



SOCIAL MEDIA ADDICTION AND STUDY HABITS AS MEDIATED BY GENDER

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Abstract:

This study investigates the relationship between social media addiction and study habits among Bachelor of Physical Education students, with gender serving as a mediating factor. It explores how social media addiction affects study habits. A quantitative research design was employed to explore how social media addiction affects study habits among Bachelor of Physical Education students. The respondents were identified through universal sampling. The researchers used two adapted questionnaires employing a five-point Likert scale to measure the levels of social media addiction and study habits. The statistical techniques used are mean, standard deviation and Pearson's r . The results revealed a significant positive correlation between social media addiction and study habits. Gender did not mediate this relationship, suggesting no distinct patterns in how male and female students are affected. The results further implied the need for interventions to address excessive social media use among students to enhance their academic performance. These insights can help educators, policymakers, and researchers craft strategies to lessen the negative impact of social media addiction on learning behaviors in universities. By introducing more structured study routines and tackling the accompanying virtual distractions, they can run awareness campaigns and bolster digital literacy programs that empower students to engage more meaningfully with their coursework.

SDG: #3 (Good health and Well Being) & #4 (Quality Education)

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1. Introduction

Healthy study habits are vital for university students aiming for strong academic performance, as they help learners use time wisely, remember course material, and think critically (Lone, 2021). However, keeping such habits alive is growing harder, with students facing relentless distractions and fluctuating motivation that make it tough to develop and stick to effective routines (David *et al.*, 2024). Many report that they cannot create or maintain stable study schedules, resulting in haphazard study sessions and frequent interruptions that undermine their concentration and time-management skills (Adeoye *et al.*, 2023).

The situation has grown more urgent as the lingering effects of COVID-19 continue to disrupt students' daily lives and instructional settings. Their familiar routines were altered for so long that re-establishing productive habits now feels daunting, and the extra pressure is weighing heavily on them (Irish Journal of Psychological Medicine, 2024). Many learners indicate that pandemic-related disruptions left them with gaps they cannot close, leading them to rely on social media and digital resources for answers. However, this reliance often splinters their attention and stretches out study sessions without yielding the comprehension they hoped for (McGraw-Hill Study Trends Report, 2023). Studies underscore that many students still struggle with organizing their time and materials, skills central to effective studying, resulting in lower academic performance than they, and their instructors, had expected (Carrión-Barco *et al.*, 2024).

Study habits play a critical role because they affect not only grades but also a student's confidence and enjoyment of learning itself. When students adopt effective habits, they tend to feel less anxious, remember more of what they study, and perform better overall, which influences the entire course of their education and the doors it can open later on (Shannon *et al.*, 2021). Research across student groups from high school classrooms to university lecture halls shows that techniques like organized note-taking, careful scheduling, and periodic self-quizzing consistently lead to stronger recall and more successful test scores (Walck-Shannon *et al.*, 2021)

Investigating the intersection of social media addiction and academic study habits is now imperative for predicting student performance (Khan *et al.*, 2021). Extensive evidence indicates that excessive social media use diverts cognitive resources away from educational tasks; learners report preferring to browse feeds rather than review coursework, a pattern correlated with declining academic grades (Alnjadat *et al.*, 2020). Moreover, social media addiction correlates especially with procrastination; instead of commencing a study period, students routinely elect a brief scroll that elongates into a protracted diversion (Khan *et al.*, 2021). Such intrusions disrupt the continuity of focused study, diminishing both the retention of material and the consistency of practice (Sari *et al.*, 2022). Consequently, addressing social media addiction must rank as a strategic

intervention to fortify study behaviors and, by extension, to elevate overall academic performance.

Good study habits consistently link to higher academic performance, as many studies confirm that how students approach their learning directly relates to their grades (Verma & Sankhian, 2025). At the same time, research has shown that social media addiction, including facets like constant virtual messaging, feeling overwhelmed by online drama, needing to keep scrolling, and information overload, disrupts several key study habits (Johnson & Lee, 2023). For instance, students who habitually check their social media feeds find it harder to stick to regular study times and effective learning methods (Davis, 2022).

This investigation builds upon three central theories that clarify the connection between study routines and educational performance. The prevailing framework is Albert Bandura's Social Learning Theory. Bandura posits that students cultivate productive study routines primarily by observing and imitating the conduct of peers and instructors. This underscores the crucial roles of attention and imitation in the educational process. Bandura (1977) describes learning as a fluid interplay in which learners first attend to exemplary models, then encode the observed actions, subsequently reproduce them, and finally gauge the incentive to repeat them. Bandura contends that a supportive educational environment does more than furnish exemplary conduct for imitation; it also affirms learners' efforts, nudging them to assimilate and perpetuate advantageous behaviors. Central to this model is self-efficacy, students' belief in their own capability, which in turn influences their drive, persistence, and achievement levels (Verywell Mind, 2006). Viewed in ensemble, the framework provides a robust lens for assessing the interplay of observational learning, reinforcement, and diverse cognitive strengths in the cultivation of study routines, ultimately guiding learners toward prosperous academic pathways.

Additionally, Bakare's Habit Theory further posits that specific study routines serve as fundamental levers of scholarly success, highlighting that disciplined practices such as prudent time management and organized note-taking yield superior learning outcomes (Bakare, 1977). This viewpoint is augmented by the VAK Learning Styles Theory, which classifies learners as Visual, Auditory, or Kinesthetic, advocating for instructional strategies tailored to the individual's predilection. When study behaviors are congruent with a student's primary learning modality, the model predicts that both habit formation and academic performance will be enhanced (Fleming, 1922).

Social media addiction negatively alters how students develop learning habits, primarily by pushing them into cognitive overload that hinders retention and processing (Hameed *et al.*, 2022). Furthermore, the sheer volume of competing content that users scroll through daily makes it harder for learners to focus on academic work long enough to internalize complex material (Adams, 2023). Extensive research indicates that cognitive load hinders students' ability to retain information and utilize effective learning strategies. Moreover, various factors can signify social media addiction, including virtual tolerance, virtual communication, virtual problems, and virtual information (Sahin,

2018). Virtual tolerance refers to the amount of time students comfortably spend on social media, which can increase their daily usage and require a longer reset period when their satisfaction diminishes (Udayanga, 2023). Lastly, the overwhelming amount of information available online can lead to “*information overload*,” making it challenging for students to comprehend and retain academic material (Nguyen *et al.*, 2022)

Study habits are the methods and strategies that students use to help them learn and do well in school, and these habits can greatly affect how well students understand, remember, and use information (Mayer, 2022). Study style plays a crucial role in determining how effectively students engage with their learning materials, as different styles can enhance or hinder academic performance (Islam, 2022). Additionally, developing a steady study schedule enables learners to distribute their hours wisely, making it easier to juggle coursework and to enhance memory retention (Egbujuo, 2021). A 2020 meta-analysis that synthesized findings from 49 studies likewise revealed a modest yet reliable link between the amount of time spent studying and overall academic success, observed in various educational contexts, which further underscores the value of organized study routines (Huang, 2020).

While recent studies in communication and media consistently highlight social media addiction as a pressing concern, most of this work overlooks its impact on localized, at-risk populations. Existing literature has begun to link media addiction to altered study habits, but it tends to treat study habits as a monolithic concept. The differential influence of specific addictive components, such as compulsive checking, notifications, and peer comparison, on distinct study behaviors like attention to reading, proactive assignment management, and collaborative learning remains unclear, particularly among groups that face compounded social and economic stresses (Robinson & Clark, 2023). This research gap is critical to address, especially as educational institutions seek effective intervention strategies to mitigate social media addiction and promote healthier study habits among students (Khan *et al.*, 2022).

It further brings out significant directions that can help researchers wanting to enhance learning in a technological environment (Liu *et al.*, 2019). This study aligns with Sustainable Development Goals 3: Good Health and Well-Being and Goal 4: Quality Education. Firstly, the intervention is concerned with examining the effect of SMA on students’ academic behaviors and promoting mental health in university environments for SDG 3. It also explains how students can successfully balance their learning activities with other responsibilities. The study emphasizes that effective learning strategies are crucial for achieving SDG 4: It enables them to understand the impact of social media on the study habits of students and comes up with good strategies that will help students overcome these odds to excel in their studies. This could therefore enhance educational performance, thus training capable skills graduates who, in turn, can impact their societies positively.

The primary objective of this study is to examine the relationship between social media addiction and the study habits of the Bachelor of Physical Education students. Specifically, the objective can be achieved by examining and assessing the following

objectives: (1) to assess the level of social media addiction among Bachelor of Physical Education students in terms of virtual tolerance, virtual communication, virtual problem, and virtual information; (2) to determine the level of study habits of Bachelor of Physical Education students in terms of study style, study routines, and study time; (3) to ascertain the significant relationship between social media addiction and the study habits of Bachelor of Physical Education students; and (4) to determine whether gender mediates the relationship of social media addiction and study habits. The null hypothesis in this study assumes that there is no significant relationship between social media addiction and study habits of Bachelor of Physical Education students.

2. Method

This section covers the different methods of gathering and analyzing data for the study. The methodology covers the research respondents, research instruments, research design, and procedures.

2.1 Research Respondents

The respondents for this study were Bachelor of Physical Education students enrolled for the school year 2024-2025, from first-year to fourth-year. Out of 281 students, only 230 answered. The investigators utilized a universal sampling strategy, thereby permitting the incorporation of every respondent accessible within the narrowly defined population relevant to the investigation. Such a strategy is advantageous because of the modest size of the target cohort, permitting thorough data gathering while avoiding the logistical difficulties often associated with random sampling (Wisdom Library, 2025). In applying universal sampling, the research seeks to obtain detailed understandings of how social media addiction interacts with study habits, while allowing for cross-gender comparisons.

The study included first-year to third-year Bachelor of Physical Education students aged 18 years and above, as this segment of the population would be subject to the effects of social media addiction on their study habits. However, the exclusion is those fourth-year Bachelor of Physical Education students because of their tight schedule, since most of them are on the field study, which makes it difficult for the researchers to reach them. The research respondents are Bachelor of Physical Education students because they are often engaged in physically demanding coursework and practical applications, making them particularly susceptible to the effects of social media addiction on their study habits. Additionally, by concentrating on Bachelor of Physical Education students, the study can control for specific academic pressures and lifestyle factors unique to this program, allowing for more targeted insights. Respondents can withdraw from the study at any point without any consequences.

2.2 Research Instruments/Materials

The researchers used an adapted and modified questionnaire to measure the four indicators of independent variables (IV) of social media addiction, namely: virtual tolerance (five items), virtual communication (nine items), virtual problems (nine items), and virtual information (six items) from the study of Sahin (2018). And the second part of the questionnaire consists of three major indicators of dependent variables (DV) of study habits, namely: study style (five items), study routine (five items), and study time (five items) from the study of Sinag *et al.* (2024). The total number of items in the questionnaires will be 44 items.

In this study, a five-point Likert scale was employed in both questionnaires to assess participants' responses. A max of 5 means "Always" (indicating that the statement strongly applies), while 4 means "Often" (indicating that the statement occurs seven to nine times out of ten). A score of 3 means "Sometimes" (indicating that the statement occurs four to six times out of ten), 2 means "Rarely" (indicating that the statement applies infrequently), and 1 means "Never" (indicating that the statement does not apply at all).

A range of means is used 4.20-5.00 (very high), which means that the statement is always manifested; 3.40-4.19 (high), shows that the statement is frequently manifested; 2.60-3.39 (moderate), shows that the statement is occasionally manifested; 1.80-2.59 (low), shows that the statement is rarely manifested; 1.00-1.79 (very low), means that the statement is never manifested.

The validated questionnaires underwent pilot testing, and the results revealed that the questionnaires on social media addiction and study habits is 0.89 and 0.94, respectively. The survey questionnaires exceed the average or acceptable reliability value of 0.70. This means that both questionnaires are reliable to be used in this study.

2.3 Research Design/Procedure

A quantitative descriptive-correlational study design was employed in this study since it is best suited to assessing how social media addiction affects Bachelor of Physical Education students' study habits. With the aid of this design, the researchers are able to comprehend the relationship between these variables and pinpoint recommendations, future interventions, and solutions. In order to gather data for the study, researchers requested formal letter approval from the dean to administer the questionnaire. Following clearance, the chosen respondents received physical copies of the Social Media Addiction (SMA) and Study Habits questionnaires from the researchers. The mean determined the relationship between social media addiction and study habits among Bachelor of Physical Education students. The standard deviation also measures the degree of variation for a given data value. Pearson's *r* examined the critical connection between social media addiction and study habits among Bachelor of Physical Education students.

3. Results and Discussion

This section of the study introduced and discussed the results, containing the social media addiction, study habits, and the correlation of the two variables.

3.1 Social Media Addiction

Presented in Table 1 is the level of social media addiction among Bachelor of Physical Education students as measured by the indicators: virtual tolerance, virtual communication, virtual problem and virtual information.

Table 1: Social Media Addiction

Indicators	Mean	SD
Virtual Tolerance	3.79	.73
Virtual Communication	3.43	.78
Virtual Problem	3.22	.84
Virtual Information	3.73	.90
Overall	3.56	.62

Table 1 shows the level of social media addiction among Bachelor of Physical Education students, with an overall mean score of 3.56, with a high descriptive level and a standard deviation of .62. This means that social media addiction among BPE students is frequently manifested.

The indicator with the highest mean score is virtual tolerance, with the mean of 3.79 (SD = .73), which is described as a high level. Students often look for internet connectivity everywhere, using social media. However, virtual problems obtained the lowest mean value of 3.22 (SD = .84) with a moderate level of social media addiction. Respondents often feel unhappy when they are not on social media, and occasionally are captivated by the mysterious world of social media.

Recent studies have highlighted the behavioral, social, and psychological factors contributing to this phenomenon. For instance, Mak (2022) found that excessive social media use negatively impacts physical activity levels and self-esteem among undergraduate students, emphasizing the behavioral addiction components such as salience and mood modification. Similarly, (Hou *et al.*, 2019) demonstrated that social media addiction is associated with decreased academic performance and mental health outcomes, mediated by self-esteem.

The findings of this study align with previous research associating social media addiction with disrupted study habits (Alzahrani, 2023). High virtual tolerance levels observed in this study confirm Udayanga's (2023) findings regarding increased screen time among students. However, contrary to the assumption that students universally struggle with self-regulation, the lower scores on virtual problems suggest that not all students perceive social media use as a significant barrier to academic success. This deviation challenges Adams' (2023) assertion that cognitive overload significantly hampers retention and comprehension.

3.2 Study Habits

In Table 2, the level of study habits was assessed using three key indicators: study style, study routine, and study time.

Table 2: Study Habits

Indicators	Mean	SD
Study Style	3.88	.65
Study Routine	3.48	.76
Study Time	3.54	.82
Overall	3.56	.62

Table 2 shows the level of study habits among Bachelor of Physical Education students with an overall mean score of 3.63, with a high descriptive level and a standard deviation of .62. This means that study habits among BPE students are frequently manifested.

In the presented data, study style achieved the highest mean of 3.88 (SD = .65), which is described as a high level. This means that the students are often considered to have their strengths and capabilities when choosing the type of study habits. In addition, the study routine presented the lowest mean of 3.48 (SD = .76) with a high level of study habits. Indicating that the statements are frequently manifested, the students often claimed that they were taking notes properly during the class.

These results echo current research regarding how social media addiction affects study habits, especially study style and routine. Alzahrani (2023) reported that heavy social media use interrupts study schedules, producing fragmented timelines and diminishing concentration on academic responsibilities. This observation resonates with the lower average scores recorded here for study routine, indicating that social media addiction likely obstructs students' capacity to create and sustain productive study habits.

3.3 Significant Relationship between Social Media Addiction and Study Habits

Table 3 represents the relationship between social media addiction and study habits. The overall r-value is .338 with a p-value of less than .001, which shows a significantly low positive correlation between the two variables.

Table 3: Significant Relationship between Social Media Addiction and Study Habits

Study Habits	Social Media Addiction				Overall
	Virtual Tolerance	Virtual Communication	Virtual Problem	Virtual Information	
Study Style	.202	.186	.193	.414***	.306***
Study Routine	.229	.163	.247	.341***	.298***
Study Time	.211	.230	.150	.358***	.303***
Overall	.243	.217	.214	.417***	.338***

*p<.50, ** p<.01, *** p<.001

The findings of this study align with previous research that highlights the significant relationship between social media addiction and academic behaviors. Social media addiction has been shown to negatively impact academic self-efficacy, problem-solving skills, and life satisfaction, while being positively associated with loneliness and depression (Polat & Aslan, 2024). Excessive use of social media platforms can lead to cognitive overload, which disrupts focus and retention, further impairing academic success (Adams, 2023).

Additionally, problematic social media use has been linked to increased feelings of isolation and decreased self-esteem, both of which negatively affect students' ability to maintain structured study habits (Mangacop & Guillena, 2024). The compulsive nature of social media engagement characterized by frequent checking and prolonged usage, has been found to interfere with students' time management and study routines (Udayanga, 2023).

3.4 Mediation Analysis

Table 4 presents the results of a mediation analysis examining the role of gender in the relationship between the independent and dependent variables. And also, to determine whether gender mediates the relationship between social media addiction and study habits.

A mediation analysis was conducted to explore whether gender mediates the relationship between social media addiction and study habits. The analysis revealed a significant direct effect of social media addiction on study habits ($B = 0.305$, $SE = 0.060$, $z = 5.073$, $p < .001$, 95% CI [0.187, 0.424]), indicating that higher levels of social media addiction are associated with poorer study habits, even when accounting for gender as a mediator. However, the indirect effect of social media addiction on study habits through gender was not statistically significant ($B = -0.009$, $SE = 0.008$, $z = -1.046$, $p = 0.295$, 95% CI [-0.025, 0.008]), suggesting that gender does not mediate this relationship. The total effect, encompassing both direct and indirect effects, remained significant ($B = 0.297$, $SE = 0.060$, $z = 4.930$, $p < .001$, 95% CI [0.179, 0.415]).

Table 4: Mediation Analysis

Type	Estimate	SE	p	z	95 % C.I (a)	
					Lower	Upper
Direct Effect	0.305	0.060	<.001	5.073	0.187	0.424
Indirect Effect	-0.009	0.008	0.295	-1.046	-0.025	0.008
Total	0.297	0.060	<.001	4.930	0.179	0.415

These findings indicate that while social media addiction significantly impacts study habits, this effect is not mediated by gender. This aligns with previous research suggesting that the relationship between social media addiction and academic performance is not significantly influenced by gender differences. Alnjadat *et al.* (2019) reported that while male students showed greater social media addiction than female

students, the drop in academic performance was steeper for the females. This finding suggests that gender itself does not mediate the relationship being examined.

More recent investigations have pinpointed a range of alternative mediators. Psychological dimensions, particularly self-esteem, depression, and anxiety, have emerged as key players; students with escalating social media addiction tend to report more anxiety and depression alongside waning self-esteem and, as a collective outcome, decreased academic involvement (Landa-Blanco *et al.*, 2024). Age, too, appears to modulate this relationship specifically; younger adolescents tend to fall prey to social media's compulsive design more readily, which drives poorer study habits. Evidence now shows that high school students who log higher social media hours develop less effective study routines and weaker performance relative to older peers, underscoring age as a meaningful variable in the social media addiction–study habits nexus (Abuzar & Hussain, 2024).

4. Conclusion and Recommendations

This research explored how social media addiction interacts with study habits among Bachelor of Physical Education students at the University of Mindanao, while considering gender as a possible mediating factor. Findings indicated that the participants reported elevated levels of both social media addiction and study habits. Although a meaningful association between the addiction and the habits was identified, gender did not serve as a mediating influence in the connection between the two. Recognizing how social media addiction shapes academic practices is essential for designing enduring learning strategies and enhancing overall student achievement.

Since the data revealed a significant relationship between social media addiction and study habits, but no mediating effect of gender, several recommendations can be made. Virtual tolerance is identified as a high level because some students frequently seek internet connectivity to access social media, which should be addressed. Faculty and school leaders should counteract this tendency by designing controlled digital situations that foster moderated internet engagement. For example, teachers might weave digital well-being themes into lesson plans, instruct learners on mindful screen usage, and clarify acceptable device behaviors in the classroom. In addition, digital literacy courses that cover self-regulatory techniques can empower students to limit distractions and reduce dependence on social media or online access.

On the other hand, while study habits were reported as high, these may be strengthened further through innovative instructional strategies. Teachers and other interested groups can boost student engagement by weaving technology into routine instruction. When lessons include gamified elements, such as think points, leaderboards, and hands-on tasks, learners typically show heightened motivation and retain content longer. Zhuang *et al.* (2023) observed that energetic learning environments, managed alongside purposeful pacing, encourage steadier and more effective study routines. By

turning learning into a more active and fun process, these methods can move study habits from merely stable to genuinely flourishing.

Bandura's Social Learning Theory complements this discussion by emphasizing that environments, both physical and digital, either fortify or erode disciplined study habits. Olutola *et al.* (2024) document that while social media platforms can facilitate learning by granting near-instant access to educational resources, their addictive potential frequently cultivates procrastination and destabilizes effective time management. This duality underscores the necessity for students to cultivate a deliberate equilibrium within their digital practices to safeguard and elevate their academic performance.

For future researchers, since gender did not mediate the relationship between social media addiction and study habits, other potential mediators may be explored. Zhuang *et al.* (2023) advanced the hypothesis that sleep quality and fatigue may function in series to couple social media use with the attenuation of academic engagement. Concurrently, Mou *et al.* (2024) delineated a pathway in which social anxiety and social media addiction collaboratively undermine academic performance through a reduction in engagement. Li *et al.* (2019) positioned learning engagement itself as a crucial outcome of social media consumption. Future researchers may consider these psychological and behavioral variables as mediators or explore other variables aside from study habits, such as academic motivation, focus, or emotional well-being, that may also be associated with social media addiction. Investigating these areas may offer more comprehensive insights into the complex interactions that shape student learning outcomes.

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Conflict of Interest Statement

The authors declare no conflicts of interest.

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