

The Mediating Role of Islamic Lifestyle in the Relationship Between Social Media Use and Sleep Disorder with Academic Achievement

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ABSTRACT

The present study aimed to investigate the mediating role of Islamic lifestyle in the relationship between social media use and sleep disorder with academic achievement among high school students in Tehran. This study was conducted using a descriptive-correlational design based on structural equation modeling. The statistical population included high school students in Tehran during the 2025–2026 academic year, from whom 420 students were selected using multistage cluster sampling. Data were collected using the Social Media Use Integration Scale developed by Jenkins-Guarnieri et al. (2013), the Pittsburgh Sleep Quality Index developed by Buysse et al. (1989), and the Islamic Lifestyle Questionnaire developed by Kaviani (2010). Academic achievement was assessed through students' grade point averages obtained from school records. Data analysis was performed using SPSS-27 and AMOS-24 software through descriptive statistics, Pearson correlation coefficients, and structural equation modeling. The findings demonstrated that social media use had a significant positive effect on sleep disorder ($\beta = 0.52, p < 0.001$) and a significant negative effect on Islamic lifestyle ($\beta = -0.48, p < 0.001$). Sleep disorder significantly and negatively predicted academic achievement ($\beta = -0.39, p < 0.001$), whereas Islamic lifestyle had a significant positive effect on academic achievement ($\beta = 0.46, p < 0.001$). Furthermore, the indirect effect of social media use on academic achievement through Islamic lifestyle was statistically significant ($\beta = -0.18, p < 0.001$), confirming the mediating role of Islamic lifestyle in the proposed model. The structural model demonstrated satisfactory fit indices (CFI = 0.95, RMSEA = 0.057, $\chi^2/df = 2.34$). The findings indicate that excessive social media use and sleep disorder negatively influence students' academic achievement, while Islamic lifestyle serves as a protective and mediating factor that enhances behavioral regulation and educational functioning.

Keywords: Social Media Use, Sleep Disorder, Islamic Lifestyle, Academic Achievement, Adolescents.

1. Introduction

The rapid expansion of digital technologies and social networking platforms has transformed the lifestyle, communication patterns, educational experiences, and psychological functioning of adolescents and young adults across the world. Social media platforms such as Instagram, Telegram, TikTok, WhatsApp, and YouTube have become integral components of students' daily routines and social interactions. Although these technologies provide opportunities for communication, learning, entertainment, and information exchange, growing evidence indicates that excessive and uncontrolled use of social media may negatively influence students' mental health, sleep quality, lifestyle patterns, and academic functioning (Thomas et al., 2022). Contemporary educational environments increasingly face challenges associated with digital dependency, screen overexposure, reduced attention span, emotional dysregulation, and decreased academic concentration among students (Ali et al., 2024). Recent studies have demonstrated that problematic internet use and compulsive social networking behaviors are associated with cognitive overload, academic procrastination, social isolation, emotional instability, and reduced educational productivity (Ijaz et al., 2024; Purificacion & Vallespin, 2024). Digital lifestyles have gradually replaced many traditional behavioral patterns among adolescents and university students, leading to reduced face-to-face interactions, sedentary behaviors, and disruptions in healthy daily routines (Lusianawati et al., 2023). Researchers have emphasized that modern digital culture has produced new forms of behavioral addiction and psychological dependency that significantly affect students' academic and psychosocial development (Dhiman, 2024). Furthermore, studies conducted in different countries have consistently reported that excessive social media engagement is associated with diminished self-regulation, emotional exhaustion, and reduced educational achievement among adolescents and young adults (Chen, 2024; Ngonso et al., 2024). These findings suggest that social media use has become a major psychosocial factor influencing students' educational and behavioral outcomes in contemporary societies.

One of the most important consequences of excessive social media use is sleep disturbance and disruption of healthy sleep patterns among students. Sleep is considered a fundamental biological and psychological requirement for cognitive functioning, emotional regulation, memory

consolidation, and academic performance. However, late-night social media engagement, excessive screen exposure, and compulsive smartphone use have significantly altered adolescents' sleep behaviors in recent years (Venguidesvarane et al., 2025). Researchers have reported that prolonged screen time delays melatonin secretion, increases cognitive stimulation before bedtime, and reduces overall sleep duration and quality (Raza, 2024). Excessive nighttime internet use is strongly associated with insomnia symptoms, daytime fatigue, poor concentration, and academic burnout among students (amoumri, 2025). Moreover, mobile phone dependence and fear of missing out (FOMO) have been identified as important predictors of poor sleep quality among adolescents and young adults (Xie & Li, 2025). Sleep deprivation resulting from digital overuse negatively affects attention, executive functioning, emotional stability, and learning capacity, all of which are directly related to educational achievement (Presta et al., 2024). Several studies have demonstrated that problematic internet use and smartphone addiction significantly increase sleep disturbances and psychological distress among students (Islam et al., 2020; Mushtaque et al., 2022). Similarly, sedentary digital activities and prolonged online engagement have been linked to poor sleep quality and reduced physical wellbeing among academic communities (Cremasco et al., 2021). Recent systematic reviews have also confirmed that excessive screen exposure contributes to attention problems, emotional dysregulation, cognitive impairment, and behavioral dysfunction among children and adolescents (Zehra et al., 2025). These findings highlight the importance of examining sleep disorder as a major psychological and behavioral outcome associated with social media overuse.

In addition to sleep-related consequences, extensive social media use may also influence students' values, cultural identity, and lifestyle orientations. Modern digital environments expose adolescents to diverse value systems, behavioral models, and cultural norms that may gradually weaken traditional and religious lifestyles. Researchers have argued that uncontrolled exposure to digital content may undermine local cultural values, family cohesion, and moral commitment among students (AlSaqqaf et al., 2024). The transformation of traditional values in the digital era has become increasingly visible among younger generations, particularly in societies with strong religious and cultural foundations (Zaini & Hamidah, 2023). Studies conducted in Muslim communities have emphasized that religiosity and spiritually grounded lifestyles play an important role in

promoting psychological wellbeing, emotional resilience, and healthy behavioral regulation (Ishaq et al., 2021). Islamic lifestyle, as a multidimensional construct, includes ethical behavior, spiritual practices, moderation, family responsibility, time management, social commitment, and self-control. Such a lifestyle may function as a protective factor against behavioral excesses and maladaptive digital habits. Previous findings indicate that adherence to religious and value-oriented lifestyles is associated with healthier coping mechanisms, greater emotional balance, and improved mental health outcomes (Kanu et al., 2024). Furthermore, Islamic and spiritually oriented lifestyles encourage moderation in media consumption, self-discipline, and balanced engagement with technology, which may reduce the harmful consequences of excessive digital involvement. Researchers have also suggested that value-based lifestyles may help adolescents maintain healthier sleep patterns, stronger academic motivation, and more effective time management behaviors (Hayba et al., 2021). Consequently, Islamic lifestyle may play an important mediating role in reducing the negative educational and psychological consequences associated with social media overuse.

Academic achievement is one of the most important indicators of students' educational success and psychological adaptation. Educational performance is influenced by a wide range of cognitive, emotional, social, environmental, and behavioral factors. In recent years, excessive engagement with digital media has emerged as a significant predictor of reduced academic performance among students (Chen, 2024). Social networking addiction may interfere with concentration, time management, homework completion, and learning motivation, ultimately reducing students' academic efficiency (Ijaz et al., 2024). Students who spend long hours on social media platforms often experience decreased attention span, fragmented cognitive processing, and lower academic persistence (Ali et al., 2024). Moreover, problematic internet use has been associated with procrastination behaviors, emotional exhaustion, and lower educational engagement (Islam et al., 2021). Researchers have further shown that excessive screen time contributes to sedentary behaviors, reduced physical activity, and cognitive fatigue, which negatively affect learning and memory processes (Korcz et al., 2023). Digital addiction may also increase emotional instability and social comparison tendencies, leading to reduced self-esteem and academic confidence among adolescents (Yousafzai & Fatima, 2025). In contrast, students who maintain balanced

digital habits and healthier lifestyles tend to exhibit better emotional regulation, greater academic resilience, and stronger educational performance (Villodres, 2025). Studies investigating digital wellbeing have emphasized the importance of establishing healthy technology use patterns to protect students' educational and psychological functioning (Thomas et al., 2022). Furthermore, interventions such as digital detox programs have shown positive effects on psychological wellbeing, stress reduction, and sleep improvement among students (Farrukh et al., 2025; Upendra & Kaur, 2024). These findings indicate that academic achievement is strongly influenced by the interaction between digital behavior, lifestyle habits, and psychological health.

Another important issue associated with excessive social media use is its impact on mental health and emotional wellbeing. Numerous studies have demonstrated that problematic social networking behaviors increase anxiety, depressive symptoms, loneliness, emotional dysregulation, and psychological dependency among adolescents and university students (Islam et al., 2021). Excessive online engagement may intensify social comparison, body image dissatisfaction, and fear of social exclusion among young individuals (Yousafzai & Fatima, 2025). Social media addiction has also been associated with lower life satisfaction, reduced self-esteem, and impaired interpersonal relationships (Purificacion & Vallespin, 2024). Furthermore, researchers have identified significant relationships between excessive screen time and reduced physical wellbeing, including sedentary lifestyle patterns, physical inactivity, and fatigue (Shobana et al., 2023). During and after the COVID-19 pandemic, screen time dramatically increased among adolescents and students, resulting in both positive and negative psychological consequences (Nutley et al., 2023). Although digital platforms facilitated communication and remote learning during periods of social restriction, they also contributed to increased sedentary behaviors, sleep problems, and emotional stress (Akulwar-Tajane et al., 2020). Researchers have argued that digital wellbeing should be considered an essential component of public health and educational policy in modern societies (Thomas et al., 2022). Mental health interventions focusing on balanced technology use, mindfulness, and behavioral self-regulation may therefore improve students' emotional functioning and academic adjustment (Holmång et al., 2025). Similarly, studies examining physical activity and digital behavior have reported that healthier lifestyle patterns are associated with improved psychological wellbeing and educational

functioning among adolescents (Korcz et al., 2023; Martínez-Murciano, 2025).

Despite the growing body of research on social media use, sleep quality, and academic performance, relatively limited attention has been devoted to the mediating role of Islamic lifestyle in explaining these relationships, particularly among Iranian students. Most previous studies have primarily focused on the direct psychological consequences of internet overuse, while fewer investigations have examined the protective role of religious and value-oriented lifestyles in mitigating these negative outcomes. Moreover, many existing studies have been conducted in Western or non-Islamic cultural contexts, limiting the generalizability of findings to societies where religion and spirituality constitute central aspects of daily life and behavioral regulation (Abolfathi et al., 2022). In Islamic societies such as Iran, lifestyle behaviors are deeply influenced by religious beliefs, moral values, family structures, and cultural traditions. Therefore, examining Islamic lifestyle as a mediating mechanism may provide a more culturally grounded understanding of how social media use and sleep disturbances influence students' academic achievement. Furthermore, previous research has emphasized the importance of culturally sensitive approaches in understanding youth behavior, digital engagement, and educational functioning (Chia et al., 2022; Guo et al., 2022). Stakeholder-based perspectives on sustainable wellbeing have also highlighted the necessity of integrating cultural and ethical dimensions into contemporary psychological and educational research (Al-Thani, 2024). Considering the increasing prevalence of digital dependency and sleep problems among adolescents, identifying protective factors that enhance students' resilience and academic functioning has become a major educational and psychological priority. Therefore, the present study aimed to investigate the mediating role of Islamic lifestyle in the relationship between social media use and sleep disorder with academic achievement among high school students in Tehran.

2. Methods and Materials

2.1. Study Design and Participants

This study was conducted using a descriptive-correlational design based on structural equation modeling to investigate the mediating role of Islamic lifestyle in the relationship between social media use and sleep disorder with academic achievement among students. The statistical

population included high school students in Tehran during the 2025–2026 academic year. Using multistage cluster sampling, several educational districts in Tehran were randomly selected, and then schools and classes were chosen from those districts. Based on the recommendations for structural equation modeling and considering the number of observed and latent variables in the proposed model, a total of 420 students were selected as the study sample. Inclusion criteria included being enrolled in high school, regular use of at least one social networking platform, willingness to participate in the study, and completion of all questionnaires. Students with severe physical or psychological disorders that could interfere with the study variables, as well as incomplete questionnaires, were excluded from the final analysis. After obtaining the necessary permissions from school authorities and providing participants with explanations regarding the objectives of the study, informed consent was obtained. The participants were assured that all information would remain confidential and would be used solely for research purposes.

2.2. Measures

The Social Media Use Integration Scale developed by Jenkins-Guarnieri, Wright, and Johnson (2013) was used to assess the extent and integration of social media use among students. This questionnaire consists of 10 items designed to evaluate emotional connection to social media and the degree to which social media is integrated into individuals' daily activities. The instrument includes two subscales: Social Integration and Emotional Connection, and Integration into Social Routines. Responses are scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating greater social media use and integration into everyday life. Previous studies have reported acceptable psychometric properties for this scale, including satisfactory internal consistency and construct validity. Cronbach's alpha coefficients reported for the subscales and total scale have generally exceeded 0.80, indicating desirable reliability.

Sleep disorder was measured using the Pittsburgh Sleep Quality Index (PSQI) developed by Buysse, Reynolds, Monk, Berman, and Kupfer (1989). This widely used instrument contains 19 self-report items assessing sleep quality and disturbances during the previous month. The questionnaire evaluates seven components, including subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep

medication, and daytime dysfunction. Scores for each component range from 0 to 3, and the global score ranges from 0 to 21, with higher scores reflecting poorer sleep quality and greater sleep disturbance. A total score higher than 5 indicates clinically significant sleep problems. Numerous studies conducted in different cultural settings have confirmed the validity and reliability of the PSQI. Previous findings have demonstrated satisfactory internal consistency, test–retest reliability, and convergent validity for the scale among adolescent and student populations.

Islamic lifestyle was assessed using the Islamic Lifestyle Questionnaire developed by Kaviani (2010). This instrument was designed based on Islamic teachings and cultural principles to evaluate behavioral and value-oriented dimensions of lifestyle among Muslim individuals. The questionnaire consists of 75 items covering multiple dimensions, including social behavior, beliefs, worship practices, ethics, financial behavior, family relations, health-related behaviors, time management, and responsibility. Items are scored using a 4-point Likert scale ranging from 1 (never) to 4 (always), and higher scores indicate greater adherence to Islamic lifestyle principles. Previous research has reported favorable psychometric properties for this instrument, including strong content validity and acceptable construct validity. Cronbach's alpha coefficients reported for the total scale and its dimensions have indicated high internal consistency, confirming the reliability of the questionnaire for research purposes.

Academic achievement was evaluated using students' grade point average (GPA) obtained from school records for the current academic semester. GPA was considered an objective indicator of academic performance and educational success. In order to ensure consistency in scoring, all GPAs were standardized according to the educational grading system used in Tehran high schools. Previous educational studies have consistently recognized GPA as a valid and reliable indicator of students' academic achievement and overall educational functioning.

2.3. Data Analysis

The collected data were analyzed using SPSS-27 and AMOS-24 software. Descriptive statistics including means, standard deviations, skewness, and kurtosis were calculated for all variables. Pearson correlation coefficients were used to examine the relationships among social media use, sleep disorder, Islamic lifestyle, and academic achievement. Structural equation modeling was employed to evaluate the proposed mediating model and determine direct and indirect relationships among variables. The significance of indirect effects was examined using the bootstrap method. Model fit was assessed using standard fit indices including the chi-square to degrees of freedom ratio, Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Goodness-of-Fit Index (GFI), and Root Mean Square Error of Approximation (RMSEA). Assumptions related to multivariate analysis, including normality, multicollinearity, and independence of errors, were also examined prior to conducting the final analyses.

3. Findings and Results

A total of 420 high school students participated in the study. Among the participants, 214 students (50.95%) were female and 206 students (49.05%) were male. The mean age of the participants was 16.42 years with a standard deviation of 1.18 years. In terms of educational level, 138 students (32.86%) were enrolled in the tenth grade, 145 students (34.52%) were in the eleventh grade, and 137 students (32.62%) were in the twelfth grade. Regarding daily social media usage, 96 students (22.86%) reported using social networking platforms less than two hours per day, 183 students (43.57%) reported between two and four hours, and 141 students (33.57%) reported more than four hours per day. The majority of participants reported daily use of multiple social networking applications including Instagram, Telegram, WhatsApp, and TikTok. Preliminary screening of the data indicated that missing values were minimal and were managed using expectation-maximization procedures. Examination of skewness and kurtosis indices demonstrated that all variables were within the acceptable range of ± 2 , indicating normal distribution of the data.

Table 1

Descriptive Statistics for Research Variables

Variables	Mean	Standard Deviation	Minimum	Maximum	Skewness	Kurtosis
Social Media Use	34.87	7.46	12	50	0.41	-0.36
Sleep Disorder	8.92	3.27	1	18	0.58	-0.29
Islamic Lifestyle	214.63	28.54	129	291	-0.47	0.31
Academic Achievement	16.84	1.91	11.25	19.96	-0.62	0.44
Social Integration and Emotional Connection	18.75	4.16	6	25	0.33	-0.41
Integration into Social Routines	16.12	3.85	5	25	0.45	-0.25
Subjective Sleep Quality	1.74	0.88	0	3	0.26	-0.72
Sleep Latency	1.58	0.83	0	3	0.37	-0.58
Sleep Duration	1.36	0.74	0	3	0.22	-0.61
Daytime Dysfunction	1.91	0.81	0	3	0.49	-0.33

The descriptive findings presented in Table 1 indicate that the mean score for social media use among students was 34.87 (SD = 7.46), suggesting a relatively high level of engagement with social networking platforms among the participants. The mean score for sleep disorder was 8.92 (SD = 3.27), which exceeded the clinical cut-off point of the Pittsburgh Sleep Quality Index, indicating that a considerable proportion of students experienced moderate sleep-related difficulties. The mean score for Islamic lifestyle was 214.63 (SD = 28.54), demonstrating a moderate to high adherence to Islamic lifestyle principles among the students. Academic achievement had a mean score of 16.84

(SD = 1.91), reflecting an overall moderate academic performance within the sample. Examination of skewness and kurtosis values showed that all variables were distributed normally, as the obtained values fell within the acceptable statistical range. Furthermore, the subscale means demonstrated that emotional connection to social media and integration into daily routines were both relatively elevated, while among sleep-related dimensions, daytime dysfunction exhibited the highest mean score, suggesting that sleep disturbances had a notable impact on students' daytime academic and cognitive functioning.

Table 2

Pearson Correlation Matrix Among Research Variables

Variables	1	2	3	4
1. Social Media Use	1			
2. Sleep Disorder	0.49**	1		
3. Islamic Lifestyle	-0.53**	-0.47**	1	
4. Academic Achievement	-0.45**	-0.51**	0.58**	1

The correlation matrix presented in Table 2 demonstrates significant relationships among all study variables. Social media use showed a positive and statistically significant correlation with sleep disorder ($r = 0.49, p < 0.01$), indicating that increased use of social networking platforms was associated with higher levels of sleep problems among students. Social media use was negatively correlated with Islamic lifestyle ($r = -0.53, p < 0.01$), suggesting that excessive engagement in social media activities was related to lower adherence to Islamic lifestyle principles and value-based behaviors. Furthermore, social media use demonstrated a significant negative relationship with academic achievement ($r = -0.45, p < 0.01$), indicating that greater social media involvement was associated with lower

academic performance. Sleep disorder was also negatively associated with Islamic lifestyle ($r = -0.47, p < 0.01$) and academic achievement ($r = -0.51, p < 0.01$). In contrast, Islamic lifestyle showed a strong positive relationship with academic achievement ($r = 0.58, p < 0.01$), suggesting that students with higher adherence to Islamic lifestyle practices tended to demonstrate better academic outcomes. Overall, the correlation findings provided preliminary support for the proposed conceptual model and justified the use of structural equation modeling for testing the mediating relationships among variables.

The structural model was examined to determine the direct and indirect relationships among social media use, sleep disorder, Islamic lifestyle, and academic achievement.

The initial model demonstrated satisfactory goodness-of-fit indicators, suggesting appropriate consistency between the theoretical framework and the observed data. The path coefficients indicated that social media use exerted a significant positive direct effect on sleep disorder and a significant negative direct effect on Islamic lifestyle. Sleep disorder also negatively predicted academic achievement, while Islamic lifestyle positively predicted academic achievement. The mediating pathway analysis further

demonstrated that Islamic lifestyle partially mediated the relationship between social media use and academic achievement. Specifically, increased social media use was associated with reduced adherence to Islamic lifestyle principles, which in turn contributed to lower academic achievement. The model explained a substantial proportion of variance in academic achievement, indicating the combined predictive role of behavioral, psychological, and lifestyle-related factors in students' educational functioning.

Table 3

Fit Indices for the Structural Equation Model

Fit Indices	Obtained Value	Acceptable Value	Model Status
χ^2/df	2.34	< 3	Acceptable
CFI	0.95	> 0.90	Acceptable
TLI	0.94	> 0.90	Acceptable
GFI	0.93	> 0.90	Acceptable
AGFI	0.91	> 0.90	Acceptable
RMSEA	0.057	< 0.08	Acceptable
SRMR	0.049	< 0.08	Acceptable

The findings reported in Table 3 indicate that the proposed structural equation model demonstrated an adequate and statistically acceptable fit with the observed data. The chi-square to degrees of freedom ratio ($\chi^2/df = 2.34$) was below the recommended threshold of 3, indicating reasonable model parsimony. Additionally, the Comparative Fit Index (CFI = 0.95), Tucker–Lewis Index (TLI = 0.94), Goodness-of-Fit Index (GFI = 0.93), and Adjusted Goodness-of-Fit Index (AGFI = 0.91) all exceeded the minimum acceptable criterion of 0.90, reflecting satisfactory

model fit. The Root Mean Square Error of Approximation (RMSEA = 0.057) and Standardized Root Mean Square Residual (SRMR = 0.049) were also within acceptable limits, indicating low residual error and adequate approximation of the hypothesized model to the empirical data. Collectively, these indices confirmed that the proposed mediational model possessed appropriate structural validity and could adequately explain the relationships among the study variables.

Table 4

Direct, Indirect, and Total Effects Among Study Variables

Path	Direct Effect	Indirect Effect	Total Effect	t-value	p
Social Media Use → Sleep Disorder	0.52	—	0.52	8.63	0.001
Social Media Use → Islamic Lifestyle	-0.48	—	-0.48	-7.91	0.001
Sleep Disorder → Academic Achievement	-0.39	—	-0.39	-6.84	0.001
Islamic Lifestyle → Academic Achievement	0.46	—	0.46	7.38	0.001
Social Media Use → Academic Achievement	-0.21	-0.18	-0.39	-5.72	0.001

The path analysis results presented in Table 4 revealed that social media use had a significant positive direct effect on sleep disorder ($\beta = 0.52, p = 0.001$), indicating that increased engagement in social networking activities contributed to greater sleep-related disturbances among students. Social media use also demonstrated a significant negative direct effect on Islamic lifestyle ($\beta = -0.48, p = 0.001$), suggesting that excessive online engagement was

associated with reduced adherence to religious and value-oriented lifestyle behaviors. Sleep disorder significantly and negatively predicted academic achievement ($\beta = -0.39, p = 0.001$), reflecting the detrimental impact of poor sleep quality on educational performance. In contrast, Islamic lifestyle exerted a significant positive effect on academic achievement ($\beta = 0.46, p = 0.001$), indicating that stronger commitment to Islamic lifestyle practices was associated

with better academic functioning and achievement outcomes. Furthermore, the indirect effect of social media use on academic achievement through Islamic lifestyle was statistically significant ($\beta = -0.18$), supporting the mediating role of Islamic lifestyle in the proposed model. The total effect of social media use on academic achievement was negative and substantial ($\beta = -0.39$), demonstrating that both

direct and indirect pathways contributed to reduced educational performance among students with excessive social media engagement. Overall, the findings confirmed the conceptual assumptions of the study and highlighted the important protective role of Islamic lifestyle in mitigating the negative academic consequences associated with social media overuse and sleep disturbances.

Figure 1

Structural Model of the Mediating Role of Islamic Lifestyle in the Relationship Between Social Media Use, Sleep Disorder, and Academic Achievement

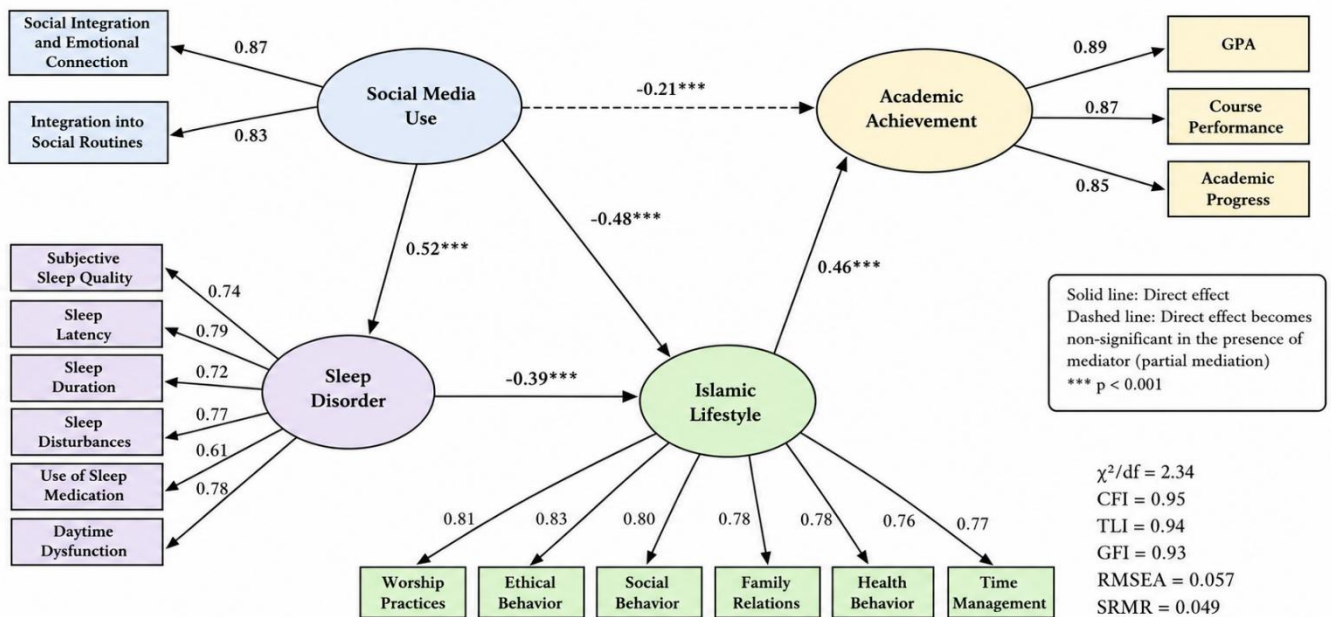


Figure 1. Structural Model of the Mediating Role of Islamic Lifestyle in the Relationship Between Social Media Use, Sleep Disorder, and Academic Achievement

The structural model analysis demonstrated that the proposed model had satisfactory fit indices and acceptable explanatory power. The coefficient of determination for academic burnout was 0.64, indicating that academic stress, intolerance of uncertainty, and religious coping jointly explained 64% of the variance in academic burnout among university students. Furthermore, the standardized root mean square residual value was within the acceptable threshold, supporting the adequacy of the proposed model. The overall findings revealed that academic stress and intolerance of uncertainty significantly increased academic burnout both directly and indirectly through religious coping mechanisms. Positive religious coping functioned as a protective psychological factor that reduced the severity of burnout symptoms, whereas negative religious coping intensified the detrimental psychological effects of stress and uncertainty.

These findings highlight the important role of spiritual and religious coping mechanisms in students' psychological adaptation to academic challenges and uncertain educational environments.

4. Discussion

The present study aimed to investigate the mediating role of Islamic lifestyle in the relationship between social media use and sleep disorder with academic achievement among high school students in Tehran. The findings demonstrated that excessive social media use was significantly associated with increased sleep disorder, reduced adherence to Islamic lifestyle, and lower academic achievement. Furthermore, Islamic lifestyle played a significant mediating role in explaining the relationship between social media use and academic achievement. These findings indicate that the

educational consequences of excessive social networking behaviors are not merely direct cognitive outcomes but are also influenced by broader lifestyle and value-oriented behavioral patterns. The results further demonstrated that students with stronger adherence to Islamic lifestyle principles exhibited healthier behavioral regulation, better sleep quality, and higher educational performance. Overall, the findings support the multidimensional impact of digital behavior on adolescents' psychological, behavioral, and educational functioning.

One of the central findings of the study was the significant positive relationship between social media use and sleep disorder. Students with higher levels of social networking engagement reported greater sleep-related problems, including poor sleep quality, delayed sleep onset, daytime dysfunction, and reduced sleep duration. This finding is consistent with previous research demonstrating that excessive digital engagement disrupts circadian rhythms and negatively affects adolescents' sleep patterns (Venguidesvarane et al., 2025). The findings are also aligned with the results reported by (Raza, 2024), who concluded that smartphone addiction significantly predicts sleep disturbances among university students. Late-night screen exposure increases physiological arousal and cognitive stimulation while suppressing melatonin secretion, which delays sleep initiation and reduces restorative sleep quality. Similarly, (Xie & Li, 2025) found that mobile phone dependence and fear of missing out significantly contribute to poor sleep quality among youth populations. The present findings also support the conclusions of (amoumri, 2025), who reported that nighttime digital engagement contributes to academic fatigue and educational inefficiency among secondary school students. Excessive social media use may increase emotional overstimulation and compulsive checking behaviors, preventing students from obtaining adequate rest and recovery necessary for cognitive functioning and learning.

The results additionally demonstrated a significant negative relationship between social media use and academic achievement. Students who reported greater involvement in social networking activities tended to have lower grade point averages and weaker educational performance. This finding is consistent with the work of (Chen, 2024), who found that excessive internet use and video gaming behaviors negatively affect academic performance through reduced concentration and disrupted learning routines. Likewise, (Ngonso et al., 2024) reported that excessive social media engagement among secondary

school students was associated with poorer academic functioning and psychological instability. One explanation for this relationship is that prolonged engagement with digital media reduces students' effective study time and weakens their attentional control. Social media platforms are designed to maximize engagement through continuous notifications, algorithmic stimulation, and rapid information exchange, which may impair sustained cognitive focus and learning persistence. Furthermore, problematic social media use is associated with procrastination tendencies and decreased self-regulation (Ijaz et al., 2024). Students who become psychologically dependent on social networking platforms may experience difficulty prioritizing academic responsibilities and maintaining consistent study habits. These behavioral disruptions gradually reduce educational productivity and academic achievement over time.

Another important finding of the present study was the negative relationship between sleep disorder and academic achievement. Students who experienced greater sleep disturbances demonstrated lower educational performance. This result supports previous findings emphasizing the importance of sleep quality for cognitive functioning, memory consolidation, emotional regulation, and attentional processes (Presta et al., 2024). Sleep deprivation negatively affects executive functioning and reduces the brain's ability to process, retain, and retrieve academic information efficiently. The findings also align with the results reported by (Korcz et al., 2023), who demonstrated that sleep quality is significantly associated with academic skills and educational functioning among children and adolescents. Similarly, (Cremasco et al., 2021) found that sedentary digital behaviors and poor sleep quality negatively influence health and academic wellbeing. Sleep disorder may impair students' motivation, concentration, classroom participation, and emotional stability, all of which are essential components of successful academic performance. Inadequate sleep additionally increases daytime fatigue and emotional irritability, reducing students' capacity to engage effectively in educational activities. Consequently, improving sleep quality may represent an important strategy for enhancing students' educational outcomes and psychological wellbeing.

The present study also revealed a significant positive relationship between Islamic lifestyle and academic achievement. Students who demonstrated stronger adherence to Islamic lifestyle principles reported better educational performance and healthier behavioral functioning. This finding highlights the protective role of

religiously grounded lifestyles in promoting psychological adjustment and educational success. Islamic lifestyle emphasizes moderation, self-discipline, time management, ethical behavior, spiritual commitment, family cohesion, and balanced living. These values may strengthen adolescents' self-regulatory capacities and improve their ability to manage digital distractions effectively. The findings are consistent with studies suggesting that religiosity and spiritually oriented lifestyles are associated with improved psychological wellbeing and healthier coping strategies (Ishaq et al., 2021). Similarly, (Kanu et al., 2024) emphasized that religio-cultural values positively influence youth development and academic performance. Students who maintain stronger spiritual and ethical commitments may possess greater internal control and behavioral stability, enabling them to resist excessive digital engagement and prioritize educational responsibilities more effectively.

The mediating role of Islamic lifestyle constituted one of the most important findings of the present study. The results demonstrated that social media use indirectly influenced academic achievement through its impact on Islamic lifestyle. Excessive engagement with social networking platforms was associated with lower adherence to Islamic lifestyle principles, which subsequently predicted reduced academic achievement. This finding suggests that digital overexposure may weaken value-oriented behavioral patterns and disrupt healthy lifestyle structures among adolescents. Previous research has shown that modern digital environments can gradually undermine local cultural norms, traditional values, and ethical frameworks among students (AlSaqqaf et al., 2024). The transformation of traditional values in the digital era has become increasingly visible among younger generations exposed to globalized online cultures (Zaini & Hamidah, 2023). Excessive immersion in digital environments may reduce family interaction, spiritual engagement, disciplined routines, and moral self-regulation. Consequently, weakened adherence to value-based lifestyles may increase susceptibility to procrastination, emotional instability, and academic disengagement. The findings therefore suggest that Islamic lifestyle may function as a psychological and cultural buffer that protects adolescents against some of the harmful educational consequences associated with problematic digital behavior.

The findings of the present study also support the broader concept of digital wellbeing proposed in recent psychological and educational literature. Researchers have increasingly argued that balanced technology use and

healthy digital habits are essential for psychological adjustment and educational functioning in contemporary societies (Thomas et al., 2022). The excessive integration of digital media into daily life has contributed to sedentary behaviors, emotional dependence, cognitive overload, and social isolation among adolescents (Lusianawati et al., 2023). The current findings align with the conclusions of (Shobana et al., 2023), who found that social media addiction negatively influences healthy lifestyle behaviors among students. Similarly, (Purificacion & Vallespin, 2024) emphasized that social media addiction affects psychological, behavioral, and physiological dimensions of adolescents' wellbeing. Digital overuse may create a fragmented attentional environment in which students constantly shift between online stimuli, reducing their capacity for sustained concentration and reflective learning. Moreover, emotionally stimulating online content may increase anxiety, social comparison, and emotional exhaustion among adolescents (Islam et al., 2021). These psychological pressures may indirectly reduce academic confidence, motivation, and educational persistence.

The present findings are also consistent with studies emphasizing the benefits of behavioral interventions targeting digital habits and psychological self-regulation. Researchers have shown that digital detox programs improve emotional wellbeing, reduce stress, and enhance sleep quality among students (Upendra & Kaur, 2024). Similarly, (Farrukh et al., 2025) demonstrated that reducing screen exposure positively affects mental and physiological health outcomes. Such findings suggest that interventions designed to strengthen self-control, lifestyle balance, and value-oriented behavior may reduce the harmful consequences of excessive social media engagement. Islamic lifestyle may contribute to these protective mechanisms by encouraging moderation, purposeful living, social responsibility, and behavioral discipline. These values may help adolescents establish healthier routines regarding technology use, sleep hygiene, and educational engagement.

Another important implication of the study concerns the sociocultural context of adolescent digital behavior. Much of the existing literature on social media use and academic functioning has been conducted in Western contexts, while fewer studies have examined these issues within Islamic and Middle Eastern societies. The present findings indicate that cultural and religious variables play a substantial role in shaping students' responses to digital environments. Studies focusing on adolescents from Middle Eastern backgrounds have emphasized the importance of family values, cultural

expectations, and behavioral norms in regulating screen time behaviors (Hayba et al., 2021). Similarly, culturally grounded research conducted among Iranian adolescents has highlighted both the opportunities and threats associated with social media use (Abolfathi et al., 2022). Therefore, understanding students' educational functioning requires consideration of the broader cultural and spiritual frameworks that influence lifestyle behaviors and psychological adjustment.

5. Conclusion

Overall, the findings of the present study indicate that excessive social media use and sleep disorder negatively influence academic achievement, while Islamic lifestyle serves as a protective mediating factor that promotes healthier behavioral regulation and educational functioning. The study contributes to the growing literature on digital wellbeing by demonstrating the importance of culturally grounded lifestyle variables in explaining adolescents' educational outcomes. The findings further emphasize that academic achievement is shaped not only by cognitive abilities but also by behavioral habits, sleep quality, moral orientation, and lifestyle balance. Consequently, effective educational and psychological interventions should adopt multidimensional approaches that simultaneously address digital behavior, sleep hygiene, emotional regulation, and value-based lifestyle development among adolescents.

One limitation of the present study was the use of a cross-sectional correlational design, which limits the ability to establish causal relationships among the variables. In addition, the study relied primarily on self-report questionnaires, making the findings vulnerable to response bias and social desirability effects. The participants were selected exclusively from high school students in Tehran, which may reduce the generalizability of the findings to students from different cultural, socioeconomic, or geographical backgrounds. Furthermore, variables such as family functioning, parental monitoring, personality traits, and socioeconomic status were not examined and may have influenced the observed relationships.

Future studies are recommended to employ longitudinal and experimental designs to examine causal relationships among social media use, sleep quality, Islamic lifestyle, and academic achievement over time. Researchers may also investigate additional mediating and moderating variables such as emotional regulation, self-control, resilience, family cohesion, and academic motivation. Comparative studies

involving students from different regions, educational levels, and cultural contexts may provide a more comprehensive understanding of the psychological and educational consequences of digital behavior. Furthermore, qualitative approaches could offer deeper insight into adolescents' lived experiences regarding social media use and lifestyle transformation in the digital era.

Educational institutions and mental health professionals should develop preventive and intervention-based programs aimed at promoting balanced social media use and healthy sleep behaviors among adolescents. Schools may implement digital wellbeing workshops focusing on time management, emotional self-regulation, and responsible technology use. Families should also be educated regarding the importance of monitoring adolescents' nighttime screen exposure and encouraging healthier daily routines. Strengthening value-oriented and spiritually grounded lifestyle practices may help students develop greater self-discipline, emotional balance, and academic commitment. In addition, policymakers and educational authorities should consider integrating digital literacy and healthy lifestyle education into school curricula to reduce the negative educational and psychological consequences associated with excessive social media engagement.

Authors' Contributions

Authors equally contributed to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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