

The Impact of Social Media Addiction on Academic Burnout: The Mediating Role of Sleep Quality Among Young Students at Ferdowsi University

Javad Mehrpour

Undergraduate Student, Psychology Department, Imam Reza International University, Mashhad, Iran
javad313mehr@gmail.com

Kourosh Akrami

Assistant Professor and Clinical Psychology Expert, Psychology Department, Imam Reza International University, Mashhad, Iran
sirkurosh@gmail.com

Abstract

This study examines the impact of social media addiction on academic burnout among students at Ferdowsi University of Mashhad, with a particular focus on the mediating role of sleep quality. The target population included undergraduate and graduate students aged 20 to 25 from various faculties, including Humanities, Engineering, Social Sciences, and Natural Sciences. A sample of 350 students was selected using a random sampling method. Data were collected through standardized questionnaires and semi-structured interviews to ensure validity and reliability. The findings reveal a significant association between social media addiction and reduced sleep quality, which in turn exacerbates symptoms of academic burnout, such as emotional exhaustion, decreased concentration, and loss of motivation. These results highlight the critical importance of improving sleep quality and regulating social media use as key strategies for mitigating academic burnout and enhancing academic performance.

Keywords: Social Media Addiction, Academic Burnout, Sleep Quality, Young Students, Ferdowsi University

I. INTRODUCTION

In recent years, social media has become deeply woven into the daily lives of young students, reshaping how they communicate, gather information, and engage with the world. While these platforms offer undeniable benefits—such as instant connectivity and access to a wealth of resources—they also present significant challenges, particularly in the academic sphere. As students devote increasing amounts of time to platforms like Facebook, Instagram, and Twitter, questions have emerged about how excessive use, and in some cases outright addiction, might be undermining their academic performance. This study takes that concern as its starting point, setting out to examine these effects in detail, clarify essential concepts, raise key research questions, and outline the central thesis, with a specific focus on students at Ferdowsi University.

Social media now occupies a central role in many students' routines. Research by Zhuang et al. (2023) suggests that its integration into everyday life has contributed to heightened feelings of exhaustion, especially among students already contending with the demands of academic work. This sense of fatigue is often compounded by psychosomatic factors, most notably poor sleep quality. The appeal of social media lies in its promise of instant gratification, community belonging, and a space for self-expression—qualities that strongly attract younger users navigating the social and academic challenges of university life.

The ever-present nature of these platforms means many students remain almost perpetually connected, sometimes sacrificing in-person interactions or time that might otherwise be devoted to their studies. As Bae et al. (2020) point out, sleep quality plays a mediating role in the relationship between academic stress and social media use, with online activity functioning both as a coping mechanism and as a source of stress.

This duality highlights the complexity of social media's role in education, where its advantages and drawbacks are closely intertwined. To explore this issue meaningfully, it is first necessary to define the core concepts at the heart of this research: social media addiction, academic burnout, and sleep quality.

SOCIAL MEDIA ADDICTION refers to the compulsive and excessive use of social media platforms, where users feel an overwhelming urge to engage with these platforms, often at the expense of other activities. Symptoms of social media addiction include anxiety when not using social media, neglect of personal and academic responsibilities, and a continuous need to check for updates (Zhu et al., 2023).

ACADEMIC BURNOUT is defined as a state of emotional, physical, and mental exhaustion that results from prolonged and excessive academic stress. Students who experience academic burnout often report feelings of cynicism toward their studies, a reduced sense of accomplishment, and a waning interest in academic activities (Zhang et al., 2022). This condition can have serious consequences for a student's mental health and academic performance, often leading to lower motivation and decreased engagement in their coursework.

SLEEP QUALITY pertains to the overall effectiveness and restorative nature of sleep, which is vital for cognitive functioning and overall well-being. Poor sleep quality can give rise to a range of issues, including impaired concentration, memory difficulties, and increased susceptibility to stress (Evers et al., 2020). Among students, factors such as academic pressures and late-night social media use have been identified as significant contributors to disrupted sleep patterns (Gu et al., 2023).

The central research question guiding this study is: "How does social media addiction affect academic burnout, and how is this relationship mediated by sleep quality?" This question aims to unpack the complex connections between these factors, providing insights into how students' social media habits at Ferdowsi University influence their academic experiences and overall well-being.

This study posits that social media addiction among Ferdowsi University students plays a significant role in fostering academic burnout, with sleep quality acting as a critical mediating factor. By examining how these elements interact, the research emphasizes the importance of addressing sleep quality in both psychological and educational strategies, and it seeks to propose practical measures to mitigate the negative impacts of social media on academic performance.

The investigation of social media addiction, academic burnout, and sleep quality draws on theoretical frameworks related to psychosocial behaviors and cognitive functioning. Che et al. (2025) indicate that daily academic stress and social media addiction function as chain mediators linking physical activity and sleep quality. This suggests a complex interplay in which social media usage not only affects sleep but also influences physical activity, ultimately impacting overall health outcomes.

Additionally, Sümen and Evgin (2021) highlight that poor sleep patterns, heightened stress, and anxiety are common among students, with excessive social media use further exacerbating these issues. Their research employs a single-factor scale of nine items to assess these variables, offering a robust approach to understanding the mediating or moderating effects at play.

Wang and Fan (2023) further stress that academic stress is a significant risk factor for poor sleep quality, which in turn contributes to school burnout. Their findings suggest that social support networks—including family and peers—can play a pivotal role in mitigating the adverse effects of social media addiction and promoting healthier sleep habits.

In conclusion, this introduction lays the groundwork for a comprehensive study of how social media addiction influences academic burnout through the mediating role of sleep quality among students at Ferdowsi University. By clearly defining key concepts and framing a relevant research question, this study aims to advance understanding of student well-being while offering actionable recommendations for both students and educators. Grounded in theoretical perspectives and supported by empirical findings, this research seeks to illuminate the challenges and opportunities that the digital age presents within educational contexts.

II. LITERATURE REVIEW

III. SOCIAL MEDIA ADDICTION

Social media addiction has become an increasingly pressing issue in today's society, especially among university students, who are both highly engaged with these platforms and particularly vulnerable to their effects. As social media continues to expand in scope and reach, understanding the complexities of this type of addiction is essential. This section examines the definition and symptoms of social media addiction, explores the factors contributing to its prevalence among university students, and considers its psychological and behavioral consequences.

Social media addiction is characterized by a compulsive and uncontrollable engagement with social media platforms, often resulting in significant impairment or distress (Zhuang et al., 2023). In many ways, it mirrors other forms of addiction, such as substance use disorders, by disrupting daily functioning and personal relationships. Common symptoms include spending excessive time on social media, neglecting responsibilities, experiencing withdrawal when unable to access platforms, and struggling to reduce usage despite recognizing its negative effects (Evers et al., 2020).

Research by Zhuang et al. (2023) highlights the ubiquity of social media among younger generations and demonstrates that excessive use can negatively impact sleep quality, which in turn amplifies feelings of fatigue and exhaustion the following day. This creates a cycle in which the initial appeal of connectivity and entertainment gradually evolves into a harmful habit.

Several factors contribute to the prevalence of social media addiction among university students, including psychological, environmental, and technological influences. University life, marked by academic pressures and social challenges, often drives students to rely on social media as a source of escape or connection. Academic stress and anxiety can lead students to seek temporary relief through online interactions and distractions (Zhu et al., 2023).

Technological developments and the widespread availability of smartphones have further facilitated constant social media engagement. Platforms like Instagram, Facebook, and TikTok are easily accessible, encouraging continuous interaction and, in many cases, addictive usage patterns (Feng et al., 2025). The constant stream of notifications and updates creates a sense of urgency and compulsion, reinforcing the cycle of addiction.

Additionally, the pursuit of social validation plays a significant role. Students often derive self-worth from the likes, comments, and shares they receive, perpetuating a cycle of seeking peer approval (Sümen & Evgin, 2021). This tendency is especially pronounced among young adults, who are in a developmental stage where social identity and self-esteem are still being shaped.

The psychological and behavioral consequences of social media addiction are profound, affecting students' mental health and overall well-being. Excessive use has been linked to higher levels of stress, anxiety, and depression (Kumar Swain & Pati, 2021). Exposure to curated content online can intensify feelings of inadequacy and low self-esteem, as students compare their lives to the seemingly perfect lives portrayed by others.

Behaviorally, social media addiction can interfere with academic responsibilities and personal relationships. Students may prioritize online engagement over studying or attending classes, which can lead to academic burnout and declining performance (Mohammadbeigi et al., 2016). The addictive nature of social media also disrupts sleep patterns, further aggravating mental health concerns and creating a cycle of exhaustion and burnout.

Abu-Snieneh et al. (2020) underscore the connection between social media addiction and stress among medical students, emphasizing its negative impact on sleep quality. Their findings show that higher levels of social media use are associated with poorer sleep, which subsequently affects cognitive functioning and academic performance.

Similarly, Wong et al. (2020) explore the psychological distress tied to social media addiction among young adults, including heightened stress and burnout. Their research indicates that prolonged engagement with social media can undermine mental health, as students struggle to balance online interactions with real-world responsibilities.

In conclusion, social media addiction presents a serious challenge for university students, influencing their academic performance, mental health, and overall well-being. A thorough understanding of its definition, symptoms, contributing factors, and consequences is essential for developing effective interventions and support systems. By addressing these underlying causes and fostering healthier social media habits, students can achieve a more balanced and fulfilling academic experience.

IV. ACADEMIC BURNOUT

V. DEFINING ACADEMIC BURNOUT AND ITS SYMPTOMS

Academic burnout is a significant and widespread issue among university students, manifesting as a persistent state of physical, emotional, and mental exhaustion caused by prolonged academic stress and pressure (Zhuang et al., 2023; Evers et al., 2020). While the concept of burnout originated in occupational settings, academic burnout specifically addresses the challenges students face in the educational environment, where continuous demands for high performance and productivity are common.

According to Maslach's Burnout Inventory, academic burnout can be understood through three main dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment (Bae et al., 2020).

Emotional exhaustion is often the most apparent symptom. It involves feeling emotionally drained and overwhelmed, leaving students struggling to manage their academic workload effectively (Zhu et al., 2023). This state can foster a sense of helplessness and make it difficult for students to stay engaged with their studies.

Depersonalization represents another dimension of academic burnout and is characterized by a cynical or detached attitude toward academic tasks and peers. Students experiencing depersonalization may withdraw from their educational environment, becoming increasingly isolated and disengaged from their learning (Zhang et al., 2022).

The third dimension, reduced personal accomplishment, occurs when students perceive their efforts as insufficient despite their hard work. This feeling of ineffectiveness can significantly lower self-esteem and motivation, creating a cycle of disengagement and declining academic performance (Gu et al., 2023).

Together, these symptoms contribute to a debilitating condition that affects students' ability to succeed academically and maintain personal well-being. Academic burnout not only diminishes learning outcomes but also impacts mental health, making it a crucial area for research and intervention.

VI. CAUSES OF ACADEMIC BURNOUT IN THE CONTEXT OF UNIVERSITY LIFE

Academic burnout among university students arises from a complex interplay of factors tied to the unique pressures of university life (Sümen & Evgin, 2021). One of the most prominent causes is the heavy academic workload, which often includes a demanding combination of assignments, projects, exams, and extracurricular commitments. The constant pressure to perform at a high level can elevate stress over time, ultimately contributing to burnout (Wang & Fan, 2023).

The competitive culture within universities further intensifies this stress. Students frequently feel compelled to achieve top grades and outperform their peers, cultivating an environment of perfectionism. The relentless drive to meet these high expectations can result in chronic stress and anxiety, which are key precursors to academic burnout (Che et al., 2025).

Social factors also play a crucial role. Adjusting to university life often requires navigating new social environments, forming friendships, and adapting to diverse cultural norms. For many students, these transitions can be stressful and sometimes isolating, adding another layer of pressure (Jiang, 2021).

The widespread use of social media can amplify these challenges. Students may feel compelled to maintain a curated online presence or compare themselves to peers' seemingly perfect lives, heightening stress and contributing to burnout.

Additionally, insufficient coping strategies and limited support systems are significant contributors. Many students lack the necessary skills or resources to manage stress effectively. The absence of robust mental health services and support networks at universities often leaves students to handle academic and personal pressures alone, magnifying the risk of burnout (Zhuang et al., 2023).

VII. IMPACT OF ACADEMIC BURNOUT ON STUDENTS' MENTAL HEALTH AND ACADEMIC PERFORMANCE

Academic burnout has far-reaching effects, influencing both students' mental well-being and their academic achievements. On a psychological level, burnout can lead to serious issues such as depression, anxiety, and an overall decline in well-being (Evers et al., 2020). Students experiencing burnout often feel hopeless or overwhelmed, which may cause them to withdraw from both academic and social activities, further intensifying their mental health struggles (Bae et al., 2020).

Burnout also takes a toll on academic performance. Symptoms like emotional exhaustion and a sense of reduced accomplishment can disrupt concentration and cognitive functioning, resulting in lower productivity and poorer academic outcomes (Zhu et al., 2023). Students may find it difficult to meet deadlines, perform well on exams, or actively participate in class discussions, all of which can negatively affect their overall academic performance (Zhang et al., 2022).

The consequences of burnout extend beyond individual students, impacting the broader educational environment. High levels of burnout can increase the likelihood of students dropping out, as they may feel unable to continue their studies (Gu et al., 2023). This not only limits their future opportunities but also presents challenges for universities in maintaining student retention and academic success.

Moreover, burnout can hinder personal development and career readiness. University is a crucial time for building the skills and knowledge needed for professional success, and burnout can obstruct this growth. Students experiencing burnout may lack the motivation or confidence to pursue opportunities beyond their studies, limiting their career prospects and long-term potential (Sümen & Evgin, 2021).

VIII. ADDRESSING ACADEMIC BURNOUT: STRATEGIES AND INTERVENTIONS

Given the substantial impact of academic burnout on students, it is crucial to explore effective strategies and interventions to reduce its effects. Universities can play a central role in this process by fostering supportive environments and promoting healthy coping mechanisms.

Providing accessible mental health services and resources, such as counseling and stress management workshops, can equip students with the skills and knowledge needed to handle stress effectively (Wang & Fan, 2023).

Raising awareness and educating students about burnout and its symptoms is also important. Workshops and seminars focused on time management, resilience-building, and self-care can empower students to recognize early signs of burnout and take proactive steps to manage academic pressures (Che et al., 2025).

Creating a balanced academic environment that prioritizes student well-being is essential. Universities can implement policies that promote reasonable workloads, flexible deadlines, and opportunities for relaxation and recreation. Encouraging collaboration over competition can reduce stress and foster a sense of community among students (Jiang, 2021).

In addition, integrating technology-based solutions—such as mobile apps for stress management or online support communities—can offer convenient, accessible tools for students to manage stress and connect with peers. Leveraging technology in this way can be particularly helpful for students who might hesitate to seek traditional forms of support (Zhuang et al., 2023).

IX. CONCLUSION

Academic burnout is a complex and pervasive issue among university students, manifesting through emotional exhaustion, depersonalization, and reduced personal accomplishment. It stems from multiple factors, including heavy academic workloads, competitive environments, and insufficient support systems, all of which profoundly affect students' mental health and academic performance.

Effectively addressing academic burnout requires a multifaceted approach that combines awareness, support, and policy changes within educational institutions. By prioritizing student well-being and providing resources that promote healthy coping strategies, universities can mitigate the effects of burnout and cultivate environments that support both academic success and personal growth.

X. SLEEP QUALITY

Sleep quality is a critical aspect of overall health, affecting cognitive functioning, emotional stability, and physical well-being. It encompasses dimensions such as sleep duration, sleep latency, sleep efficiency, and the subjective feeling of being rested upon awakening. High sleep quality is characterized by falling asleep quickly, maintaining uninterrupted sleep, and waking up refreshed (Zhuang et al., 2023). In contrast, poor sleep quality can result in exhaustion, irritability, and impaired cognitive performance, making it particularly detrimental for university students who face academic and social demands.

Adequate sleep is essential for cognitive processes such as memory consolidation, decision-making, and learning. During sleep, the brain integrates new information into existing knowledge networks. Sleep deprivation impairs concentration, memory retention, and problem-solving abilities, directly affecting academic performance (Zhu et al., 2023). Sleep also supports emotional regulation, helping students manage stress and maintain a positive mood, whereas poor sleep can exacerbate anxiety and depressive symptoms, further hindering academic success.

Common sleep disturbances among students are linked to lifestyle choices, academic stress, and social habits. Excessive use of social media and electronic devices can delay sleep onset, shorten sleep duration, and disrupt sleep cycles due to screen-emitted blue light and stimulating content (Feng et al., 2025; Evers et al., 2020). Academic pressures, such as exams and assignments, can heighten anxiety, leading to racing thoughts and difficulty relaxing before sleep (Sümen & Evgin, 2021). Irregular schedules and late-night study sessions further compromise sleep hygiene.

Poor sleep quality is closely associated with academic burnout, characterized by emotional exhaustion, reduced motivation, and diminished performance (Mohammadbeigi et al., 2016). Sleep deprivation undermines concentration, problem-solving, and memory, making it challenging for students to achieve academic success. Moreover, it negatively affects mental health, increasing vulnerability to stress, anxiety, and depression, creating a cycle in which emotional strain further disrupts sleep (Kumar Swain & Pati, 2021).

In conclusion, sleep quality is a vital determinant of students' health and academic outcomes. Influenced by lifestyle habits, academic stress, and social media use, poor sleep can impair cognitive and emotional functioning and contribute to academic burnout. Promoting healthy sleep practices is essential for enhancing students' well-being and academic performance, and interventions targeting sleep hygiene can play a pivotal role in supporting their success.

XI. METHODOLOGY

XII. PARTICIPANTS

This study focused on students aged 20 to 25 at Ferdowsi University in Mashhad, Iran, a large and prestigious institution attracting a diverse student population. This age group represents individuals in the later stages of undergraduate studies or the early stages of graduate education, making them particularly relevant for examining academic burnout, social media usage, and sleep quality.

The sample included both male and female students to ensure balanced gender representation, as research indicates that social media engagement patterns may differ across genders (Kuss & Griffiths, 2017). Participants were drawn from various academic disciplines—humanities, social sciences, engineering, and natural sciences—to capture differences in academic pressures and social media usage patterns across fields. Socio-economic diversity was also considered, as access to technology and social media usage may vary based on students' economic backgrounds.

A stratified random sampling technique was employed to ensure representation across key demographic subgroups. The population was divided into strata based on gender, academic discipline, and year of study. Participants were then randomly selected from each subgroup using a random number generator, minimizing selection bias and enhancing generalizability. The final sample included approximately 300 students, providing a robust dataset for analysis.

Inclusion criteria required participants to be current undergraduate or graduate students aged 20–25 with active social media accounts on at least one major platform (e.g., Instagram, Facebook, Twitter). Participants were also required to provide informed consent and voluntarily participate in the study.

Exclusion criteria included part-time or distance learning students, those with diagnosed severe mental health disorders (e.g., depression or anxiety), and students not fluent in Persian or English. These criteria were designed to minimize confounding variables that could affect sleep quality, academic performance, or social media usage patterns.

By carefully selecting participants based on these criteria and employing stratified random sampling, the study ensured a representative and reliable sample. This approach allows for meaningful insights into the relationships between social media addiction, sleep quality, and academic burnout, while considering the potential influence of demographic factors on these outcomes.

XIII. DATA COLLECTION

Accurate and reliable data collection is essential in research examining complex human behaviors and relationships. In this study, which explores the interplay between social media addiction, sleep quality, and academic burnout among students at Ferdowsi University, we employed a combination of data collection tools and techniques designed to capture comprehensive and nuanced insights. This section details the instruments and methods used, describes the procedural steps, and explains how reliability and validity were ensured.

To examine these relationships, we adopted a mixed-methods approach, incorporating both quantitative and qualitative data collection methods. This approach allowed for a more holistic understanding of the phenomena, capturing both measurable trends and subjective experiences among participants. Quantitative measures enabled us to assess the levels of social media addiction, sleep quality, and academic burnout systematically, while qualitative insights provided context and depth, revealing the personal and behavioral nuances underlying these patterns.

The data collection process involved the administration of structured surveys, standardized questionnaires, and semi-structured interviews. Participants completed validated instruments to measure social media addiction, sleep quality, and academic burnout, ensuring that the results were reliable and comparable to existing literature. The qualitative component, conducted through focused interviews or open-ended survey questions, allowed participants to express their experiences in their own words, providing additional insights into the relationships among the study variables.

To ensure reliability, all instruments used were established and previously validated in similar populations, and the internal consistency of each scale was assessed using Cronbach's alpha. Validity was maintained by adopting widely recognized measures and by conducting a pilot study with a small subset of students to confirm the clarity and appropriateness of the questions. Data collection was conducted under standardized conditions, with participants receiving clear instructions and assurances of confidentiality to encourage honest and accurate responses.

By combining quantitative rigor with qualitative depth, the study's data collection strategy allowed for a thorough examination of how social media addiction relates to sleep quality and academic burnout, providing both statistically robust findings and meaningful contextual understanding.

XIV. SURVEYS

The main data collection tool in this study was a structured survey that included validated scales to measure social media addiction, sleep quality, and academic burnout.

The scales used were:

1. Social Media Addiction Scale (SMAS): to assess the level of social media use and dependence.
2. Pittsburgh Sleep Quality Index (PSQI): to evaluate sleep quality and its dimensions.
3. Maslach Burnout Inventory-Student Survey (MBI-SS): to measure academic burnout, including emotional exhaustion, cynicism, and reduced personal accomplishment.

XV. • SOCIAL MEDIA ADDICTION SCALE (SMAS):

This scale assesses the extent of social media use and the associated addictive behaviors. It includes items that gauge the frequency of use, the compulsive need to check social media, and the impact of social media on daily life. The scale is designed to produce a quantitative measure of addiction levels, allowing for statistical analysis of its correlation with academic burnout and sleep quality.

XVI. • PITTSBURGH SLEEP QUALITY INDEX (PSQI):

The PSQI is a widely used instrument for measuring sleep quality and disturbances over a one-month period. It includes questions on sleep duration, sleep disturbances, and the overall quality of sleep. This instrument is pivotal in understanding how sleep quality may mediate the relationship between social media addiction and academic burnout.

XVII. • MASLACH BURNOUT INVENTORY - STUDENT SURVEY (MBI-SS):

This inventory measures the three dimensions of academic burnout: emotional exhaustion, cynicism, and academic efficacy. The MBI-SS is essential for quantifying the levels of burnout experienced by students, providing critical data that links back to both social media use and sleep issues.

- survey was designed to be anonymous and self-administered to ensure that participants could respond honestly and openly about their experiences. The questions were carefully crafted to avoid leading or biased phrasing, thereby enhancing the reliability of the responses.

XVIII. • INTERVIEWS

- In addition to the surveys, we conducted semi-structured interviews with a subset of participants. These interviews provided qualitative data that complemented the quantitative findings from the surveys. The interviews allowed us to explore the personal experiences of students in more depth, focusing on their feelings about social media use, sleep habits, and academic pressures.

- During the interviews, participants were encouraged to describe their daily routines, the role of social media in their lives, and how they perceived these factors as affecting their sleep and academic performance. This qualitative data was crucial for adding context to the statistical findings, offering a more detailed and nuanced understanding of the participants' experiences.

- The data collection process was carefully planned and carried out to ensure that comprehensive and representative data were gathered from our target population of students aged 20 to 25 at Ferdowsi University.

XIX. • TIMING

- The data collection phase took place over a three-month period, beginning at the start of the academic semester. This timing was chosen deliberately, as it coincided with a period when students were actively engaged in their studies but had not yet reached the heightened stress of final exams. By collecting data during this phase, we aimed to obtain an accurate and authentic picture of students' experiences with social media use, sleep patterns, and academic burnout.

XX. • SETTING

- Data collection was conducted within the university environment to ensure accessibility and encourage maximum participation. Surveys were distributed electronically using the university's official email system and through social media platforms commonly

used by students. This method allowed us to reach a wide range of participants while giving them the flexibility to complete the surveys at their own convenience.

- For the interviews, one-on-one sessions were arranged in quiet, private areas on campus to provide a comfortable and confidential setting for open discussion. Depending on the participants' preferences and availability, interviews were conducted either in person or via video calls. Each session lasted approximately 30 to 45 minutes, providing ample time for an in-depth exploration of students' experiences and perspectives.

XXI. • RECRUITMENT OF PARTICIPANT

- Participants were recruited using multiple strategies, including announcements made during university classes, posts on social media platforms, and flyers distributed throughout campus. Our goal was to include a diverse sample that accurately represented the student population, considering factors such as gender, academic discipline, and year of study.

- To encourage participation, students who completed the survey were given the opportunity to enter a random drawing for gift cards. This approach not only motivated students to take part but also emphasized the relevance of the study in addressing issues that impact their well-being.

- Throughout the research process, ensuring the reliability and validity of our data collection instruments remained a top priority. Reliable instruments produce consistent results across different contexts and populations, while valid instruments accurately measure the concepts they are intended to assess.

XXII. • RELIABILITY

- To ensure the reliability of our survey instruments, we first conducted a pilot study with a small group of students before the main data collection. This pilot phase helped us identify any unclear or confusing questions and make the necessary adjustments to improve clarity and comprehension.

- We then calculated Cronbach's alpha for each scale to assess internal consistency, with a value of 0.70 or higher considered acceptable for our study. For instance, the Social Media Addiction Scale (SMAS) demonstrated a reliability coefficient of 0.85 in the pilot study, indicating strong internal consistency. Similarly, the Pittsburgh Sleep Quality Index (PSQI) and the Maslach Burnout Inventory - Student Survey (MBI-SS) showed coefficients of 0.82 and 0.88, respectively.

- These results confirmed that the instruments used were reliable measures of social media addiction, sleep quality, and academic burnout, providing confidence that the data collected would be consistent and dependable.

XXIII. • VALIDITY

- To ensure the validity of our instruments, we used established scales that have been widely applied and validated in previous research. In addition, we conducted a content validity assessment by consulting with experts in psychology and education. These experts carefully reviewed the survey items to confirm that they accurately captured the constructs of social media addiction, sleep quality, and academic burnout.

- Moreover, the use of a mixed-methods approach further strengthened the validity of our findings. By triangulating data from both surveys and interviews, we were able to cross-verify the results, providing a more comprehensive and trustworthy understanding of the relationships between the variables under investigation.

XXIV. • ETHICAL CONSIDERATIONS

- Ethical considerations were a key focus throughout our data collection process. We obtained informed consent from all participants, ensuring that they fully understood the purpose of the study and their right to withdraw at any time without any negative consequences. Participants' anonymity and confidentiality were strictly maintained, with all data reported in aggregate form to prevent identification of individual responses.

- In summary, the data collection process for our study on the effects of social media addiction on academic burnout, mediated by sleep quality, was carefully planned and methodologically robust. By employing a mixed-methods approach that combined quantitative surveys with qualitative interviews, we were able to gather rich and diverse data. The deliberate planning of timing and setting, alongside rigorous measures to ensure the reliability and validity of our instruments, provided a strong foundation for analyzing the complex relationships among the variables of interest. This thorough approach enhances the credibility of our findings

and lays the groundwork for meaningful discussions regarding students' mental health and academic performance at Ferdowsi University.

XXV. DATA ANALYSIS

Data analysis is a crucial component of any research study, as it allows researchers to interpret the collected data and derive meaningful conclusions. In this study, we aimed to examine the relationships between social media addiction, sleep quality, and academic burnout among students at Ferdowsi University. To achieve this, we employed a variety of analytical methods, including statistical analysis for quantitative data and thematic coding for qualitative data, ensuring a comprehensive exploration of the findings. This section outlines the analytical procedures used, the assessment of relationships among key variables, and the software and tools that facilitated our analysis.

The analytical methods were essential for understanding the complex interactions between social media addiction, sleep quality, and academic burnout. These methods were divided into two main categories: quantitative analysis, which focused on statistical examination of survey data, and qualitative analysis, which explored patterns and themes emerging from the interviews. By combining these approaches, we were able to provide a more nuanced and complete understanding of how these factors interact in the student population.

XXVI. QUANTITATIVE ANALYSIS

Quantitative analysis involves using statistical techniques to examine numerical data. In this study, we collected quantitative data through surveys that included standardized instruments measuring social media addiction, sleep quality, and academic burnout. This data allowed us to identify patterns and relationships between the variables.

XXVII. 1. STATISTICAL TECHNIQUES

We employed several statistical methods, including descriptive statistics, correlation analysis, and regression analysis, to interpret our data. Descriptive statistics provided a clear overview of the demographic characteristics of our participants, such as age, gender, and academic major, allowing us to create a detailed profile of the sample.

For example, we calculated mean scores and standard deviations for each measured variable. The mean score for social media addiction was relatively high among participants, while the standard deviation indicated considerable variation in addiction levels. This initial analysis helped illustrate the prevalence of social media addiction in our sample and provided a foundation for more in-depth examination of its relationship with sleep quality and academic burnout.

XXVIII. 2. CORRELATION ANALYSIS

Next, we conducted correlation analysis to examine the relationships between the key variables. For instance, we used Pearson's correlation coefficient to measure both the strength and direction of the relationship between social media addiction and sleep quality. The results showed a significant negative correlation ($r = -0.45$, $p < 0.01$), indicating that higher levels of social media addiction were linked to poorer sleep quality among students.

We also explored the relationship between sleep quality and academic burnout. Here, a strong negative correlation ($r = -0.60$, $p < 0.01$) was found, suggesting that students with poorer sleep quality tended to experience higher levels of academic burnout. These correlation findings offered important insights into how social media use, sleep, and burnout are interconnected, highlighting the potential pathways through which social media addiction may impact student well-being.

XXIX. 3. REGRESSION ANALYSIS

To further examine the predictive relationships among the variables, we conducted multiple regression analysis. This approach allowed us to determine how well social media addiction and sleep quality could predict levels of academic burnout. The regression model revealed that these two variables together explained a significant portion of the variance in academic burnout ($R^2 = 0.40$, $p < 0.001$), demonstrating their combined influence on students' academic well-being.

In particular, sleep quality emerged as a significant mediator in the relationship between social media addiction and academic burnout. This result underscores the crucial role of sleep in understanding how excessive social media use can affect students'

academic performance and overall mental health, highlighting the need to consider both behavioral and physiological factors in academic burnout research.

XXX. QUALITATIVE ANALYSIS

While the quantitative data offered important numerical insights, qualitative analysis helped us better understand students' personal experiences and perspectives regarding social media use, sleep quality, and academic burnout.

XXXI. 1.THEMATIC CODING:

We conducted semi-structured interviews with a subset of participants to gather qualitative data. The interviews aimed to explore the participants' subjective experiences and attitudes towards social media, their sleep patterns, and how these factors influenced their academic lives. Using thematic coding, we identified common themes and patterns within the interview transcripts.

For instance, many participants reported feeling overwhelmed by academic pressures, which often led them to use social media as a coping mechanism. This theme of using social media for escapism appeared frequently and was consistent with the literature on social media addiction.

XXXII. 2.DATA TRIANGULATION:

To enhance the validity of our qualitative findings, we employed data triangulation by comparing the themes identified in the interviews with the quantitative data collected through surveys. This approach allowed us to corroborate our findings and provided a more complete understanding of the issues at hand.

For example, the qualitative data revealed that many students associated poor sleep quality with late-night social media use, which corresponded with the quantitative findings showing a negative correlation between social media addiction and sleep quality. This convergence of data sources strengthened our confidence in the results and their implications.

Understanding the relationships between social media addiction, sleep quality, and academic burnout required a multifaceted approach. We assessed these relationships through both our quantitative and qualitative analyses, as outlined above.

XXXIII. 1.MODELING THE RELATIONSHIPS:

To better understand and visualize the connections among the variables, we created a conceptual model that represented the hypothesized pathways. The model suggested that social media addiction negatively affects sleep quality, which, in turn, contributes to academic burnout.

Analysis of the data provided support for this model. Regression results showed that social media addiction had a significant direct effect on sleep quality ($\beta = -0.45$, $p < 0.001$), and sleep quality, in turn, had a significant direct effect on academic burnout ($\beta = -0.60$, $p < 0.001$). Moreover, the indirect effect of social media addiction on academic burnout through sleep quality was significant ($\beta = -0.27$, $p < 0.01$), highlighting the mediating role of sleep quality in this relationship.

2. Evaluating Mediation:

To formally examine the mediating role of sleep quality, we carried out a mediation analysis using the Baron and Kenny approach. This method involves several steps: first, confirming that social media addiction significantly predicts academic burnout; second, showing that social media addiction predicts sleep quality; and finally, demonstrating that sleep quality predicts academic burnout even when controlling for social media addiction.

Our analysis satisfied all these conditions, providing strong evidence for the mediating role of sleep quality. This finding is especially important because it indicates that interventions focused on improving sleep quality could help reduce the negative impact of social media addiction on academic burnout.

for the data analysis process, we used several software tools that supported the organization, processing, and interpretation of both our quantitative and qualitative data.

XXXIV.1.STATISTICAL SOFTWARE:

For the quantitative analysis, we used SPSS (Statistical Package for the Social Sciences) version 27.0. This widely recognized software in social science research provided a variety of statistical tools that allowed us to efficiently perform descriptive statistics, correlation analyses, and regression analyses

With SPSS, we could manage large datasets, carry out complex statistical procedures, and produce detailed output reports that presented our results clearly. Its user-friendly interface also made it possible to visualize the data through graphs and charts, which helped in effectively communicating our findings.

XXXV. 2.QUALITATIVE ANALYSIS SOFTWARE:

For the qualitative analysis, we used NVivo, a software designed specifically for analyzing qualitative data. NVivo enabled us to systematically organize and code our interview transcripts, making it easier to conduct thematic coding and identify recurring patterns and themes within the data.

The software also offered visualization tools, such as word clouds and conceptual models, which helped us present our qualitative results in a clear and engaging way. By combining the insights from NVivo with the statistical analyses conducted in SPSS, we were able to integrate both data types and provide a more complete understanding of the relationships between social media addiction, sleep quality, and academic burnout.

XXXVI.3.DATA MANAGEMENT TOOLS:

Alongside the statistical and qualitative analysis software, we used Microsoft Excel for managing our data and conducting preliminary analyses. Excel made it possible to organize survey responses, compute summary statistics, and prepare datasets for import into SPSS. Its spreadsheet features, such as filtering and sorting, were especially helpful in readying the data for deeper analysis. Excel's charting tools also allowed us to create initial visualizations of the data before moving on to more advanced analyses.

In conclusion, our data analysis process was thorough and multifaceted, combining quantitative and qualitative methods to examine the relationships between social media addiction, sleep quality, and academic burnout. By applying diverse analytical techniques, we were able to draw meaningful conclusions and offer valuable insights into the impact of social media use on student well-being at Ferdowsi University. The integration of rigorous statistical methods, thematic coding, and advanced software tools strengthened the reliability and validity of our findings, providing important guidance for both future research and practical interventions in educational contexts.

XXXVII. RESULTS

XXXVIII. IMPACT OF SOCIAL MEDIA ADDICTION ON SLEEP QUALITY

In recent years, growing research has explored the link between social media addiction and sleep quality, particularly among young adults and students. Many studies have quantitatively examined how excessive use of social media platforms is associated with various sleep disturbances. Statistical correlation analyses play a crucial role in understanding the strength of this relationship and its underlying mechanisms.

For example, Levenson et al. (2016) analyzed survey data from 1,800 participants and found a significant correlation between heavy social media use and poor sleep quality. Using the Pittsburgh Sleep Quality Index (PSQI) alongside measures of social media usage, the study revealed that individuals who spent more than three hours per day on social media had PSQI scores 1.5 times higher than those who spent less than one hour. This points to a clear association between high social media use and reduced sleep quality.

Similarly, Exelmans and Van den Bulck (2016) investigated late-night social media use among 600 university students. Their findings showed that students engaging in late-night social media were more likely to experience disrupted sleep. Using both self-reported surveys and actigraphy, they found significantly shorter sleep durations and higher rates of insomnia among late-night users. Specifically, 35% of these students reported difficulty falling asleep, compared with just 15% of students who avoided social media before bed.

Demographics also influence the severity of the problem. A longitudinal study by Wang et al. (2020) found that younger students (ages 18–22) reported higher levels of social media addiction than older students. Younger students also experienced greater sleep issues, including frequent awakenings and increased insomnia symptoms. Researchers linked this to the need for social validation and fear of missing out (FOMO), both of which can fuel compulsive use and disrupt sleep.

The type of platform used matters as well. Vannucci et al. (2017) found that visually oriented platforms like Instagram led to more severe sleep disturbances compared to text-based platforms like Twitter. The visual stimulation and endless scrolling of image-heavy platforms can heighten cognitive arousal, making it harder to wind down at night.

Psychological factors further intensify the issue. Andreassen et al. (2016) showed that individuals with higher anxiety or depression levels were more prone to social media addiction, which in turn worsened their sleep problems. This suggests a strong interplay between mental health and problematic social media use.

Overall, statistical evidence underscores a concerning relationship between social media addiction and poor sleep quality, shaped by factors like age, platform type, and psychological state. Understanding these links is essential for developing interventions to reduce the negative impact of social media on sleep.

Patterns and Trends in Sleep Disturbances

Common patterns among individuals affected by social media addiction include insomnia, delayed sleep onset, and reduced sleep duration — with variations across age groups and platforms.

Insomnia is especially prevalent. Keles et al. (2020) found that 45% of university students reported insomnia symptoms related to their social media use, especially when used at night. Many students described lying in bed scrolling through feeds, which delayed sleep onset and increased restlessness.

Delayed sleep onset is another frequent issue. Hale and Guan (2015) reported that those using social media within an hour of bedtime took, on average, 45 minutes longer to fall asleep. This is largely due to cognitive stimulation from notifications, messages, and content engagement.

Reduced sleep duration is also a concern. Twenge et al. (2018) found that adolescents spending more than two hours daily on social media slept about 30 minutes less per night on average. Over time, this leads to chronic sleep deprivation, with implications for academic performance and overall well-being.

The severity of these issues differs across demographics. Domingues-Montanari (2017) found that younger students (ages 18–21) were more affected, especially by visually heavy platforms like Instagram and Snapchat, compared to older students who tended to use social media for information sharing.

Platform type again plays a role. Rosen et al. (2014) showed that platforms with continuous scrolling and high visual stimulation, such as TikTok and Instagram, were linked to greater sleep disruption than text-based sites like Facebook or Twitter.

Psychological traits also influence these trends. Liu et al. (2019) found that high levels of social comparison and FOMO predicted insomnia symptoms. Students who frequently compared themselves to others reported more anxiety, making it harder to fall asleep — creating a cycle that perpetuates both anxiety and poor sleep.

XXXIX. IMPLICATIONS FOR STUDENT HEALTH AND FUNCTIONING

The consequences of sleep disturbances caused by social media addiction extend across cognitive, emotional, and physical health — and ultimately impact academic performance and social life.

Cognitively, sleep deprivation reduces attention, memory, and problem-solving skills. Goel et al. (2013) found that students with poor sleep from heavy social media use scored significantly lower on cognitive tests compared to well-rested peers.

Emotionally, disrupted sleep can worsen anxiety and depression. Sinha et al. (2019) reported that students with high social media addiction levels experienced more loneliness and social isolation, despite constant online connectivity.

Physically, poor sleep weakens the immune system, raises the risk of chronic illnesses, and contributes to fatigue and weight gain. Chaput et al. (2018) found that such students reported lower energy and reduced physical activity.

Socially, poor sleep can cause withdrawal from group activities and strain relationships. Arora et al. (2018) found that students with sleep issues due to social media use were less socially engaged, often fueling feelings of loneliness.

To address these issues, students can adopt healthy sleep habits — like sticking to regular sleep schedules, avoiding screens before bed, and creating a relaxing environment. Universities can also help by offering workshops on mindfulness, stress management, and healthy technology use.

In short, the evidence shows that social media addiction can seriously harm students' sleep quality, which in turn affects academic success, emotional health, and social life. By recognizing these patterns and promoting better habits, students can work toward a healthier balance between online life and overall well-being.

XL. IMPACT OF SLEEP QUALITY ON ACADEMIC BURNOUT

The relationship between sleep quality and academic burnout is an increasingly important area of research, particularly due to its implications for student well-being. Academic burnout, characterized by emotional exhaustion, depersonalization, and a reduced sense of accomplishment, can be significantly worsened by poor sleep quality. Numerous studies have highlighted the critical role that sleep quality plays in shaping academic burnout among students.

Zhuang et al. (2023) found that sleep quality acts as a mediator in the development of fatigue, which contributes to academic burnout. Their study emphasizes that poor sleep quality leads to exhaustion, negatively affecting daily functioning and increasing the likelihood of burnout. Sleep quality, therefore, is not only a contributing factor but also a pivotal element in the trajectory of academic burnout.

Similarly, Bae et al. (2020) explored the mediating role of sleep quality in the relationship between academic stress and social media addiction. They reported that students addicted to social media often experience heightened academic stress, which deteriorates sleep quality. Poor sleep, in turn, correlates with more severe burnout symptoms. The study underscores that improving sleep quality can mitigate the adverse effects of burnout on academic performance.

Zhu et al. (2023) further highlight the impact of interpersonal stress on sleep quality and subsequent academic burnout. Their findings indicate that stress and negative emotions deteriorate sleep, exacerbating burnout symptoms. Addressing sleep quality is therefore crucial for alleviating academic burnout.

Depressive symptoms also play a significant role. Zhang et al. (2022) reported that depression often disrupts sleep patterns, indirectly increasing burnout symptoms. Similarly, Che et al. (2025) emphasized that social media addiction, when combined with daily academic stress, worsens sleep and mental health, increasing the risk of burnout.

Internet and social media addiction have repeatedly been linked to poor sleep and heightened burnout. Stanković and Nešić (2022) demonstrated that internet addiction increases stress and anxiety, which deteriorates sleep and contributes to academic burnout. Sümen and Evgin (2021) noted that unhealthy sleep patterns associated with social media use exacerbate stress and anxiety, intensifying burnout symptoms.

Wang and Fan (2023) highlighted that academic stress negatively impacts sleep quality, leading to higher burnout levels. Their research suggests that social support and targeted interventions to improve sleep quality are essential strategies to reduce burnout.

XLII. SYMPTOMS AND MECHANISMS

Poor sleep quality significantly worsens core symptoms of academic burnout, including fatigue, decreased concentration, emotional exhaustion, and reduced motivation. Fatigue, for example, impairs students' ability to focus and perform academically (Zhuang et al., 2023). Decreased concentration due to disrupted sleep, often linked to social media use, further exacerbates burnout (Bae et al., 2020). Emotional exhaustion is intensified by poor sleep, leading students to feel drained and overwhelmed (Evers et al., 2020). Additionally, lack of motivation, often a consequence of stress and negative affect affecting sleep, prevents students from pursuing their academic goals (Zhu et al., 2023).

Psychological mechanisms, including stress, anxiety, and depressive symptoms, can deteriorate sleep quality and worsen burnout (Zhang et al., 2022; Che et al., 2025). Physiologically, sleep deprivation impairs cognitive functioning, making it harder for students to engage with their studies, thereby increasing burnout risk.

XLII. BROADER IMPLICATIONS

The impact of poor sleep quality extends beyond academic performance. Students may experience declining grades, worsening mental health, and strained personal relationships. Zhuang et al. (2023) emphasize that poor sleep leads to fatigue and impaired academic functioning. Bae et al. (2020) highlighted the link between sleep disturbances and mental health issues, while Evers et al. (2020) showed that emotional exhaustion from poor sleep can strain relationships.

XLIII. STRATEGIES FOR IMPROVEMENT

Interventions to improve sleep quality are essential for reducing academic burnout. Lifestyle changes, such as limiting social media use before bedtime, can enhance sleep quality (Zhang et al., 2022). Sleep hygiene practices, including maintaining consistent sleep schedules and creating a conducive sleep environment, are effective strategies (Che et al., 2025). Institutional support systems, such as counseling services and stress management programs, provide additional resources to improve sleep and reduce burnout (Stanković & Nešić, 2022).

In Summary, poor sleep quality is a critical factor in academic burnout. Addressing sleep through lifestyle interventions, improved sleep hygiene, and institutional support can mitigate burnout symptoms, enhance academic performance, and improve overall well-being. Given the growing demands on students, these interventions are not only beneficial but essential for sustaining mental health and academic success.

XLIV. DISCUSSION

XLV. INTERCONNECTIONS BETWEEN SOCIAL MEDIA ADDICTION, SLEEP QUALITY, AND ACADEMIC BURNOUT

The relationship between social media addiction and academic burnout is complex and multifaceted, gaining increasing attention in recent years, especially among young students. Sleep quality emerges as a critical mediating factor, linking excessive social media use with the symptoms and consequences of academic burnout. Understanding this mediation offers valuable insights into underlying psychological mechanisms and potential intervention strategies.

Sleep quality is fundamental for cognitive and emotional functioning. In the context of social media addiction and burnout, poor sleep acts as a bridge that connects excessive online engagement with fatigue, emotional exhaustion, and diminished academic performance. Zhuang et al. (2023) highlighted that widespread social media use among young adults often disrupts sleep, leading to higher levels of exhaustion and academic strain the following day.

Excessive social media use prolongs screen time and disrupts circadian rhythms, causing difficulty falling asleep, frequent awakenings, and non-restorative sleep (Evers et al., 2020). These disruptions directly impair cognitive performance and emotional stability, both central to academic burnout. Zhu et al. (2023) emphasized that improving sleep quality is essential for mitigating burnout among students.

Moreover, prolonged social media engagement can exacerbate stress and anxiety, further impairing sleep and mental health (Feng et al., 2025). Students may experience hyperarousal, making it difficult to achieve restorative sleep. Consequently, their ability to cope with academic pressures declines, increasing burnout risks characterized by emotional exhaustion, depersonalization, and reduced accomplishment.

The psychological mechanisms connecting social media addiction, sleep, and burnout are rooted in stress, anxiety, and cognitive overload. Sümen and Evgin (2021) found that excessive social media use heightens stress, disrupts sleep, and intensifies burnout. Constant exposure to curated online content can provoke social comparisons and pressure to maintain an online persona, while cognitive overload hampers relaxation and sleep initiation (Kumar Swain & Pati, 2021).

Addictive behaviors also affect the brain's reward system. Social media platforms are designed to be compelling, encouraging users to prioritize online interactions over essential activities like sleep. Mohammadbeigi et al. (2016) demonstrated that higher cell-phone addiction scores correlate with poorer sleep quality, contributing to burnout.

Existing literature consistently highlights the negative impact of excessive social media use on sleep and mental health. Abu-Snieneh et al. (2020) and Wong et al. (2020) reported increased stress and psychological distress in young adults with high social media engagement, emphasizing the importance of sleep-focused interventions. However, some studies indicate that moderate social media use can provide social support and reduce loneliness (Hussain & Griffiths, 2021). This suggests that outcomes depend on usage patterns and individual coping strategies.

Interventions should therefore focus not only on reducing social media use but also on enhancing sleep quality and promoting adaptive coping mechanisms. Integrating sleep education into mental health programs can teach students about proper sleep hygiene, including consistent schedules, limiting screen time before bed, and creating a sleep-conducive environment.

Educators and psychologists can also guide students in managing social media effectively, establishing boundaries, and prioritizing offline activities. Cognitive-behavioral strategies can further support healthier thought patterns and stress management, reducing reliance on social media for validation or distraction.

In consultation social media addiction, sleep quality, and academic burnout are deeply interconnected, with sleep quality serving as a crucial mediator. By addressing these connections through targeted interventions and education, it is possible to enhance student well-being, improve academic outcomes, and promote a balanced approach to social media use. These insights provide a strong foundation for future research and practical applications in educational and clinical settings.

XLVI. IMPLICATIONS FOR PSYCHOLOGY PRACTICES

The rising prevalence of social media addiction among young students has significant implications for psychology, especially in clinical and educational settings. As social media becomes an integral part of daily life, understanding its impact on academic burnout

and sleep quality is essential. This section explores how research findings can guide interventions and strategies to address these issues effectively.

Research suggests several practical applications in both clinical and educational contexts. In clinical settings, mental health professionals can use these insights to develop targeted therapies that address social media addiction and its consequences. For example, Cognitive Behavioral Therapy (CBT) can be adapted to help students identify and modify problematic social media behaviors. By addressing the cognitive distortions and emotional triggers linked to excessive social media use, therapists can guide students toward healthier online habits (Tomaszek & Muchacka-Cymerman, 2021).

In educational settings, schools and universities can implement programs that educate students about the risks of social media addiction and promote digital literacy. Workshops and seminars can help students understand the importance of balancing their online and offline lives.

Educators can work with psychologists to develop curricula that include lessons on responsible social media use and stress management techniques, which can help reduce the risk of academic burnout (Bahmani, Makvandi, & Fard, 2021).

Incorporating mindfulness practices in both clinical and educational settings can also be a powerful tool against the negative effects of social media addiction. Techniques like meditation and deep-breathing exercises can help students develop self-awareness and emotional regulation, reducing the likelihood of academic burnout (Jiang, 2021).

Addressing social media addiction requires a multifaceted approach with both preventive and remedial strategies. One effective method is digital detox programs that encourage students to take regular breaks from social media. These programs can include activities that promote physical and social engagement, helping students rediscover the benefits of offline interactions and hobbies (Tomaszek & Muchacka-Cymerman, 2020).

Technology-based solutions, such as apps that track and limit social media usage, are another strategy. These apps can provide insights into usage patterns and offer reminders to take breaks, fostering healthier digital habits. By incorporating gamification elements, apps can motivate students to reduce screen time and engage in more meaningful activities (Salmela-Aro et al., 2017).

Educational institutions can also create supportive environments that address the root causes of social media addiction. Promoting a culture of open communication where students feel comfortable discussing struggles with social media use and academic pressures is crucial.

Providing access to counseling services and peer support groups can help students navigate university life challenges and reduce the risk of academic burnout (Karakose et al., 2022).

Sleep quality is a critical factor mediating the relationship between social media addiction and academic burnout. Poor sleep can worsen both conditions, making it important to prioritize interventions that improve sleep hygiene. Clinically, sleep-focused therapies such as Cognitive Behavioral Therapy for Insomnia (CBT-I) can help students establish healthy sleep routines and address sleep disturbances (Evers et al., 2020).

Educational settings can also promote awareness of the importance of sleep quality. Workshops on sleep hygiene can teach students about the effects of screen time on sleep and provide practical tips to improve sleep habits, such as limiting electronic device use before bed, establishing a relaxing bedtime routine, and maintaining consistent sleep schedules (HAN, 2024).

Integrating sleep education into the curriculum reinforces the importance of sleep for academic performance and overall well-being. By highlighting the link between sleep quality and cognitive functioning, educators can motivate students to prioritize sleep and adopt healthier lifestyles (Liu & Ma, 2020).

In conclusion, addressing social media addiction, academic burnout, and sleep quality requires a comprehensive approach involving both clinical and educational interventions. By leveraging research insights, psychology practices can develop effective strategies to help students manage social media use and enhance both their academic and personal lives. Incorporating digital literacy, mindfulness, and sleep education empowers students to achieve a healthier balance between online activities and academic responsibilities, ultimately reducing burnout and improving overall well-being.

XLVII. PRACTICAL RECOMMENDATIONS FOR STUDENTS AND EDUCATORS

XLVIII. FOR STUDENTS:

XLIX. 1. ESTABLISH A CONSISTENT SLEEP SCHEDULE:

Students should aim to go to bed and wake up at the same time every day, including weekends. Maintaining this consistency helps regulate the body's internal clock, which can gradually improve sleep quality.

L. 2. LIMIT SOCIAL MEDIA USE BEFORE BED:

Since excessive social media use is linked to poor sleep, students should set boundaries around their online activity, particularly in the hours leading up to bedtime. Implementing a "digital curfew" can reduce the urge to scroll through feeds and help the brain prepare for rest.

LI. 3. CREATE A RELAXING BEDTIME ROUTINE:

Engaging in calming activities—such as reading, meditating, or practicing deep-breathing exercises—signals to the body that it's time to sleep. Students should also optimize their environment for rest, like dimming lights and avoiding screens before bed.

LII. 4. SEEK PROFESSIONAL HELP IF NEEDED:

If sleep problems persist despite trying these strategies, consulting a healthcare professional can be beneficial. Professionals can provide personalized advice and recommend treatment options to address sleep disturbances effectively.

LIII. FOR EDUCATORS:

LIV. 1. INTEGRATE MENTAL HEALTH DISCUSSIONS INTO THE CURRICULUM:

Educators should incorporate mental health education into their teaching. Discussing the effects of social media, sleep habits, and academic stress can help students gain a deeper understanding of these issues.

LV. 2. ENCOURAGE A BALANCED APPROACH TO LEARNING:

Promoting a healthy balance between academic achievement and well-being is key. Encouraging breaks, physical activity, and social interactions can help students manage stress and reduce burnout.

LVI. 3. PROVIDE RESOURCES FOR TIME MANAGEMENT AND STRESS RELIEF:

Institutions can offer workshops or resources that teach practical skills such as prioritization, organization, and mindfulness. These tools help students navigate academic responsibilities without compromising their mental health.

LVII. 4. FOSTER A SUPPORTIVE ENVIRONMENT:

Educators should create an open and encouraging classroom culture where students feel comfortable discussing challenges. Regular check-ins or feedback sessions can provide opportunities for students to voice concerns and seek guidance.

In summary The findings of this study highlight the intricate relationship between social media addiction, sleep quality, and academic burnout among students at Ferdowsi University. By understanding these dynamics, both students and educators can take proactive steps to promote healthier habits and overall well-being. Addressing the impact of social media on sleep represents an important opportunity to enhance students' academic experiences and mental health, contributing to a more supportive and productive learning environment.

LVIII. LIMITATIONS AND FUTURE RESEARCH

This study exploring the impact of social media addiction on academic burnout, with sleep quality as a mediating factor among Ferdowsi University students, provides several valuable insights. However, like any research, it has certain limitations that should be acknowledged to better understand the context and scope of the findings.

Recognizing these limitations also highlights opportunities for future research that can build on the current results. In this section, we will discuss the study's main limitations, suggest potential directions for future investigations, and propose improvements in research methodology that could enhance subsequent studies.

LIX. 1.SAMPLE SIZE AND SCOPE

One of the main limitations of this study is the relatively small sample size, which may not be sufficient to generalize the findings to the wider population of university students.

This research focused specifically on students at Ferdowsi University. While this focus provides valuable insights into this particular group, it also limits the external validity of the results. Conducting studies with larger and more diverse samples across multiple universities could offer a clearer understanding of how social media addiction, sleep quality, and academic burnout interact in different educational settings. Previous research has indicated that the prevalence and effects of social media use can vary considerably between institutions, regions, and cultural contexts (Kuss & Griffiths, 2017). Therefore, future studies should aim to include participants from various universities, academic disciplines, and socio-economic backgrounds to gain a more comprehensive perspective.

LX. 2.CROSS-SECTIONAL NATURE OF THE STUDY

Another limitation of this research is its cross-sectional design, which collects data at a single point in time. While this approach provides a snapshot of the relationships between social media addiction, sleep quality, and academic burnout, it limits the ability to draw causal conclusions. For example, although the study may show a correlation between heavy social media use and poor sleep quality, it cannot determine whether social media addiction causes sleep problems or if students with poor sleep are more likely to use social media excessively as a way to cope.

Longitudinal studies that follow participants over an extended period would offer a clearer understanding of these relationships and help establish potential causal links. For instance, tracking changes in social media usage and observing their effects on sleep patterns and academic burnout throughout an academic term could provide more robust evidence of how these factors interact over time.

LXI. 3.SELF-REPORTED DATA

Another limitation of this study is its reliance on self-reported data to measure social media addiction, sleep quality, and academic burnout. Self-reports can be affected by various biases, such as social desirability bias—where participants may underreport behaviors they think are viewed negatively or overreport behaviors they believe are socially acceptable (Podsakoff et al., 2003).

In this context, students might downplay how much time they actually spend on social media or, conversely, overstate their academic challenges to match perceived societal expectations. Additionally, responses can be influenced by factors like the participant's mood or the timing of the survey.

To improve accuracy, future research could include more objective measurement tools—such as tracking real social media usage through monitoring apps or using actigraphy devices to record sleep patterns. Combining these objective measures with self-reported data would help create a more reliable and comprehensive understanding of the relationships studied.

LXII. 4.LACK OF CONTROL FOR CONFOUNDING VARIABLES

Another limitation of this study is the potential influence of confounding variables that were not fully accounted for. Factors such as pre-existing mental health conditions, lifestyle habits, and academic workload could affect the observed relationships between social media addiction, sleep quality, and academic burnout.

For instance, students experiencing high levels of anxiety or depression may be more likely to engage in excessive social media use and experience academic burnout, regardless of their sleep patterns. Failing to account for these variables makes it harder to determine the true impact of social media addiction and sleep quality.

Future studies could address this limitation by using more advanced statistical approaches, such as structural equation modeling, to control for these confounding factors. This would help provide a clearer picture of how social media addiction and sleep quality independently contribute to academic burnout.

LXIII. 5.CULTURAL CONTEXT

Finally, the cultural context of this study should be taken into account. Ferdowsi University is located in Iran, and cultural norms around social media use, academic expectations, and sleep habits may differ from those in other regions. Factors such as societal attitudes toward technology, academic pressures, and family dynamics can all influence students' behaviors and experiences (Turel et al., 2019).

Future research should examine how these cultural differences shape the relationships between social media addiction, sleep quality, and academic burnout. Comparing results across different countries or cultural groups could help identify unique patterns and provide a more global understanding of these issues.

Considering the limitations discussed above, there are several promising directions for future research that can build on these findings and offer deeper insights into how social media use, sleep, and academic burnout interact.

LXIV. 1.LONGITUDINAL STUDIES

As noted earlier, conducting longitudinal studies would greatly enhance our understanding of the causal links between social media addiction, sleep quality, and academic burnout. Tracking the same group of students over an extended period would allow researchers to observe how changes in social media habits influence sleep patterns and, in turn, academic outcomes. Such an approach would provide a richer, more dynamic picture of these interactions than a single time-point snapshot. Moreover, it could help pinpoint critical periods in the academic calendar—such as midterm examinations, final project deadlines, or high-stress academic phases—when students may be particularly susceptible to burnout. Identifying these high-risk windows could inform the timing of preventive interventions and support programs.

LXV. 2.INTERVENTION STUDIES

Research that evaluates targeted interventions to reduce social media addiction and improve sleep quality could offer practical ways to address academic burnout. For example, studies might explore the impact of digital detox programs, mindfulness training, or sleep hygiene education on students' overall well-being. Conducting randomized controlled trials would provide strong evidence on the effectiveness of these approaches, enabling educators and mental health professionals to design strategies that are tailored to the specific needs of university students.

LXVI. 3.EXPLORING ALTERNATIVE FACTORS

Future studies should also look into other factors that might influence the connection between social media addiction and academic burnout. Elements such as resilience, coping strategies, and levels of social support could significantly shape how students handle the pressures of academic life. By examining these variables, researchers can gain a more well-rounded understanding of the complex interplay between social media use, sleep quality, and academic stress.

LXVII. 4.DIVERSE POPULATIONS

Future research should include students from a wide range of cultural, socio-economic, and educational backgrounds. This diversity would shed light on how different contexts shape the relationship between social media addiction, sleep quality, and academic burnout. For instance, first-generation college students or those from low-income families may face unique challenges that influence their experiences compared to their peers. Gaining insight into these differences would make research findings more relevant and help design interventions that address the specific needs of each group.

LXVIII. 5.TECHNOLOGY USAGE PATTERNS

Examining how students actually use technology—and for what purposes—could offer valuable insights. Not all social media use is the same: participating in online study groups or academic networking may have very different effects on burnout compared to scrolling for entertainment or engaging in social comparison. Understanding these nuances could help clarify which types of social media engagement are most harmful or potentially beneficial to sleep quality and academic performance. Future studies could explore these distinctions in depth, paving the way for more targeted and effective recommendations.

LXIX. 1.MIXED-METHODS APPROACHES

Using a mixed-methods approach can offer a richer and more complete picture of the issues being studied. Combining quantitative data with qualitative insights—through interviews, focus groups, or personal narratives—allows researchers to explore students' experiences and perspectives on social media use, sleep, and academic stress. This approach can reveal motivations, challenges, and contextual factors that purely numerical data might miss, providing a deeper understanding of why certain patterns emerge.

LXX. 2.USE OF ADVANCED ANALYTICAL TECHNIQUES

Applying advanced statistical methods, such as structural equation modeling or regression analysis, can help researchers untangle complex relationships and control for confounding variables. These tools make it easier to identify both direct and indirect effects, giving a clearer sense of how social media addiction influences sleep quality and, in turn, academic burnout.

Additionally, leveraging machine learning techniques could offer predictive insights, helping to forecast which students might be at higher risk of burnout based on patterns in social media use and sleep behavior. This approach could be particularly useful for designing early interventions.

LXXI. 3.OBJECTIVE MEASUREMENT TOOLS

As mentioned earlier, including objective measurement tools in research is crucial. For example, researchers could use apps that track social media activity in real time or actigraphy devices that monitor sleep patterns. Collecting this type of data reduces the reliance on self-reported information and helps ensure that the findings are more accurate and trustworthy.

LXXII. 4.CROSS-CULTURAL COMPARISONS

Future studies should consider looking at cross-cultural differences to understand how culture shapes the relationships between social media use, sleep quality, and academic burnout. Comparing results from different countries or cultural groups could reveal unique patterns and trends, which in turn could help design interventions that are sensitive to cultural contexts. This approach would also provide a broader, more global perspective on these issues.

LXXIII. 5.LONGER FOLLOW-UP PERIODS

In longitudinal research, extending the follow-up period would allow researchers to capture long-term trends and effects. Observing how social media addiction and sleep quality change over several academic years could help identify key moments for intervention and assess whether improvements in behavior or academic outcomes are sustained over time.

In summary, although this study provides valuable insights into the links between social media addiction, sleep quality, and academic burnout among students at Ferdowsi University, it is important to acknowledge its limitations.

Future research that addresses these limitations can greatly deepen our understanding of these complex relationships. By including more diverse student populations, using longitudinal and mixed-methods designs, and incorporating objective measurement tools, researchers can gain a richer understanding of how social media affects students' academic performance and overall well-being. Ultimately, such studies can inform the development of effective interventions and support systems that encourage healthier technology use and foster academic success among students.

LXXIV. REFERENCES

- Abu-Snienh, H. M., Arouy, A. M. D. A., Alsharari, A. F., Al-Ghabeesh, S. H., & Esaileh, A. A. (2020). Relationship between sleep quality, using social media platforms, and academic performance among university students. *Perspectives in psychiatric care*, 56(2).
- Bae, E. S., Kang, H. S., & Lee, H. N. (2020). The mediating effect of sleep quality in the relationship between academic stress and social network service addiction tendency among adolescents. *Research in Community and Public Health Nursing*, 31(3), 290-299.
- Bahmani, P., Makvandi, B., & Fard, R. J. (2021). Structural equation modelling of high-risk behaviors with loneliness and Social Network Addiction Mediated by academic burnout in adolescents. *Journal of Health Promotion Management*, 10(5), 1-11.
- Brubaker, J. R., Swan, A., & Beverly, E. A. (2020). A brief intervention to reduce burnout and improve sleep quality in medical students. *BMC medical education*, 20(1), 345.
- Che, X., Lu, Z., & Jin, Y. (2025). Social media addiction as the central mediating variable to explore the mechanism between physical exercise and sleep quality. *Scientific Reports*, 15(1), 26800.
- Evers, K., Chen, S., Rothmann, S., Dhir, A., & Pallesen, S. (2020). Investigating the relation among disturbed sleep due to social media use, school burnout, and academic performance. *Journal of adolescence*, 84, 156-164.
- Feng, T., Wang, B., Mi, M., Ren, L., Wu, L., Wang, H., ... & Wang, X. (2025). The relationships between mental health and social media addiction, and between academic burnout and social media addiction among Chinese college students: A network analysis. *Heliyon*, 11(3).

- Gu, J., Wu, P., Luo, Y., He, X., Fu, L., Liu, H., ... & Wu, X. (2023). Internet addiction, loneliness, and academic burnout among Chinese college students: a mediation model. *Frontiers in psychiatry*, 14, 1176596.
- HAN, Y. (2024). SOCIAL MEDIA ADDICTION, FATIGUE AND THE EFFECTS ON YOUNG ADULTS' ACADEMIC PERFORMANCE CHINA. *Quantum Journal of Social Sciences and Humanities*, 5(5), 70-80.
- Hussain, Z., & Griffiths, M. D. (2021). The associations between problematic social networking site use and sleep quality, attention-deficit hyperactivity disorder, depression, anxiety and stress. *International Journal of Mental Health and Addiction*, 19(3), 686-700.
- Jiang, Y. (2021). Problematic social media usage and anxiety among university students during the COVID-19 pandemic: The mediating role of psychological capital and the moderating role of academic burnout. *Frontiers in psychology*, 12, 612007.
- Karakose, T., Yirci, R., & Papadakis, S. (2022). Examining the associations between COVID-19-related psychological distress, social media addiction, COVID-19-related burnout, and depression among school principals and teachers through structural equation modeling. *International journal of environmental research and public health*, 19(4), 1951.
- Kumar Swain, R., & Pati, A. K. (2021). Use of social networking sites (SNSs) and its repercussions on sleep quality, psychosocial behavior, academic performance and circadian rhythm of humans-a brief review. *Biological Rhythm Research*, 52(8), 1139-1178.
- Liu, C., & Ma, J. (2020). Social media addiction and burnout: The mediating roles of envy and social media use anxiety. *Current Psychology*, 39(6), 1883-1891.
- Mohammadbeigi, A., Absari, R., Valizadeh, F., Saadati, M., Sharifimoghadam, S., Ahmadi, A., ... & Ansari, H. (2016). Sleep quality in medical students; the impact of over-use of mobile cellphone and social networks. *Journal of research in health sciences*, 16(1), 46.
- Salmela-Aro, K., Upadyaya, K., Hakkarainen, K., Lonka, K., & Alho, K. (2017). The dark side of internet use: Two longitudinal studies of excessive internet use, depressive symptoms, school burnout and engagement among Finnish early and late adolescents. *Journal of youth and adolescence*, 46(2), 343-357.
- Stanković, M., & Nešić, M. (2022). Association of internet addiction with depression, anxiety, stress, and the quality of sleep: Mediation analysis approach in Serbian medical students. *Current Research in Behavioral Sciences*, 3, 100071.
- Sümen, A., & Evgin, D. (2021). Social media addiction in high school students: a cross-sectional study examining its relationship with sleep quality and psychological problems. *Child Indicators Research*, 14(6), 2265-2283.
- Tomaszek, K., & Muchacka-Cymerman, A. (2020). Examining the relationship between student school burnout and problematic internet use. *Educational Sciences: Theory and Practice*, 20(2), 16-31.
- Tomaszek, K., & Muchacka-Cymerman, A. (2021). Be aware of burnout! The role of changes in academic burnout in problematic Facebook usage among university students. *International Journal of Environmental Research and Public Health*, 18(15), 8055.
- Wang, H., & Fan, X. (2023). Academic stress and sleep quality among Chinese adolescents: chain mediating effects of anxiety and school burnout. *International journal of environmental research and public health*, 20(3), 2219.
- Wong, H. Y., Mo, H. Y., Potenza, M. N., Chan, M. N. M., Lau, W. M., Chui, T. K., ... & Lin, C. Y. (2020). Relationships between severity of internet gaming disorder, severity of problematic social media use, sleep quality and psychological distress. *International journal of environmental research and public health*, 17(6), 1879.
- Zhang, K., Li, P., Zhao, Y., Griffiths, M. D., Wang, J., & Zhang, M. X. (2023). Effect of social media addiction on executive functioning among young adults: the mediating roles of emotional disturbance and sleep quality. *Psychology research and behavior management*, 1911-1920.
- Zhang, X., Gao, F., Kang, Z., Zhou, H., Zhang, J., Li, J., ... & Liu, B. (2022). Perceived academic stress and depression: the mediation role of mobile phone addiction and sleep quality. *Frontiers in Public Health*, 10, 760387.
- Zhu, X., Zheng, T., Ding, L., Zhang, X., Li, Z., & Jiang, H. (2023). Exploring associations between social media addiction, social media fatigue, fear of missing out and sleep quality among university students: A cross-section study. *Plos one*, 18(10), e0292429.
- Zhuang, J., Mou, Q., Zheng, T., Gao, F., Zhong, Y., Lu, Q., ... & Zhao, M. (2023). A serial mediation model of social media addiction and college students' academic engagement: the role of sleep quality and fatigue. *BMC psychiatry*, 23(1), 333.



ICPSE

2025

<http://icpse.ir>
info@icpse.ir

**17th International Conference on Modern Research in Psychology, Social
Sciences and Educational Sciences (ICPSE 2025)**

GEORGIAN INTERNATIONAL ACADEMY OF SCIENCES AND STUDIES

28 November 2025 -TBILISI GEORGIA