, with some positing a positive correlation between religiosity and environmentally friendly behaviors,<sup>32</sup> while others suggest either a negative<sup>33</sup> or neutral impact on

<sup>28</sup> For further details, Hamza Ferhan, *İstanbul ve Amman'daki Üniversite Öğrencilerinin Dini Hayatı [Religious Practices Among Students Residing in Istanbul and Amman]* (Ankara: Sonçağ Akademi, 2021).

<sup>29</sup> C. L. Kanagy – F. K. A. Willits, "Greening' of religion? Some evidence from a Pennsylvania sample' *Social Science Quarterly* 74/3 (1993), 674-683; Baylor-Brandhorst, 'Religiosity and Environmental...' 58; Briguglio at al., 'Environmental Engagement', 10.

<sup>30</sup> Ayten, 'Sahip olma'mi 'Emanet Görme' mi? 203-233; Hilal Nur Kavalcı, 'Çevreci Davranışlarda Bulunma ve Dindarlık İlişkisi [The Link between Religiosity and Environmental Behaviors]' (Yayınlanmamış Yüksek Lisans Tezi, Bursa: Uludağ Üniversitesi Sosyal Bilimler Enstitüsü, 2019).

<sup>31</sup> Ayten – Hussain, *The Relationship between Religiosity, Environmental Orientation and Environmental Behaviors*, 27-44.

<sup>32</sup> e.g., Çiçek & Ayten, 'Religiosity, Economic Status, Environmental Concern, 395-417.

<sup>33</sup> "e.g., C. Tsimpo - Q. Wodon, 'Faith affiliation, religiosity, and attitudes towards the environment and climate change' *The Review of Faith - International Affairs* 14/3 (2016), 51-64.



environmental attitudes and behaviors.<sup>34</sup> In this current study, the role of religiosity on environmental behaviors has been investigated in both Turkish and Jordanian samples. The findings from the regression analysis revealed that religiosity significantly predicted both waste management and active environmentalism within the Jordanian sample. In contrast, religiosity emerged as a significant predictor solely for waste management within the Turkish sample. The findings provided partial validation for Research Hypothesis 3. These outcomes also were partially consistent with the findings of Ayten & Hussain.<sup>35</sup> The observed disparity in predictors between the two samples appears to be influenced by ideological considerations, particularly stemming from the political context surrounding the Gezi Park incident in Turkey. Specifically, among religious individuals in Turkey, there arose a perceived alignment between active environmentalism, including participation in green protests, and an anti-state stance.<sup>36</sup>

#### ***Research limitations and directions for future research***

This study represents a pioneering endeavor in investigating the relationship between religiosity and environmental attitudes and behaviors, employing cross-cultural Muslim samples. However, several limitations warrant consideration. Firstly, the composition of the sample may not be fully representative, given its skewed distribution towards a mean age of 25.6 years and potential homogeneity in religious backgrounds. Additionally, this study underscores the necessity for cross-cultural Muslim samples to comprehensively apprehend the multifaceted processes of industrialization, modernization, and urbanization unfolding within Muslim societies.

Furthermore, it is crucial to acknowledge the potential mediating and moderating influences of political and ideological attitudes towards environmentalism on the association between religiosity and environmental issues, encompassing behaviors, interests, and orientations. For future research endeavors, integrating these variables into quantitative models is imperative to enhance our understanding of this complex interplay.

<sup>34</sup> Aydemir, 'Yetişkinlerde İklim Değişikliği Endişesi', 67.

<sup>35</sup> Ayten-Hussain, 'The Relationship Between Religiosity, Environmental Orientation and Environmental Behaviors', 27-44.

<sup>36</sup> For further details, Ayten, *Doğa Bize Emanet*, 120-130.

## References

- al-Hodhaif, F., 'Environmental Values Among Students of Physical Education and Movement Sciences at Qassim University and Their Relationship to The Level of Religiosity'. *Journal of The Faculty of Education- Ain Shams University: Education and Psychology* 35/9 (2019), 579-606.
- Arli, D. - Pentecos, R. - Thaichon, P. 'Does religion make consumers more environmentally friendly?'. *Marketing Intelligence and Planning* 39/8 (2021), 1024-1041.
- Arli, D. - Van Esch, P. - Cui, Y. 'Who Cares More about the Environment, Those with an Intrinsic, an Extrinsic, a Quest, or an Atheistic Religious Orientation? Investigating the Effect of Religious Ad Appeals on Attitudes toward the Environment'. *Journal of Business Ethics* 185 (2023), 427-448.
- Aydemir, Ayşe Büşra. 'Yetişkinlerde İklim Değişikliği Endişesi Dini Başa Çıkma ve Dindarlık İlişkisi [The Link between Religiosity, Religious Coping and Worry about Climate Change: A Study on Adults] (İstanbul: Marmara University Social Science Institute, Master Thesis, 2022).
- Ayten, Ali. *Prososyal Davranışlarda Dindarlık ve Empatinin Rolü* [The Role of Religiosity and Empathy on Prosocial Behaviors]. (Doctorate Thesis, İstanbul: Marmara University, 2009).
- Ayten, Ali. 'Sahip olma'mi 'Emanet Görme' mi? Çevre bilinci ve dindarlık üzerine bir araştırma [Possession or Custodianship: An Empirical study on the relationship between environmental orientation, environmental behaviours, and religiosity]'. *Din Bilimleri Akademik Araştırma Dergisi* 10/2 (2010), 203-233.
- Ayten, Ali – Yıldız, Refik. 'Dindarlık, Hayat Memnuniyeti İlişkisinde Dinî Başa Çıkmanın Rolü Nedir? Emekliler Üzerinde Bir Araştırma [What is the Role of Religious Coping Activities on the Relationship between Religiosity and Life Satisfaction? A Study on Retirees]' *Din Bilimleri Akademik Araştırma Dergisi* 16/1 (2016), 281-308.
- Ayten, Ali - Hussain, Amjad. 'The Relationship Between Religiosity, Environmental Orientation, and Environmental Behaviors: An Empirical Study with Turkish and British Muslim Samples', *Marmara Üniversitesi İlahiyat Fakültesi Dergisi* 53/2 (2017), 27-44.
- Ayten, Ali – Hardal, Fatma. 'Ruhsal Rahatsızlıklara Yönelik Bilgi Düzeyi ve Dindarlığın Ruhsal Rahatsızlıklara İlişkin Damgalama İle İlişkisi: Üniversite Öğrencileri Üzerine Nicel Bir Araştırma [The Links between the level of knowledge on mental health diseases, religiosity, and stigmatization: A Quantitative Study among Undergraduate Students]' *Dinbilimleri Akademik Araştırma Dergisi* 20/2 (2020), 551-571.
- Ayten, Ali. *Doğa Bize Emanet: Dinî ve Psikolojik Yönleriyle İnsan-Doğa İlişkisi. [Nature as Amanah: Exploring the Relationship between Humanity and the Environment from Religious and Psychological Perspectives]* (İstanbul: İz Yayıncılık, 2021), 203-233.
- Baylor, R. J. - Brandhorst, S. R. 'Religiosity, and Environmental Attitudes: Engagement in Proenvironmental Behavior'. *Journal of Psychological Research* 20/2 (2015), 58-64.
- Briguglio, M., Garcia Muñoz, T. – Neuman, S., 'Environmental Engagement, Religion and Spirituality in the Context of Secularization, *Environ. Res. Lett* 15 (2020), 1-12.
- Çiçek, Şule - Ayten, Ali. 'Religiosity, Economic Status, Environmental Concern, and Perceived Behavioral Effectiveness as Predictors of Buying Environmentally Friendly Products: A Quantitative Study of Turkish Muslims'. *İlahiyat Studies* 14/2 (2023), 395-417.

- Ferhan, Hamza. *İstanbul ve Amman'daki Üniversite Öğrencilerinin Dini Hayatı* [Religious Practices among Students Residing in Istanbul and Amman]. Ankara: Sonçağ Akademi, 2021.
- Izzi Dien, M. *The Environmental Dimensions of Islam*. Cambridge: The Lutterworth Press, 2000.
- Kanagy, C. L. - Willits, F. K. A. 'Greening' of religion? Some evidence from a Pennsylvania sample. *Social Science Quarterly* 74/3 (1993), 674-683.
- Karimi, S. - Liobikiene, G. - Alitavakoli, F. The Effect of Religiosity on Pro-Environmental Behavior Based on the Theory of Planned Behavior: A Cross-Sectional Study among Iranian Rural Female Facilitators. *Frontiers in Psychology* 13 (2022), 1-12.
- Kavalcı, H. N. *Çevreci Davranışlarda Bulunma ve Dindarlık İlişkisi* [The Link between Religiosity and Environmental Behaviors]. Bursa: Uludağ Üniversitesi, Sosyal Bilimler Enstitüsü, Yayınlanmamış Yüksek Lisans Tezi, 2019.
- Nasr, S. H. *İnsan ve Tabiat* [The Human Being and Nature]. İstanbul: Yeryüzü Yayınları, 1982.
- Ogunbode, T. O. - Oyekan, F. E. Religious Practices and Its Impacts on a Sustainable Urban Environment in Nigeria: The Way Forward. *Hindawi The Scientific World Journal* (2023), 1-8.
- Shehu, M. Religious Influence on Environmental Attitudes and Behavior: Dominion or Stewardship? *Annals of Social Sciences & Management Studies* 8/2 (2023), 1-11.
- Skirbekk, V. - Sherbinin, A. - Adamo, S. B. - Navarro, J. - Chai-Onn, T. Religious Affiliation and Environmental Challenges in the 21st Century. *Journal of Religion and Demography* 7 (2017), 238-271.
- Tsimpo, C. - Wodon, Q. Faith affiliation, religiosity, and attitudes towards the environment and climate change. *The Review of Faith - International Affairs*. 1/3 (2016), 51-64.
- White, L. The Historical Roots of Our Ecologic Crisis. *Science* 155/3767 (1967), 1203-07.
- Woodrum, E. - Hoban, T. Theology and Religiosity Effects on Environmentalism, *Review of Religious Research* 35 /3 (1994), 193-206.
- Yang, Y. - Huang, S. Religious Beliefs and Environmental Behaviors in China. *Religions*. 9/3 (2018), 1-12.

