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Religious culture and cigarette use: University students' attitudes towards smoking based on their Islamic value

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Abstract: The current examines the influence of Islamic values on smoking behaviors among undergraduate students at Yarmouk University in Irbid, Jordan (N: 334). Tobacco use, in religious and cultural terms, is viewed as abhorrent; it is a significant concern for this population group. The study intends to identify how Islamic values affect the perception of students on smoking and, consequently, their smoking behavior. A self-administered questionnaire assessed sociodemographic data and the past 30 days of cigarette use. Descriptive statistics, such as frequencies and percentages, midpoint and standard deviation, and inferential statistics, such as chi-square tests, t-tests, ANOVA, Pearson correlation, and hierarchical regression, were used to analyze smoking behaviors, Islamic values, and demographic attributes. The study shows that Islamic values have a strong negative attitude towards smoking; students attributed smoking to religion, family and social expectations and perceptions, health and economic implications. Further, the hierarchical regression analysis revealed that cigarette use, hookah and e-cigarette, gender, and attitude towards Islamic values were suitable predictors for cigarette use. This study advances knowledge regarding smoking behaviors from the cultural-religious perspective. It highlights the importance of historically and culturally informed gender-sensitive prevention programs that address smoking-related beliefs, attitudes, and practices. Collaboration with the Ministry of Health and media outlets to integrate Islamic values into public health campaigns can reduce smoking among university students by aligning cultural and religious beliefs with health messaging.

Keywords: Islamic values; smoking behaviors; university students; non-smokers; smoking prohibition; family expectations; societal impact

1. Introduction

Smoking represents a critical public health issue in contemporary society, particularly among youth and adolescents. Its widespread prevalence exacerbates its dangers, as extensive evidence has demonstrated its significant health risks, including its status as a leading cause of mortality worldwide (Peto and Lopez, 2004). This underscores the necessity of thoroughly understanding the various forms of smoking, their chemical compositions, and their impact on the youth population in Jordan. (Hussen et al., 2023).

Smoking manifests in multiple forms, characterized by distinct use methods and chemical compositions. Cigars have three layers, with an outer wrapper ranging from yellow to dark brown (Newell, 2020). Depending on whether they are handmade, semi-handmade, or industrially produced, cigars contain approximately 4000 chemical compounds, including 250 toxic substances and about 50 carcinogens. Pipes, one of the oldest methods of tobacco consumption, was initially crafted from clay and later from wood, utilizing leaves from plants such as eucalyptus and pear (Kassem et al.,

2024). The hookah (also known as shisha) has grown substantially over the past three decades, particularly in Arab countries, with the youth demographic emerging as the predominant user group. Additionally, methods like dipping or chewing tobacco involve placing prepared smoking in the mouth, allowing for the gradual absorption of nicotine through the oral mucosa or by swallowing. This practice is notably prevalent among school and university students in the United States (Alshaikh, 2020; Dar-Odeh and Abu-Hammad, 2021).

Studies on smoking behavior among university students are therefore critical, mainly because this population is in a developmental state where many behavioral patterns, including smoking, are initiated and reinforced (Al-Kubaisy et al., 2017). University students are in a stage of new social liberation to make their own decisions, engage themselves in social activities, and are mainly prone to risky practices such as smoking due to peer and academic performance pressure (Parker et al., 2017). When these underlying factors involve religious and cultural aspects, then studying smoking behaviors becomes even more critical. University students in Jordan live where modern social demands and religious culture overlap. This makes them a good target group for the study of how their faith affects their health practices, such as smoking.

1.1. Islamic view on tobacco

Islamic scholars have shown significant interest in examining the nature of smoking, its consequences, and the legal rulings associated with its consumption, given its introduction and subsequent spread. Since there is no direct mention of tobacco in the Quran or Sunnah (Labib et al., 2023). The ban on smoking is primarily based on Islamic principles that forbid anything harmful to the body, offensive to others, or wasteful of wealth. Modern medical evidence underscores the numerous harms of smoking, reinforcing the obligation for Muslims to avoid such harmful practices (Al-Sheikh, 2018; Bader, 2022).

Several additional Islamic legal arguments support the prohibition of smoking. Smoking is classified as a harmful impurity with an unpleasant odor (Radwan, 2003; World Health Organization, 2000). Smoking is also considered intoxicating, as intoxication is defined as anything that clouds the mind, even if it is less potent than alcohol (Bensaid et al., 2021). Smoking initially impairs rational faculties by affecting breathing and senses (Vanaman, 2023). Additionally, substances causing lethargy and numbness are prohibited unless necessary. Moreover, smoking is harmful, and anything proven harmful is forbidden (Jahanbin, 2021).

The physical harms of smoking, such as arterial hardening, heart disease, memory impairment, and respiratory illnesses, are well-documented (Alshaikh, 2020). Socially, smokers are often observed to display poor behavior, impatience, and a quick temper over minor issues (Humphreys, 2023). Economically, smoking represents a wasteful expenditure that benefits neither body nor soul and fails to contribute positively to life or the hereafter (Rahman, 2024).

According to the Islamic perspective, based on the presented evidence, smoking weakens the body, endangers the health, and represents a waste of resources, making it prohibited in Islam. Muslims are encouraged to avoid the company of smokers or those using other intoxicants to prevent adopting harmful habits.

1.2. Smoking in Jordanian society

The smoking landscape among Jordanian youth is particularly alarming. According to a World Health Organization (WHO) report titled “Tobacco Use Trends 2000–2030,” global trends indicate a steady decline in tobacco use. However, Jordan is one of six countries where tobacco consumption is on the rise. In 2022, the prevalence of tobacco uses among Jordanians aged 15 and above averaged 36.3%, with a stark gender disparity: 57.8% among males and 13.4% among females. The WHO estimated that in 2022 there were approximately 2.774 million tobacco users in Jordan (Al Mulla et al., 2020; Al-Tammemi, 2022).

In response to these concerns, Jordan’s Health ministry has emphasized the urgent need to implement the National Tobacco Control Strategy (2024–2030) and its associated action plan (2024–2026), supported by the WHO, to mitigate the risks associated with smoking. Despite these initiatives, Jordan remains among the six countries where tobacco use continues to escalate. The financial burden of smoking is substantial, ranking second only to meat and poultry expenditures within Jordanian households. Moreover, the increasing prevalence of hookah and e-cigarettes has further contributed to rising smoking rates in the country (Alkhatib et al., 2024; World Health Organization, 2023).

The alarming statistics reported by the WHO have compelled the Jordanian government to enforce stricter regulations, including a ban on smoking in public places and the imposition of severe penalties. The data reveal that Jordanians consume an average of 21 cigarettes per day, resulting in significant economic losses and a considerable health burden. Smoking-related illnesses, particularly cancers of the lung, mouth, and throat, are increasingly prevalent. For example, smokers are 20 times more likely to develop lung cancer compared to non-smokers. The National Cancer Registry data from 2008 to 2022 indicates a 164% increase in tobacco-related cancers compared to non-tobacco-related cancers (Smith et al., 2022; World Health Organization, 2023).

This information shows the profound impact of smoking on the health, social, and economic well-being of Jordanian youth. (Qasem et al., 2024). The evidence reinforces the severe health risks associated with tobacco use and underscores the Islamic prohibition of smoking, encompassing its sale and purchase.

1.3. Study aims

The study aims to explore the influence of Islamic values on smoking behaviors among university students by examining several key areas. First, it seeks to determine how Islamic prohibitions and values shape students’ smoking behaviors. The research will focus on identifying differences between smokers and non-smokers regarding their adherence to these religious principles, thereby highlighting the significant role of Islamic values in guiding smoking-related decisions.

Additionally, the study aims to assess students’ attitudes toward smoking and its impact on their religious duties. This includes investigating their aversion to marrying smokers and understanding how these attitudes reflect the influence of Islamic values on personal and social preferences. By exploring these dimensions, the study

highlights the central role of religious beliefs in shaping individual behaviors and choices.

Further, the study aims to analyze the influence of electronic cigarettes and hookahs on traditional tobacco smoking among university students. The research will examine how the use of these alternative smoking products correlates with cigarette use, providing insights into the complex relationships between various forms of smoking.

2. Materials and methods

2.1. Participants

The study included 334 students from Yarmouk University in Irbid, Jordan. The participants were between 17 and 22 years old, with a median age of 20. The gender distribution was nearly equal, with 169 males (50.6%) and 165 females (49.4%). The students were from various faculties, with 153 (46.5%) from Natural Sciences and 181 (43.5%) from Social Sciences. Among the participants, 135 students (40.4%) reported using cigarettes in the past 30 days (see **Table 1**).

Table 1. Sociodemographic characteristics and prevalence of past 30-days smokers among students ($N = 334$).

Characteristics	Unweighted no. (weighted %)
Gender	
Male	169 (50.6)
Female	165 (49.4)
Faculty	
Natural Sciences	153 (46.5)
Social Sciences	181 (43.5)
Study year	
The first year	41 (12.3)
The second year	40 (12.0)
The third year	105 (31.4)
The fourth year	148 (44.3)
cigarette use (based on the Past 30 days of cigarette use)	135 (40.4)

Note: students ages 17–22 years; median age = 20 years; past 30-days smokers: past 30-days.

2.2. Procedure

Data collection occurred from 20 April 2023, to 20 May 2023. The sample size was determined using Raosoft online software, with a 5% margin of error, a 95% confidence interval, and a 50% response distribution. This resulted in a recommended sample size of 334 students from the Yarmouk University Faculty of Islamic Studies in Jordan (Raosoft, 2023). An online questionnaire was used to collect data. The questionnaire was distributed via university email and social media platforms to ensure a broad reach. Participants were informed about the study’s purpose and assured of the confidentiality of their responses. They provided informed consent before participating in the survey.

2.3. Measures

The primary measure used in this study was a self-reported questionnaire that assessed sociodemographic characteristics and cigarette use over the past 30 days. Participants indicated their gender as either male or female and selected their faculty from a list of options, including Natural Sciences and Social Sciences, and their study year from 1–4 years. They also reported the number of days they used cigarettes in the past 30 days, with response options ranging from 0 days to 30 days, allowing for a detailed assessment of cigarette use frequency. The scale consists of four scales: Students’ attitudes towards smoking based on their Islamic value included 11 items: Cigarette use (based on past 30-days cigarette use), Electronic cigarette use (based on past 30 days cigarette use), and Hookah use (based on past 30-days. cigarette use) included three items (AlKhudari et al., 2024; Almutairi, 2016). These items explored various dimensions, such as personal and religious reasons for avoiding smoking, the perceived health impacts, and the social and familial consequences of smoking. For example, participants were asked to respond to statements like “I prefer not to marry a smoker because smoking is considered haram (forbidden) in Islam” and “I avoid smoking because it can lead to drug addiction.” These items were designed to capture the multifaceted reasons behind cigarette use and abstinence among the students (Table 2). The questionnaire was designed to be user-friendly and took approximately 10min to complete. The data collected provided insights into the prevalence of cigarette use among students and its association with sociodemographic factors and personal beliefs.

The reliability coefficients for the scale used in this study indicate high internal consistency across all dimensions. Specifically, Cronbach’s alpha values for the scales measuring attitudes towards smoking based on their Islamic value (0.77) are above the commonly accepted threshold of 0.70, suggesting that the items within each scale are highly correlated and measure the same underlying construct (Sujati and Akhyar, 2020).

Table 2. Variables and scale sources.

Variables and scales	Item	Sources
Sociodemographic variables	Sociodemographic section (1–3)	Bin Abdulrahman et al. (2022); Hamadeh et al. (2020); Milic et al. (2020)
Cigarette use	4	Milic et al. (2020)
Electronic cigarette use	5	McLeish et al. (2028)
Hookah use	6	AlKhudari et al. (2024)
Students’ attitudes towards smoking based on their Islamic value	Scale items (1–11)	Almutairi (2016); Bader (2022); Bensaid (2021); Labib (2023)

3. Results

3.1. The differences between smokers and non-smokers based on their Islamic values related to smoking

The study assessed university students’ attitudes ($N = 334$) regarding smoking and Islamic values, revealing significant insights into their preferences and beliefs

(Table 3). One notable finding was their preference against marrying smokers (Effendi et al., 2024). Specifically, only 11% of non-smokers expressed this preference, compared to 14% of smokers, resulting in 25% indicating indifference. However, this result was not statistically significant ($p = 0.174$). In contrast, a substantial majority indicated they abstain from smoking due to its prohibition in Islam, with 2% of non-smokers and 13% of smokers acknowledging this belief, leading to a total of 16% overall, which was highly significant ($p < 0.001$).

In addition to personal abstinence, students expressed strong sentiments regarding familial and societal expectations. Only 6% of non-smokers and 13% of smokers stated they would refuse to have a smoker in their family (de Oliveira et al., n.d.), resulting in a total of 19%. This attitude was similarly corroborated by a strong acknowledgment that smoking might prevent individuals from performing their religious duties correctly, with 14% of non-smokers and 13% of smokers agreeing, yielding a total of 27% ($p < 0.001$). Furthermore, the acknowledgment of smoking’s health risks was prevalent, with 3% of smokers recognizing it as harmful ($p = 0.013$), indicating a significant concern for health implications.

The study also highlighted the perceived adverse effects of smoking on family and society. Only 1% of non-smokers and 8% of smokers indicated they would avoid smoking for their family’s sake. Yet, 90% of participants indicated they would abstain due to potential societal detriments ($p < 0.001$). Additionally, students perceived smoking as akin to spending money on illegal activities, with just 1% of non-smokers and 6% of smokers reflecting this viewpoint, yet overall concern remained significant ($p < 0.001$).

Moreover, the study explored students’ roles as examples for future generations. 35% expressed a desire not to smoke to avoid setting a poor example for their children (Hoek et al., 2024); this finding was statistically significant ($p < 0.001$). Concerns regarding addiction and fire hazards further reinforced the majority’s stance on abstaining from smoking, with both issues showing high significance ($p < 0.001$).

In conclusion, the results indicate a predominant trend among university students toward abstention from smoking, heavily influenced by their Islamic values. Students recognize the negative implications of smoking, which encompass health risks, societal impact, and the importance of role modeling for their future generations. The statistical significance across various associations underscores the interconnectedness of Islamic beliefs and attitudes toward smoking, signifying a conscious effort to align personal choices with religious principles.

Table 3. University students’ attitudes towards smoking based on their Islamic values ($N = 334$).

Items	Responses	Non-cigarette use N (%)	cigarette use N (%)	Total N (%)	p -value*
I prefer not to marry a smoker because smoking is considered <i>haram</i> (forbidden) in Islam.	No	37(%11)	48(%14)	85(%25)	0.174
	Yes	125(%37)	124(%37)	249(%75)	
I abstain from smoking because it is prohibited in Islam.	No	7(%2)	45(%13)	52(%16)	0.000***
	Yes	155(%46)	127(%38)	282(%84)	
I refuse to have a smoker in my family.	No	21(%6)	43(%13)	64(%19)	0.000***
	Yes	141(%42)	129(%39)	270(%81)	

Table 3. (Continued).

Items	Responses	Non-cigarette use N (%)	cigarette use N (%)	Total N (%)	p-value*
Smoking can prevent me from performing religious duties correctly.	No	47(%14)	43(%13)	90(%27)	0.000***
	Yes	115(%34)	129(%39)	244(%73)	
Smoking is” harmful” because it causes various diseases in the body.	No	1(%0)	9(%3)	10(%3)	0.013*
	Yes	161(%48)	163(%49)	324(%97)	
I avoid smoking because it may negatively affect my family.	No	5(%1)	28(%8)	33(%10)	0.000***
	Yes	157(%47)	144(%43)	301(%90)	
I avoid smoking because it can have a detrimental impact on society.	No	5(%1)	28(%8)	33(%10)	0.000***
	Yes	157(%47)	144(%43)	301(%90)	
I believe that smoking is a form of spending money on illegal activities.	No	5(%1)	20(%6)	25(%7)	0.000***
	Yes	157(%47)	152(%46)	309(%93)	
I refrain from smoking so that I do not set a bad example for my children.	No	44(%13)	74(%22)	118(%35)	0.000***
	Yes	118(%35)	98(%29)	216(%65)	
I avoid smoking because it can lead to drug addiction.	No	26(%8)	40(%12)	66(%20)	0.000***
	Yes	136(%41)	132(40)	268(%80)	
I abstain from smoking because it can cause fires.	No	22(%7)	42(%13)	64(%19)	0.000***
	Yes	140(42%)	130(39%)	27081%)	

Not. p-value derived from Chi-square test; * p < 0.05; ** p < 0.01; *** p < 0.001.

3.2. The differences between the study categorical variables according to the four study scales.

Table 4 presents descriptive statistics and significant tests regarding religious commitment and respect concerning smoking behavior among university students ($N = 334$). The table includes the mean (M) scores and standard deviations (SD) for cigarette use, electronic cigarette use, hookah use, and students’ attitudes towards smoking based on their Islamic values, along with p-values from t-tests and One-Way ANOVAs.

In examining cigarette use based on the past 30 days, male students reported a significantly higher mean score ($M = 0.70$, $SD = 0.46$) than female students, with a mean score of only 0.10 ($SD = 0.30$). The p -value of 0.00 indicates a significant difference in cigarette use between genders. Similarly, male students also exhibited higher electronic cigarette use ($M = 0.46$, $SD = 0.50$) than females ($M = 0.15$, $SD = 0.35$), with a significant p -value of 0.00. Hookah use followed the same trend, with males reporting a mean of 0.46 ($SD = 0.50$), while females reported a significantly lower mean of 0.12 ($SD = 0.32$), again with a p -value of 0.00. However, no significant difference was found in students’ attitudes towards smoking based on Islamic values between genders, with male students reporting a mean score of 0.84 ($SD = 0.17$) compared to females at 0.80 ($SD = 0.20$), yielding a p -value of 0.82.

When considering the variable of faculty, students in the Natural Sciences reported a mean cigarette use of 0.36 ($SD = 0.48$), while Social Sciences students had a mean of 0.44 ($SD = 0.50$). Although the p -value of 0.10 suggests no significant difference, electronic cigarette use showed no significant differences across faculties. Natural Sciences students at 0.29 ($SD = 0.45$) and Social Sciences students at 0.32 ($SD = 0.45$).

= 0.47), yielding a p -value of 0.54. For hookah use, the means were also similar—0.26 (SD = 0.44) for Natural Sciences and 0.31 (SD = 0.46) for Social Sciences, with a p -value of 0.30. Both faculties reported similar scores regarding attitudes toward smoking based on Islamic values, yielding a non-significant p -value of 0.69.

Examining the study year variable indicates that first-year students had a mean cigarette use of 0.22 (SD = 0.42), while second-year students scored higher with a mean of 0.50 (SD = 0.51). Third-year ($M = 0.42$, SD = 0.50) and fourth-year students ($M = 0.42$, SD = 0.50) reported similar usage levels. However, no significant differences in cigarette use by study year were found ($p = 0.22$). Similar patterns emerged for electronic cigarette use and hookah use across study years, with no significant differences noted in the usage levels of these products. Notably, students' attitudes toward smoking based on Islamic values remained relatively constant across all years, with mean scores ranging from 0.76 to 0.83, yielding a p -value of 0.56.

In conclusion, the results reveal a significant gender disparity in smoking behaviors, with male students exhibiting higher rates of cigarette, electronic cigarette, and hookah use compared to female students. However, students' attitudes toward smoking based on Islamic values did not significantly differ by gender, faculty, or study year. The data emphasize the impact of gender on smoking behaviors while highlighting a consistent adherence to anti-smoking values across the student population.

Table 4. Descriptive Statistics and Significance Tests for study scales (t-tests and One-Way ANOVA, $N = 334$).

Variables		Cigarette use (based on Past 30 d. cigarette use)		Electronic cigarette use (based on Past 30 d. cigarette use)		Hookah use (based on Past 30 d. cigarette use)		Students' attitudes towards smoking based on their Islamic value	
		M (SD)	p	M (SD)	p	M (SD)	p	M (SD)	p
Gender	Male	0.70 (0.46)	0.00	0.46 (0.50)	0.00	0.46 (0.50)	0.00	0.84 (0.17)	0.82
	Female	0.10 (0.30)		0.15 (0.35)		0.12 (0.32)		0.80 (0.20)	
Faculty	Natural S.	0.36 (0.48)	0.10	0.29 (0.45)	0.54	0.26 (0.44)	0.30	0.83 (0.18)	0.69
	Social S.	0.44 (0.50)		0.32 (0.47)		0.31 (0.46)		0.82 (0.20)	
study Year	First	0.2 (0.42)	0.22	0.22 (0.42)	0.25	0.29 (0.46)	0.14	0.82 (0.19)	0.56
	Second	0.50 (0.51)		0.45 (0.50)		0.40 (0.50)		0.76 (0.21)	
	Third	0.42 (0.50)		0.33 (0.47)		0.38 (0.49)		0.83 (0.18)	
	Fourth	0.42 (0.50)		0.23 (0.42)		0.22 (0.42)		0.83 (0.20)	

Notes. M = means; SD = standard deviation; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

3.3. The correlations between study scales.

The analysis in **Table 5** outlines the scores of different factors related to smoking behaviors and attitudes among university students ($N = 334$). The table includes the mean (M) scores and standard deviations (SD) for each type of smoking behavior and students' attitudes toward smoking based on their Islamic values, accompanied by Pearson correlation coefficients between these factors.

For cigarette use, the mean score was 0.40 with a standard deviation of 0.49, indicating a moderate level of cigarette consumption among the respondents. In contrast, electronic cigarette use had a lower mean score of 0.29 (SD = 0.45), suggesting that it is less prevalent than traditional cigarette use. The correlation

between electronic cigarette use and cigarette use was positive and significant ($r = 0.461, p < 0.01$), implying that students who use electronic cigarettes are also more likely to engage in cigarette use.

The analysis also considered hookah use, with a mean score of 0.30 (SD = 0.46). The correlation between hookah use and cigarette use was notably positive and significant ($r = 0.401, p < 0.01$), suggesting that students who engage in hookah smoking are also likely to use cigarettes. Furthermore, there was a strong positive correlation between hookah and electronic cigarette use ($r = 0.561, p < 0.01$), indicating that these forms of smoking are interrelated among the respondents.

In examining students' attitudes toward smoking based on Islamic values, the mean score was 0.82 (SD = 0.19), suggesting a generally positive attitude towards anti-smoking that aligns with Islamic principles. Importantly, these attitudes displayed negative correlations with all three types of smoking behavior. Specifically, there was a significant negative association with cigarette use ($r = -0.158, p < 0.01$), electronic cigarette use ($r = -0.210, p < 0.01$), and hookah use ($r = -0.328, p < 0.01$). These results imply that stronger anti-smoking attitudes grounded in Islamic values are associated with lower levels of smoking across all forms.

In summary, the findings illustrate significant relationships between various forms of smoking and students' attitudes toward tobacco, influenced by their Islamic values. While a positive correlation exists between traditional and electronic cigarette use, a negative correlation is observed between these behaviors and students' anti-smoking attitudes. This suggests that adherence to Islamic values against smoking plays a crucial role in influencing smoking behaviors among this demographic, highlighting the importance of values and beliefs in shaping health-related choices.

Table 5. Scores of each factor and Pearson correlation coefficients ($N = 334$).

	<i>M</i> (<i>SD</i>)	1	2	3	4
1. Cigarette use	0.40(0.49)	1			
2. Electronic cigarette use	0.29(0.45)	0.461**	1		
3. Hookah use	0.30(0.46)	0.401**	0.561**	1	
4. Students' attitudes towards smoking based on their Islamic value	0.82(0.19)	-0.158**	-0.210**	-0.328**	1

Notes. *M* = means; *SD* = standard deviation; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

3.4. Hierarchical regression on cigarette use (based on the past 30 days).

The hierarchical regression analysis provides valuable insights into the predictors of cigarette use among university students based on their past 30-day cigarette use. The study was conducted in three steps, each revealing essential aspects of smoking behavior (Table 6).

Table 6. Hierarchical regression on cigarette use (based on past 30 days of cigarette use) among university students ($N = 334$).

	Step 1 (β)	Step 2 (β)	Step 3 (β)
Gender (ref: female)			
Male	0.60*	0.48***	0.51***

Table 6. (Continued).

	Step 1 (β)	Step 2 (β)	Step 3 (β)
Faculty (ref: Natural Sciences)			
Social Sciences	0.056	0.19	0.05
Study year (ref: Fourth)			
First	-0.10	-0.113*	-0.110*
Second	0.09*	0.037	0.030
Third	-0.00	-0.043	-0.033
Electronic cigarette use		0.126*	0.077
Hookah use		0.197**	0.183**
Students' attitudes towards smoking based on their Islamic value			-0.137***
R^2	0.39***	0.45***	0.47**
ΔR^2		0.06***	0.01**

Notes. R^2 : R Square, ΔR^2 : R Square Change; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

In step 1, sociodemographic variables, specifically gender and faculty, were analyzed. The results showed that gender was a significant predictor of cigarette use, with males demonstrating a higher likelihood of smoking compared to females ($\beta = 0.60$, $p < 0.05$). This finding is consistent with previous research indicating that men typically smoke more than women. The faculty type, whether Social Sciences or Natural Sciences, did not significantly predict cigarette use in this model. This lack of significance suggests that the field of study may not play a crucial role in influencing smoking behavior within this sample. The model explained 39% of the variance in cigarette use ($R^2 = 0.39$, $p < 0.001$), establishing a solid baseline predominantly driven by gender differences.

Step 2 expanded the analysis by including additional variables such as electronic cigarette and hookah use. This inclusion increased the model's explanatory power to 45% ($\Delta R^2 = 0.06$, $p < 0.001$), reflecting a significant improvement in understanding cigarette use. Both electronic cigarette use ($\beta = 0.126$, $p < 0.05$) and hookah use ($\beta = 0.197$, $p < 0.01$) were found to be significant predictors of cigarette smoking. The positive associations suggest that students who engage in electronic cigarette or hookah use are more likely also to smoke cigarettes. This finding highlights the interconnected nature of various smoking behaviors and emphasizes the need for comprehensive prevention strategies that address multiple forms of tobacco use.

In step 3, the analysis incorporated students' attitudes towards smoking, particularly those shaped by Islamic values. This step slightly increased the model's explanatory power to 47% ($\Delta R^2 = 0.01$, $p < 0.01$). The negative relationship between students' attitudes informed by Islamic values and cigarette use ($\beta = -0.137$, $p < 0.001$) indicates that more vital adherence to these values is associated with lower cigarette use. This result underscores the influence of personal and cultural values on smoking behavior, suggesting that intrinsic attitudes and beliefs play a significant role in health-related behaviors.

In particular, the results of the hierarchical regression analysis suggest that sociodemographic characteristics, behavioral parameters, and twelve personal values

contribute to university student's cigarette use. The considerable predictors consist of male gender, electronic cigarette and hookah utilization, and the attitude that presupposes compliance with the tenets of Islam. These facts prove that cigarette use is a complex phenomenon, so interventions aimed at its prevention should also be complex and consider gender differences, multiple types of use, and value orientations. Further research should expand upon the identified dimensions and seek other risk factors to establish better smoking prevention interventions for various students. (Varatharajan et al., 2024).

4. Discussion

Based on the above results, it became feasible to see the influence of Islamic values on the university students' behavior regarding smokers and non-smokers.

4.1. No significant differences in marriage preferences

Smokers' and non-smokers' attitudes toward marrying a smoker were quite alike, as 79.4% of smokers and 84.9% of nonsmokers expressed an unfavorable attitude toward marrying a smoker; this difference turned out to be statistically insignificant, $p = 0.174$. This implies that self-image determines the preference not to marry a smoker and other cultures or beliefs (Oltra et al., 2024).

4.2. Abstention from smoking due to Islamic prohibition

The subject of interest shifted significantly if a person never smoked or stopped smoking for the following reasons: The non-smoking respondents reported that the Islamic prohibition was a valid reason for their nonsmoking mainly at 46%, and smokers also acknowledged this reason at 38%. Furthermore, this result accosted a very high level of statistical significance, $p < 0.001$, confirming the impact of Islamic values on the decision of non-smokers not to smoke.

This suggests that non-smokers are more likely to align their behaviors with religious teachings, using their faith as a guide to resist smoking (Bader, 2022).

4.3. Family and societal expectations

The study also highlighted the role of family and societal expectations in shaping attitudes toward smoking. Both smokers and non-smokers demonstrated a solid refusal to have a smoker in their family. (Islam and Johnson, 2003), 81% of the total sample agrees with this stance. This attitude was highly significant ($p < 0.001$), reflecting a broader societal disapproval of smoking within the family unit. Additionally, the belief that tobacco could prevent proper performance of religious duties was shared by a significant portion of participants ($p < 0.001$), further emphasizing the interconnection between spiritual practice and smoking behaviors.

4.4. Health risks and societal impact

Awareness of the health hazards of smoking was high; 97% of the respondents acknowledged that smoking was dangerous to health ($p = 0.013$). Further, 90.2% of the students said they refrained from smoking because it negatively affects society ($p < 0.001$). This implies that university students have a keen interest in taking care of

their health as well as the health of the general public. It can be concluded that the general public health informative campaigns (which educate the public on how to improve their health and that of the community) will impress university students (Aghar et al., 2020).

4.5. Smoking as a form of spending on illegal activities

The belief that smoking is a kind of spending money on illegal activities was shared by most participants, max 93% ($p < 0.001$). This is appropriate in Islamic belief that frowns at wasteful cost, especially on malicious or unlawful activities, thus enhancing the religion-ethical foundation of students' perception of smoking (Abugarara, 2020).

4.6. Role modeling and future generations

The fear that students could become examples for future generations would also play a significant role in shaping students' attitudes. A large proportion of the respondents, 65 of them, reported that, at least, they wanted not to smoke to avoid feeling that they are a terrible role model for their children ($p < 0.001$). This underscores the concept of passing children good examples to emulate by parents since the latter have light responsibilities of being moral notional figures to their children (Bader, 2022)

4.7. Concerns about addiction and fire hazards

The concerns about quitting smoking, according to the study, were related to addiction and fire, with a percentage response of 80% and 81% of the participants, respectively ($p < 0.001$). This implies that students have a broad understanding of the various risks associated with smoking (Khalaf et al., 2022).

4.8. Gender differences in smoking behaviors

Another significant research implication that has emerged from the study is the highly skewed status of smoking based on gender. Nine out of 10 male students cited cigarette use, while 8 out of 10 males confirmed electronic cigarette and 6 out of 10 Hookah usage, while the female figure was significantly lower. For example, male students' cigarette use scores were 0.70 (SD = 0.46), substantially different from the female student mean score of 0.10 (SD = 0.30; $p = 0.00$). This trend held for not only electronic cigarettes but also hookah, with males reportedly using at higher rates, with p 's of 0.001 or less, affirmation of vital statistical significance (Hamadeh et al., 2020).

Thus, the present study emphasizes the gender factor as a significant determinant of smoking practices among university students. The seemingly higher proportion of male students who smoke may suggest that the social environment within which learning is cocurricular encourages or permits male student smokers than their female counterparts or that students of the male sex are more likely to smoke due to culturally embedded acceptable conditions. Still, it might also indicate a paradigm that males should smoke but should females not or should be influenced by their peers not to smoke.

4.9. Faculty and study year: Smoking behaviors and Islamic values

To this end, the study also compared and contrasted the variation in smoking behaviors with students' faculty and year of study. Surprisingly, cigarette, electronic, or hookah use was not significantly different between the Natural Sciences students and those from the Social Sciences faculties. Such a trend was the same for the students' study year; no significant difference was noted in the level of smoking usage among first-, second-, third-, and fourth-year students.

These results suggest that smoking behaviors among university students are not strongly associated with their academic discipline or their progression through university. This could indicate that smoking habits are more influenced by factors outside the educational environment, such as peer groups, social circles, or broader societal trends. In contrast, some studies have shown differences between academic disciplines and between them and the community outside the university (Bin Abdulrahman et al., 2022).

Despite the observed differences in smoking behaviors, the study found a consistent adherence to Islamic values related to smoking across all demographic variables. Students' attitudes towards smoking, as measured by Islamic values, did not significantly differ by gender, faculty, or study year. For example, male students had a mean score of 0.84 (SD = 0.17) on the Islamic values scale, while female students had a mean score of 0.80 (SD = 0.20), with a non-significant *p*-value of 0.82.

This consistency suggests that Islamic values related to smoking are deeply ingrained and widely shared among university students, regardless of their gender, field of study, or academic standing. The uniformity in these attitudes across different groups indicates a strong cultural or religious influence promoting anti-smoking values, potentially as a protective factor against smoking behaviors (Bin Abdulrahman et al., 2022).

4.10. Hierarchical regression findings on cigarette use

The results of the hierarchical regression analysis help understand the predictors of cigarette use among university students according to their use of cigarettes within the last 30 days. This study was conducted in three phases to help expose the essential characteristics of smoking behavior.

This finding has implications for personal and cultural values in smoking behavior, indicating that endorsed attitudes and beliefs contribute to various health behaviors (**Figure 1**). The hierarchical regression analysis reveals that sociodemographic factors and behavioral and personal values determine cigarette use among university students. The significant predictors are gender, use of e-cigarettes and hookah, and attitudes consistent with the Islamic faith. Thus, these findings presented a broader perspective on smoke use wherein gender-specific factors and more than one type of smoking should be considered, and cultural values should be incorporated into any intervention programs. Further research should extend these dimensions and include other potential predictors to design more efficient anti-smoking educational programs to be implemented at schools for different categories of students (Milic et al., 2020).

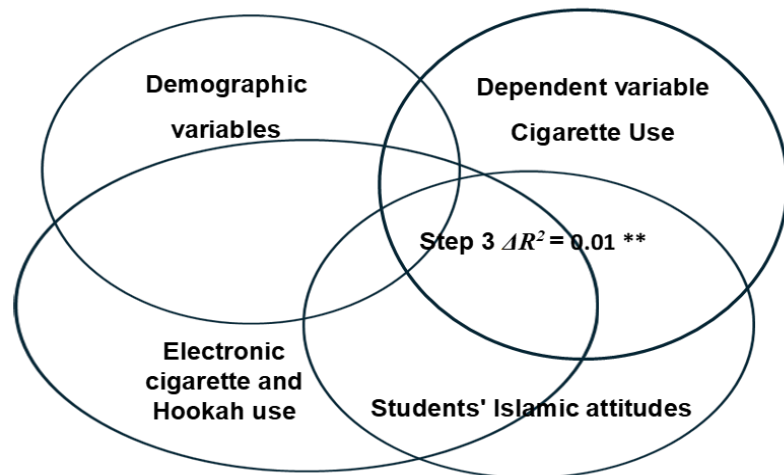


Figure 1. A framework of the third model: Hierarchical regression on cigarette use (based on past 30 days of cigarette use) among university students.

Research findings, mainly the negative correlation between Islamic values and cigarette utilization, underscore the critical part that religious bodies, including the Ministry of Islamic Affairs and Prayer Places, play in university students' smoking attitudes.

These institutions can play a significant role in promoting health as it has been manifested through religious leaders' teachings during sermons and health education programs consistent with Islamic principles, which frown and restrict people from engaging in such practices. So, too, media programs, for example, the Ministry of Health, can approach electronic, print, and social media to announce campaigns that uphold Islamic values because they support people's healthy living and discourage people from smoking because it is destructive, among other effects. When religious and cultural practices are incorporated into the body of ideas used in public health campaigns, these are more effective in attitude and practice change to reduce smoking among students. Such an approach, which is a collaboration of religious and healthcare organizations, can develop an effective and culturally appropriate plan to address the concern of tobacco in the community.

5. Conclusion

These research findings show that Islamic values significantly influence the smoking status of university students, smokers, and non-smokers having dissimilarities. The current social norms entail that non-smokers are more likely to identify Islamic prohibition as a locus of critical concern that kept them from smoking when compared to smokers, thus calling attention to the high impact of religion in shaping human behavior. Although people as a whole avoid marrying smokers, this factor did not significantly state a difference between smokers and non-smokers, so that this preference may be because of personal or cultural beliefs.

Regarding smokers' and non-smokers' expectations, the research highlights the family and societal influence. Smokers and non-smokers showed strong displeasure towards smokers in their families and had similar concerns about the performance of religious activities with tobacco. Most of the students had an adequate understanding

of the health hazards and social impacts of smoking, and a majority considered smoking as unhealthy and a gesture of wasteful expenditure. Besides, the students believe that they do not need to smoke because there should not be people who smoke in the future; fears related to addiction and fire hazards also act as stimuli for non-smoking.

Gender differences are also easily discerned in study findings, as male students indulge more in cigarettes, e-cigarettes, and hookahs than female students. Nonetheless, there were no significant differences in smoking behaviors by faculty or year of study, indicating that these behaviors probably reflect external factors rather than disciplinary fields. However, there are substantial differences found regarding the smoking behavior to Islamic values related to smoking across the demographic variables, evidently about a multifaceted cultural or religious influence that identified anti-smoking values.

The hierarchical regression analysis substantiates the multifaceted nature of university students' cigarette use; the research acknowledges gender, electronic cigarette and hookah use, and perceived norms, alongside Islamic values, as valuable predictors. The study implies that more effort needs to be directed towards multidimensional prevention approaches that target multiple smoking practices and culturally sensitive ones. Third, the study should inform future research to design strategies that adequately address students' various needs.

The study, therefore, emphasizes the importance of a smoking prevention message that takes account of Islamic values since religion plays a lead role in influencing smoking behaviors. This creates a premise that state-affiliated institutions such as the Ministry of Islamic Affairs and the operational mosques should partner with health departments to merge Islamic teachings in the persuasion processes. These processes can eliminate cultural and religious criteria input to ensure the suitability of health calls. Family and societal expectations were also areas that needed to be addressed in educational programs to fully exploit the current awareness of the health effects of smoking and its influence on religious obligations.

6. Limitations

The present study has some limitations that are worth considering while analyzing the research results. First, it is a cross-sectional design that obtains data at one point and does not encourage us to conclude about changes in smoking behaviors and attitudes. A longitudinal approach to collecting data would better explain the change in smoking behavior and attitudes and identify causality.

Besides, using self-reported measures indicates predisposing response bias, such as social desirability bias or reporting error. Smoking behaviors might be underreported, and the degree to which participants adhere to Islamic values might be overestimated because of perceived social desirability.

Instead, because smoking is socially forbidden, especially while in a religious gathering, participants may feel biased in the way they provide impressions. Someday, research can be enhanced in this regard by using biochemical markers or any other way of examining the actual smoking behavior of the sample. Further, as this study is cross-sectional, it provides a single-time behavior, making it circumspect to establish

causality. Thus, the best approach for future research will be the longitudinal study to examine how religious values affect smoking.

The present study's generalization is also restricted because the participants are university students only. This specific demographic may not be generalized to the rest of the population, let alone people in other cultural or geographical settings and people in different settings, such as workplaces rather than academic ones. In addition, the study can be restricted regarding all the participants' ethnicity, students' socioeconomic status, or any other characteristic, which can limit the generalization of the results regarding diverse student groups and cultural backgrounds.

The research also might not capture all the possible confounding factors that might have an impact on smoking, for instance, peer pressure, the presence of mental health disorders, or stressors. Adding these variables could have given a better picture of smoking trends. Further, while the analysis considered whether it was a faculty type and study year, the current smoking behaviors did not differ materially depending on these factors, which are less significant variables. Still, more differentiated aspects of scholars' lives/academic environments or specific stressors connected to various years of study might still apply.

Another limitation is the assumption of cultural homogeneity among the participants, especially on issues related to Islamic values. Since people may have their own way of interpreting divine teachings, this one format may be lacking in portraying the various ways in which these valuable teachings impact the smoking craze.

Finally, procedures for validating and reliability of measurement instruments for attitudes toward smoking and Islamic self-identity were not mentioned. For this reason, it becomes essential to ensure that these tools measure the intended constructs with great precision.

Eliminating these limitations in future studies may help refine the comprehension of smoking-related behaviors and how cultural and religious values contribute to them, depending on the survey's results, to improve prevention and intervention approaches.

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