



The Impact of Smartphones on Students' Psychology, Emotions, Physical Health, Management, Social Life, and Academic Performance

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Abstract: This study aims to analyze the impact of smartphone usage on students' psychological, emotional, physical, social, and academic aspects at Pattimura University. A quantitative approach was employed using a voluntary survey method involving 546 students aged 18–24 years. Data were collected through a Likert-scale questionnaire and analyzed using percentage techniques. The findings indicate that excessive smartphone use has a significant multidimensional impact on students. Approximately 57.96% of respondents reported intensive social media usage patterns that interfere with concentration, while 65.69% showed notable psychological and emotional effects, including anxiety and mood disturbances. Regarding physical health, respondents reported sleep disturbances, eye strain, and reduced physical activity. Some also acknowledged that smartphone use affects social relationships and productivity, including increased procrastination and decreased academic focus. Despite these negative impacts, students demonstrated awareness of the importance of managing smartphone usage through strategies such as time limitation and digital detox. It can be concluded that uncontrolled smartphone use contributes to decreased academic performance and well-being, although adaptive skills and self-regulation may mitigate these effects.

Keywords: academic performance; smartphone addiction; social media use; student well-being; technology impact

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INTRODUCTION

The development of smartphones in the 1990s fundamentally changed human lifestyles. Phones—including cell phones and smartphones—have changed how we communicate with people and interact with our friends, how we store information, and how we access entertainment, goods, and services, making these activities much easier and quicker (Hartanto et al., 2023). Increasingly, more than half of Generation Z say they access various social media platforms several times a day, and nearly 1 in 5 Generation Z members admit to using social media every hour of the day. In terms of time spent on social media, close to 1 of every 3 college students reports using social media an average of 7-10 hours per day, and just under 1 of every 3 college students reports using social media an average of 5-6 hours per day. This evidence was taken from a study of 415 students at the State University of New York at Oneonta during the 2017-2018 academic year. The findings indicated that practically all of Generation Z (99%) own a smartphone, and 98% of that cohort reported using their smartphones to connect to the Internet almost all the time.

Regarding Generation Z's views on smartphone and social media addiction, 4 out of 5 students admit they spend too much time on the Internet, and 2/3 say they have become too engrossed in social media. More importantly, 7 out of 10 students recognize they have become addicted to the Internet, and almost two-thirds feel they are addicted to social media (Ahmed, 2019). One other study stated that 13.5% of children and adolescents suffer from internet addiction (Wu et al., 2013). Internet addiction is a worrisome issue because it is connected to physical and mental health disorders (Siste et al., 2021), like cognitive impairments, obesity, and sleep disorders (Yang et al., 2018). This information points to the need for counseling and for providing parents, educators, and policymakers with appropriate interventions for these challenges. There are many ways to communicate between humans today, particularly through technology, particularly on social media. Recent studies on social media use indicate that approximately 3 billion people worldwide now use social media (Iwamoto & Chun, 2020). Social media has increasingly attracted users who spend more time communicating in social networking groups, with research showing that users spend an average of 2 hours and 31 minutes on social media (Chen & Xiao, 2022). In addition, social media has become an integral part of children, teens, and

adults' lives over the last decade (Smith et al., 2021). A good chunk of young people's social life is now on social media and online, and almost all users are utilizing it for social purposes; users around the globe are using social media platforms to connect with their friends, family, coworkers, and communities via image-based social platforms like Facebook, WhatsApp, Instagram, and X, to name a few (Yang, 2025) and plays an essential aspect of contemporary communication by allowing users' to communicate, make and share reports of thoughts, and engage in online communities. Social media enables people to stay in touch with others, share their daily lives, and become part of an online community. These networking sites offer users the ability to create their profiles, and members of these sites, often referred to as friends, create digital online communities (Mitrulescu, 2024) and engage in ways they never knew were possible. Students use social media as a medium to share their knowledge; they prefer it because of the ways and capabilities it offers followers to encourage, support, and enable people to share and represent meaningful knowledge by connecting with others in a variety of ways.

International studies in different countries show that the prevalence of smartphone addiction is different between countries: for example, in Korea, smartphone addiction rates were found to be 26.6% (Lee et al., 2018), 26.8% in India (Choksi & Patel, 2021), 10% in Italy (Vaccaro, 2020), and 16.9% in Swiss (Haug et al., 2015). In Malaysia, a recent study found a significantly higher prevalence rate of 40.6% (Lei et al., 2020). As of January 2024, social networking offers a wealth of uses and variety, yet a limited number of platforms dominate the ecosystem. The social media king remains Facebook, with 3.049 billion active monthly users globally, and YouTube, with 2.491 billion active monthly users, holds the crown as the largest video-sharing platform globally. WhatsApp and Instagram, under the Facebook umbrella, also share the honor of having 2 billion active users each month. This illustrates Facebook's and Google/YouTube's breadth of reach, not only within the industry but across the international digital landscape (Labudová, 2024). In the United States, 52% of dental practices use social media, and Facebook is the most widely used platform in the dental practices space. The most common purpose for social media is for marketing purposes (91%) (Henry et al., 2012). A comparative study demonstrates that Indonesian students utilized social media platforms like Facebook, Instagram, YouTube, and Telegram, while Filipino Students use Facebook when connecting with campus friends (Nurfalah et al., 2023). Young people and their parents in Indonesia appreciate the role of social media in their lives. On average, they spend time on social media for socializing, practical purposes, and entertainment. Most teens say they are good at using social media; however, many parents recognize that their teens lack the self-regulation skills to manage their time on it (Purboningsih et al., 2023). The increasing social media usage has changed (affected) society significantly in many ways, both positively and negatively - especially for youth (Merino et al., 2024). Social media offers students useful opportunities in an educational sense - from quick access to information to new collaborative and interactive ways to learn (Sivakumar et al., 2023). One clear benefit is improved communication in the Moroccan educational system (Faizi et al., 2013). Social media platforms such as Facebook, Myspace, and Twitter can be utilized to collect feedback, facilitate communication and networking between students, and communicate between students and teachers, and even students and each other across classes (Faizi et al., 2013; Nafisah et al., 2024). It may appear as though the largest and most prevalent age group using social media consists of young adults (millennials). It would be safe to say that they have never lived without information and communications technology (ICT). Millennials use social media for a wide variety of things - sustaining social relationships, gathering information, and communicating with family and friends (Backer & Awad, 2025).

Universities are places where knowledge is generated in diverse ways at various levels, ranging from individual projects, group discussions, brainstorming sessions, and research endeavors (Maweu & Yudah, 2020). Currently, teaching methods are undergoing significant changes in line with the times. One example we can emulate is that courses and lectures at Chinese universities have shifted from in-person to online, with social media serving as an important platform for educators to teach and answer questions, significantly increasing the time students spend on social media. Today, social media use has been operationalized as a formative construct to investigate its impact on students' subjective well-being (Guo et al., 2014; Kim et al., 2020). Given that people typically use multiple social media products simultaneously, we treat social media as a common construct to better understand the relationship between social media use and subjective well-being. Academics generally believe that social media use can have positive impacts on students (Wang et al., 2014; Yang & Lee, 2020). For instance, some studies indicate that social media can help students gather social capital (Pang, 2018), reduce their loneliness (Phu & Gow, 2019), and enhance their subjective well-being (Zhang et al., 2023). However, other studies state that if students use social media too frequently, they may become exposed to social media addiction, which can affect their physical and mental health (Andreassen et al., 2017; Marino et al., 2018). Another study even found no significant relationship between social media use and subjective well-being (Utz & Breuer, 2017). Furthermore, social media addiction harms the subjective well-being of 370 Chinese students (Zhao, 2021). This has been a challenge since lecturers find it difficult in class. Additionally, assignments and semester exams have experienced delays in quantity, resulting in scores below the passing mark, which has forced lecturers to implement remedial courses. Additional research indicated that students spend a lot of time on their mobile phones. Students continue to browse incoming messages or social media

notifications continuously, a habit that can slowly develop into addiction. This condition not only disrupts their focus but also leads to a drastic decrease in learning focus, hindering their ability to absorb material effectively and potentially lowering their performance. Lecturers have the majority of their concerns about giving lectures. The concern is backed by statistical data that shows 57% of female students aged 17 and 29 show traits of social media addiction. The purpose of the study is to reflect on the alarming proliferation of digital dependency among the younger generation, which is impacting not only their daily lives but also possibly their mental health, school productivity, and socialization (Kolhar et al., 2021). As social media continues to expand its reach in education, it is a matter of balancing its use to mitigate its negative impacts and ensure students' educational experiences remain healthy, positive, and productive (Nafisah et al., 2024). This research shows, first-hand, how the exponential use of social media is affecting Arab university students through an online survey of 536 students in the UAE, Saudi Arabia, and Egypt. Although 68% are active on social media for more than 60 hours a week, and the majority of respondents are doubtful about the authenticity and seriousness of pages on relevant issues, 95% of respondents are active users of social media for entertainment purposes, 94% for awareness of global cultures, and 94% for data sharing.

The presence of smartphones integrated with social media has made them an essential part of daily life, particularly for the younger generation. Social media is now used not only for communication but also as a platform for sharing information, building communities, and supporting the learning process. In higher education, the use of social media has expanded as a tool to facilitate interaction between students and lecturers and to encourage collaboration in learning (Alenezi & Brinthaup, 2022; Shabur & Siddiki, 2024). Despite these benefits, smartphones and social media also have various impacts. On the positive side, this technology can improve access to information, expand social networks, and support more interactive learning processes (Tuliao et al., 2025; Laumann et al., 2025). However, excessive use can lead to addiction, which negatively affects both physical and mental health, such as reduced concentration, poor sleep quality, and increased stress and anxiety (Islam et al., 2025; Sipetic, 2023). In academic settings, these issues are reflected in decreased student focus during lectures, delayed assignment completion, and an overall decline in academic performance (Punir, 2021). Numerous previous studies have examined the use of social media and smartphones among students from various perspectives. Some studies indicate that social media can provide benefits, such as enhancing subjective well-being, strengthening social relationships, and supporting the learning process (Timung et al., 2024). However, other research highlights its negative impacts, including addiction, mental health problems, and decreased academic achievement (Alansari et al., 2026).

Additionally, some studies have found that the relationship between social media use and well-being is not always significant (Majeed et al., 2022; Andersen et al., 2026). These differing findings suggest that smartphone and social media use is complex and influenced by multiple factors. Although many studies have been conducted, most focus only on one or two specific aspects, such as psychological or academic impacts. To date, there is still limited research that comprehensively examines multiple aspects simultaneously, particularly those encompassing psychological, emotional, physical health, time management, social interaction, and academic performance within a single analytical framework. This limitation has resulted in a lack of comprehensive understanding of the overall impact of smartphone addiction on students' lives, highlighting the need for more holistic and integrative research. Therefore, the aim of this study is to analyze the impact of smartphone addiction on the psychological, emotional, physical health, management, social aspects, and academic performance of students at Pattimura University.

METHODS

This research employs a quantitative approach, suitable for measuring, analyzing, and drawing conclusions from the numerical data collected from respondents. The chosen sampling method is non-probability, using a voluntary survey that imposes no restrictions on anyone wishing to participate. This means that each individual has complete freedom to determine their involvement in the research, making the study open and inclusive. Nevertheless, the sampling process is still directed toward respondents who meet specific criteria to meet the research's needs (Memon et al., 2020). In this study, 546 participants aged 18-24 years were included. All participants are smartphone users, which is relevant to the research context, as it requires skills in using digital devices.

Furthermore, the research participants come from various study programs at Pattimura University, Indonesia. This diversity in academic backgrounds is expected to provide a broader perspective on the phenomenon under study, as each study program has distinct experiences, mindsets, and technology use habits. Before filling out the questionnaire, students were first informed about the research objectives, the procedures to be followed, and their rights as respondents. The researchers also sought the students' voluntary consent to participate, ensuring that their involvement was based on full awareness and not coercion. All personal information and responses provided by the respondents are guaranteed confidentiality, in accordance with research ethics principles. This confidentiality is maintained by excluding individual identities from the report and using the data solely for academic and scientific purposes. With this design, the research not only ensures

the validity of the collected data but also emphasizes the importance of ethical aspects in data collection. The choice of the voluntary survey method provides students with the flexibility to contribute according to their readiness, while the respondent criteria ensure that the data obtained is relevant to the research objectives.

The questionnaire was designed to facilitate respondents in selecting answers from a range of structured and clearly defined options, thereby simplifying the processes of completion, evaluation, and subsequent data analysis (Elangovan & Sundaravel, 2021). By using a structured format, respondents can provide consistent, comparable responses, enhancing the overall quality and reliability of the collected data. The instrument consists of 10 categories of difficulties encountered by students, each represented by 2 items to ensure adequate coverage and depth of measurement. In addition, the questionnaire includes two categories related to students' perceptions, specifically concerning the importance of international publications and the need for institutional support from the university, each also represented by two items. Altogether, the questionnaire comprises 30 items, carefully constructed to capture both challenges and perceptions in a balanced, systematic manner. All items are measured using a five-point Likert scale ranging from "Strongly Disagree (SD)" to "Strongly Agree (SA)," allowing respondents to express varying degrees of agreement. This scaling method enables more nuanced data collection and supports more detailed statistical analysis. The questionnaire was distributed using Google Forms, which was integrated into a website developed by the researchers. This online distribution method allows respondents to conveniently access, complete, and submit the questionnaire at their own pace and from any location.

Furthermore, the use of digital platforms enhances data collection efficiency, minimizes human error, and accelerates data processing, making it both practical and effective for researchers and participants alike. Once the data were collected, they were analyzed using descriptive methods based on percentages to provide a clear, systematic overview of students' difficulties and perceptions regarding writing for international publication. The use of percentage analysis allows for easy interpretation of trends and patterns within the data. Overall, this research is expected to generate valuable insights that will help the university identify key challenges students face and develop more targeted, effective support programs to improve students' academic writing skills, particularly in the context of international publication.

RESULT AND DISCUSSION

To investigate the patterns of social media use among respondents, items 1-5 were utilized. The results are presented in Table 1.

Table 1. Patterns of Social Media Use Among Students

Item	Question	Category (%)				
		SA	A	N	D	SD
1	I spend more than 2 hours a day using social media on my smartphone	21	66.4	5.7	7.7	0.4
2	I often open social media applications repeatedly within one hour	18.7	70.1	5.1	7	0.2
3	Notifications from social media applications make it difficult for me to concentrate on work or study	21.1	49.3	11.8	17.5	1.7
4	I find it hard to stop using social media even though I intend to reduce my usage time	17.3	60.5	12.3	10.5	1.7
5	The autoplay video feature on platforms like YouTube causes me to watch longer than planned	12.9	43.5	15.9	26.9	2.2

Table 1 shows that 66.4% agree that they spend more than 2 hours a day using social media on their smartphones (item 1). Additionally, based on item 2, 18.7% of respondents often open social media applications more than once within an hour, with 70.1% agreeing that this activity has become part of their routine. Furthermore, in item 3, 21.1% of respondents feel that notifications from social media applications make it difficult for them to concentrate on work or study, with 49.3% agreeing that this is a problem. In item 4, 17.3% of respondents reported finding it hard to stop using social media, even though they intended to reduce their time spent on it, and 60.5% agreed that this presents a challenge for them. Lastly, in item 5, the data indicates that 12.9% of respondents agree that the autoplay video feature on platforms like YouTube causes them to watch longer than planned, while 43.5% agree that this also affects their media consumption patterns. Overall, this data shows that social media use significantly affects respondents' concentration and time spent, as well as the challenges they face in managing their social media use.

The analysis of items 1–5 shows that students' social media usage is relatively high, with an average agreement level of 57.96%. This indicates that social media has become deeply embedded in students' daily routines, not only increasing the duration of smartphone use but also shaping behavioral patterns such as frequent checking and reduced concentration. This pattern reflects a shift in students' time allocation, where digital engagement increasingly competes with academic activities. From a theoretical perspective, this behavior

can be explained through habit formation and digital dependency. Repeated exposure to features such as notifications, instant updates, and continuous content flow encourages automatic, repetitive use. Over time, this leads to difficulty in self-regulation, as students become accustomed to constant interaction with their devices. This habitual use disrupts sustained attention, making it harder for students to focus on academic tasks. These findings are consistent with previous studies. [Elsheikh et al. \(2024\)](#) found that smartphone use, particularly before bedtime, is strongly associated with poor sleep quality. This occurs because prolonged screen exposure and cognitive stimulation interfere with the body's natural sleep cycle. Similarly, [Rai et al. \(2016\)](#) reported that students spend several hours daily on smartphones, mainly for social media and communication, which contributes to dependency and decreased productivity. More importantly, this study demonstrates that usage patterns, including intensity and frequency, are closely related to behavioral outcomes. It is not only the amount of time spent on smartphones that matters, but also how students interact with digital platforms. Frequent interruptions from notifications and repeated checking can fragment attention and reduce learning effectiveness. The findings also reveal a connection between social media usage, physical conditions, and academic behavior. High smartphone use is associated with sedentary lifestyles, eye strain, and sleep disturbances, which in turn affect students' readiness to learn and overall academic performance. This highlights that smartphone use should be viewed as a multidimensional phenomenon that simultaneously influences various aspects of student life. Overall, the results confirm that excessive social media use plays a significant role in shaping students' habits and well-being. These findings suggest that educational institutions should promote digital self-regulation strategies, such as limiting screen time and increasing awareness of responsible technology use, in order to reduce negative impacts while maintaining the benefits of smartphones for learning and communication. Using items 6-10, we examined the psychological and emotional challenges of social media use. The details are presented in [Table 2](#).

Table 2. Psychological and Emotional Impact

Item	Question	Category (%)				
		SA	A	N	D	SD
6	Excessive social media use makes me feel anxious or stressed	14.3	46.1	13.8	23.9	2.9
7	Seeing other people's posts on Facebook or Instagram often makes me feel less confident	12.1	35.6	14.9	32.3	6.4
8	Negative content or bad news on social media significantly affects my mood	14.5	52.9	13.1	18.2	2.4
9	Positive interactions through comments and messages on social media help improve my mood	21.7	61.9	8.5	8.8	0.2
10	I feel lonely when I cannot access my social media accounts for a long time	12.7	56.4	12.3	17.1	3.1

From [Table 2](#), we see that 46.1% of respondents agree that they feel anxious or stressed when they use social media excessively (item 6). Based on item 7, we know that 35.6% of respondents reported that seeing others' posts on Facebook or Instagram often makes them feel less confident. Following up with item 8, 52.9% of respondents agree that social media - when negative content or bad news is seen - significantly affects their mood. For item 9, 61.9% of respondents believe that positive connections, such as comments or messages, made through social media lead to better social interactions and improved mood states. Finally, in item 10, 56.4% of respondents experience real loneliness when away from their social media accounts for long periods. The overall data, items 6-10, point to the impact that social media has on people's mental and emotional health, as well as the time and interactions that may or may not develop from social media use.

The analysis of items 6–10 shows a high level of agreement regarding the psychological and emotional impact of smartphone use, indicating that a substantial proportion of students experience anxiety, mood disturbances, reduced self-confidence, and feelings of loneliness associated with social media engagement. This finding suggests that smartphone use is not merely a behavioral habit but also closely linked to students' emotional regulation and mental well-being. From a theoretical perspective, these results can be explained by social comparison theory and emotional dependency. Social media platforms expose users to curated, often idealized representations of others' lives, which can trigger upward social comparison and lead to feelings of inadequacy, stress, and lower self-esteem. At the same time, repeated reliance on social media for emotional support reinforces a pattern of emotional dependency, where students increasingly use digital interactions as a coping mechanism for negative feelings such as loneliness or anxiety. The findings also reveal a dual effect of social media on psychological well-being. On one hand, social media facilitates social connectedness by enabling communication, feedback, and support from peers, which can enhance mood and a sense of belonging. On the other hand, excessive exposure to negative content, social pressure, and constant comparison can negatively affect emotional stability. This duality highlights that the impact of smartphone use is neither inherently positive nor negative, but depends on the intensity and nature of use. These results are consistent with previous research. [Aloteibi et al. \(2024\)](#) found that smartphone ownership and usage are particularly high among

adolescents and young adults, with prolonged use associated with increased dependency and psychological effects. The present study extends this understanding by demonstrating how high usage intensity is directly associated with emotional outcomes such as stress, anxiety, and loneliness, thereby reinforcing the link between behavioral patterns and mental health. Importantly, the findings suggest an interconnected relationship between psychological conditions, social interaction patterns, and smartphone usage behavior. Students who rely more heavily on social media for interaction tend to experience both increased emotional support and heightened vulnerability to negative psychological effects. This indicates that psychological outcomes are shaped not only by exposure to digital content but also by how individuals interpret and engage with that content. In summary, the results confirm that smartphone use has a significant and complex influence on students' psychological and emotional well-being. The study emphasizes that excessive and unregulated use can contribute to emotional distress, while controlled and purposeful use may provide social and emotional benefits. These findings imply that educational institutions should promote digital literacy and emotional self-regulation strategies, encouraging students to develop healthier social media interaction patterns to enhance well-being and academic success. To investigate the impact of mobile phone use on respondents' physical health, items 11-15 were used. The details are presented in [Table 3](#).

Table 3. Impact on Physical Health

Item	Question	Category (%)				
		SA	A	N	D	SD
11	Using a mobile phone to access social media before bed often disrupts my sleep.	21	57	9	13.2	2.4
12	Frequent phone-screen staring while using social media quickly fatigues my eyes or gives me headaches.	26.5	60.7	6.6	7	0.2
13	My body position when using a mobile phone for social media sometimes causes neck or back pain.	25.4	57.9	6.4	9.7	1.1
14	Prolonged social media usage drastically reduces my daily physical activity.	20.8	58.9	12.2	9	0.49
15	I have experienced mental fatigue due to excessive information from various social media platforms.	9	46	16.7	26.1	4.4

[Table 3](#) shows that 57% of respondents agree that using a mobile phone to access social media before going to sleep often causes sleep disturbances (item 11). Additionally, based on item 12, 60.7% of respondents admitted to frequently staring at their phone screens, which quickly fatigues or causes pain in their eyes. Furthermore, in item 13, 57.9% of respondents feel that their body position when using a mobile phone sometimes causes neck or back pain. In item 14, 58.9% of respondents agree that prolonged social media usage can drastically reduce their daily physical activity. Finally, in item 15, the data indicate that 46% of respondents have experienced mental fatigue due to excessive information from various social media platforms. Overall, this data illustrates that mobile phone and social media usage has a significant impact on respondents' physical health, including sleep disturbances, vision problems, physical pain, and reduced physical activity.

The analysis of items 11–15 indicates a high level of agreement regarding the negative impact of smartphone usage on students' physical health, suggesting that excessive use is closely associated with sleep disturbances, visual strain, musculoskeletal discomfort, and reduced physical activity. This pattern reflects not only the prevalence of intensive smartphone use but also its direct physiological consequences on daily functioning. From a theoretical standpoint, these effects can be explained by prolonged screen exposure and behavioral displacement. Continuous interaction with smartphone screens, particularly before sleep, disrupts circadian rhythms through exposure to blue light and cognitive stimulation, leading to poor sleep quality. At the same time, extended sedentary behavior replaces physical activity, increasing the risk of fatigue and long-term health problems. Poor posture during device use further contributes to musculoskeletal strain, particularly in the neck and back, illustrating how habitual usage patterns translate into physical health issues. The findings also reveal an interconnected relationship between physical, cognitive, and behavioral variables. For example, sleep disturbances and eye fatigue not only affect physical well-being but also reduce concentration, learning readiness, and overall academic performance. Similarly, information overload from continuous social media exposure contributes to mental fatigue, which further exacerbates both physical exhaustion and psychological stress. This demonstrates that the impact of smartphone use operates across multiple dimensions simultaneously rather than in isolation. These results are consistent with previous studies. [Sekarrini \(2020\)](#) found that smartphone addiction is associated with physical complaints such as eye strain, musculoskeletal pain, and anxiety symptoms. Additionally, [Shekhawat et al. \(2024\)](#) reported that excessive smartphone use affects sleep patterns and cognitive function, while [Arumugam et al. \(2020\)](#) highlighted the negative impact of nighttime smartphone use on students' well-being and daily performance. The present study strengthens this evidence by showing how high usage intensity among university students is directly linked to both immediate physical discomfort and broader functional impairments. Importantly, the findings suggest that awareness of these

negative effects does not necessarily lead to behavioral change, indicating a gap between knowledge and practice. This highlights the role of habitual dependency and limited self-regulation in sustaining excessive smartphone use despite its known risks. In conclusion, the results confirm that smartphone use has a significant, multidimensional impact on students' physical health, which is closely intertwined with cognitive and academic outcomes. These findings imply the need for interventions that promote healthier digital habits, such as limiting screen time, improving ergonomic practices, and increasing awareness of the physiological consequences of excessive smartphone use. Such strategies are essential to support students' overall well-being and optimize their academic performance in the digital era. To investigate the relationship between social media and respondents' productivity, items 16-20 were used (see [Table 4](#)).

Table 4. Social Relationships and Productivity

Item	Question	Category (%)				
		SA	A	N	D	SD
16	Social media helps maintain relationships with friends and family even at a distance.	55.9	41.5	2.8	1.5	0.2
17	Excessive social media use can sometimes disrupt direct interaction with those around us.	20.7	59.7	10.7	9.2	1.1
18	Dependence on social media significantly decreases my work/study productivity	19	55.2	15.5	10.3	1.3
19	I often procrastinate on tasks because I am too engrossed in social media like Facebook or YouTube.	19.9	56.2	9.8	13.4	2.4
20	Limiting my time on social media can improve my focus and work/study outcomes.	32.4	60.2	5.9	2.6	0.4

[Table 4](#) shows that 55.9% of respondents agree that social media helps maintain relationships with friends and family despite distance (item 16). However, based on item 17, 59.7% of respondents acknowledge that excessive social media usage sometimes disrupts direct interaction with those around them. Furthermore, in item 18, 55.2% of respondents feel that dependence on social media significantly decreases their work or study productivity. In item 19, 56.2% of respondents often procrastinate on tasks because they are too engrossed in social media like Facebook or YouTube. Finally, in item 20, the data shows that 60.2% of respondents agree that limiting social media usage time can enhance their focus and work or study outcomes. Overall, this data shows that while social media plays a positive role in maintaining social relationships, it also has negative impacts on direct interaction and productivity, as well as challenges in managing time spent on social media. The analysis of items 16–20 indicates a high level of agreement on the impact of smartphone use on students' social relationships and productivity, suggesting a dual, interconnected effect. On one hand, social media facilitates communication and helps maintain relationships across distances, reinforcing the role of smartphones as tools for social connectivity. On the other hand, excessive use is associated with reduced face-to-face interaction, increased procrastination, and decreased academic productivity, indicating that digital engagement may substitute rather than complement real-world interactions. From a theoretical perspective, this phenomenon can be explained through the displacement theory and attention fragmentation. Time spent on social media often displaces time that could be allocated to academic tasks or direct social interaction. At the same time, constant exposure to notifications and digital content fragments attention, making it difficult for students to sustain focus. This explains why students who are highly engaged in social media tend to experience lower productivity and increased procrastination despite being aware of these negative effects.

The findings also demonstrate an integrated relationship between social interaction, self-regulation, and academic performance. While social media enhances perceived connectedness, it simultaneously weakens the quality of direct interpersonal communication and reduces learning efficiency. This supports the idea that the impact of smartphone use is not linear but multidimensional, where benefits and drawbacks coexist depending on usage patterns and self-control. These results are consistent with previous research. Studies have shown that smartphone use during learning activities can reduce concentration and increase multitasking, ultimately lowering academic performance ([Zhang & Zeng, 2024](#)). In addition, [Ahmed et al. \(2020\)](#) highlighted the dual impact of smartphones, where they can support learning but also contribute to academic decline when overused. The present study extends these findings by illustrating how social media dependence specifically mediates the relationship between connectivity and productivity, reinforcing both social benefits and academic risks. Importantly, the results indicate that students are aware of the negative consequences of excessive smartphone use but often lack effective self-regulation strategies to control it. This gap between awareness and behavior suggests that cognitive control and habit management play a critical role in determining whether smartphone use leads to positive or negative outcomes. In conclusion, the findings confirm that smartphone use simultaneously shapes students' social relationships and academic productivity through complex and interrelated mechanisms. While it enhances communication and connectivity, excessive, unmanaged use can lead to reduced

focus, increased procrastination, and weakened academic performance. These findings imply that educational institutions should promote balanced digital practices, including time management strategies and the reinforcement of face-to-face interaction, to ensure that smartphone use supports rather than hinders students' academic and social development. To examine respondents' management of social media use, items 21-25 were included. The results are listed in [Table 5](#).

Table 5. Management of Social Media Usage

Item	Question	Category (%)				
		SA	A	N	D	SD
21	I try to limit my daily use of applications like Facebook and YouTube, but I find it difficult to be consistent.	15.1	59.4	14	11.8	1.7
22	Time management applications are very helpful in reducing my dependence on social media.	16.9	61.8	13.8	9	0.7
23	I am aware of the importance of digital detox for maintaining mental health but have not yet implemented it regularly.	20.8	70.5	7.6	2.2	0.4
24	I believe that education about the negative impacts of social media use can help users be more mindful in their use of this technology.	29	63.8	5.7	2.2	0.6
25	Notification features should be controlled to avoid being a constant source of distraction while using digital devices.	20.9	66.3	9.3	4.6	0.4

[Table 5](#) shows that while 59.4% of respondents agree they try to limit their daily use of social media applications such as Facebook, Instagram, and TikTok, 15.1% agree they find it difficult to do so (item 21). According to item 22, 61.8% of respondents indicated that time management applications are a huge help in reducing their dependence on social media. Furthermore, according to item 23, 70.5% of respondents agree that digital detox is important and the proper way to maintain mental health, while 20.8% stated they did not do this regularly. In item 24, the results provide evidence of the perception: 63.8% of respondents agree that education about the negative impacts of social media use could help people be far more mindful in their use of this technology, with 29% "strongly agree". Finally, the item 25 data shows that 66.3% of respondents agree that turning off notification features is best for avoiding a source of constant distraction on digital devices, while 20.9% mentioned they "strongly agree". Overall, the data demonstrates strong awareness among respondents of the need to manage social media use to help users and society achieve a balance between its benefits and negative impacts. The analysis of items 21–25 indicates strong agreement regarding students' awareness and management of smartphone and social media use. This suggests that most students recognize the negative consequences of excessive screen use and attempt to regulate their behavior through strategies such as limiting screen time, using time management applications, and practicing digital detox. However, the findings also reveal a gap between awareness and consistent behavior, indicating that self-regulation remains a key challenge. From a theoretical perspective, this discrepancy can be explained by self-regulation theory and limitations in cognitive control. Although students understand the risks associated with excessive smartphone use, repeated exposure to notifications, instant feedback, and continuous content reinforces habitual behavior that is difficult to control. This aligns with previous findings that smartphone addiction is closely related to failures in self-regulation and increased emotional stress ([Al-Abyadh et al., 2024](#)). As a result, intentions to reduce usage are often not sustained over time. The findings also highlight an integrated relationship between time management, attention control, and academic outcomes. Students who manage their smartphone use effectively tend to demonstrate better focus and productivity, whereas those with poor regulation are more likely to engage in multitasking and frequent attention switching. This supports the switch-load theory, which posits that repeated task-switching reduces cognitive efficiency and negatively affects academic performance ([Fernandez, 2018](#); [Joshi et al., 2023](#)). These results are consistent with prior research showing that excessive smartphone use is associated with decreased motivation, increased stress, and lower academic achievement ([Rodríguez et al., 2020](#)). At the same time, this study extends previous findings by emphasizing that awareness alone is insufficient to change behavior and highlighting the importance of practical regulatory strategies for managing digital habits. Furthermore, smartphones play a dual role in the academic context. On the one hand, they provide access to information and support learning activities; on the other hand, uncontrolled use leads to distraction, reduced engagement, and potential learning loss. This duality has also been highlighted in previous studies, which show that smartphone use can both support and hinder academic performance depending on usage patterns ([Lin et al., 2025](#)). In conclusion, the findings confirm that effective management of smartphone use is a critical factor in determining its impact on students' academic performance and well-being. The results imply that educational interventions should not only focus on increasing awareness but also on strengthening students' self-regulation skills, including time management, attention control, and digital discipline. By doing so, smartphone use can be optimized as a supportive learning tool rather than a source of distraction. Items 26-30 were used to see respondents' personal perspectives on social media, as shown in [Table 6](#).

Table 6. Personal Perception of Social Media

Item	Question	Category (%)				
		SA	A	N	D	SD
26	Social media is a primary source of entertainment and important information in daily life for most users, including myself.	27.8	65.2	4.4	2.8	0.4
27	I feel that certain content (entertainment vs. news) influences the duration of social media use differently.	16.6	64.6	12	7.6	0.6
28	When stressed, I usually seek entertainment through short YouTube videos rather than engaging in other activities.	19.5	55.7	11.9	13.8	1.5
29	I believe that online interactions, such as comments/messages, provide better emotional support than face-to-face interactions.	19.2	65	12.9	5.3	0.4
30	I am confident that limiting social media usage will greatly impact my quality of life.	42.4	50.7	6.1	3.3	0.4

The laughter in item 26 represents a previous statement regarding the approximately 3 out of 10 who agree/disagree with the view of social media. Table 6 indicates that 27.8% strongly agree that social media is a source of entertainment with important information for most users' everyday use, and 65.2% agree with this for themselves (item 26). Further, item 27 shows that 16.6% of respondents report that entertainment and news content determine how long they use social media, and 64.6% agree that the two types of content have different impressions. Moreover, in item 28, 19.5% say that during times of stress they would generally seek entertainment platforms featuring short videos on YouTube, and 55.7% agree that seeking entertainment is preferred over other forms of engagement. In item 29, 19.2% comment that online interaction provides more emotional support than face-to-face interaction, and 65% agree. Finally, in item 30, the data indicate that 42.4% of respondents say they are very confident that limiting their social media use will greatly impact their quality of life, and 50.7% agree with this notion. All things considered, this data shows that respondents have a nuanced view of social media, appreciating both its advantages as a source of entertainment and information as well as the significance of time management and constructive relationships.

The analysis of items 26–30 indicates a high level of agreement regarding students' personal perceptions of social media, suggesting that it plays a central role as both a source of information and entertainment in their daily lives. This finding reflects how smartphones have become embedded in students' cognitive and emotional routines, influencing not only how they access information but also how they cope with stress and maintain social connections. From a theoretical perspective, this phenomenon can be explained through uses and gratifications theory and coping mechanisms. Students actively use social media to fulfill specific needs, such as entertainment, information seeking, and emotional support. The preference for short-form content, especially during stressful situations, suggests that social media serves as an immediate coping strategy, offering quick distraction and psychological relief. However, this behavior may reinforce dependency, as repeated reliance on digital content reduces the development of more adaptive coping strategies. The findings also reveal an integrated relationship between content consumption, emotional response, and behavioral outcomes. Different types of content influence the duration and intensity of use, while emotional states such as stress or loneliness drive students to engage more frequently with social media. This interaction creates a feedback loop in which emotional needs increase usage, and prolonged usage further shapes emotional experiences. At the same time, the perception that limiting social media use can improve quality of life indicates a level of critical awareness among students regarding the need for balance. These results are consistent with previous research. Atas and Çelik (2019) found that students primarily use smartphones for communication and social media, highlighting their central role in daily activities.

Furthermore, self-determination theory suggests that intrinsic motivation and self-regulation play a protective role in managing technology use and maintaining cognitive engagement (Schladitz et al., 2024). The present study extends these findings by demonstrating how personal perceptions are directly linked to usage behavior, emotional coping, and awareness of potential risks. Importantly, the findings indicate that students simultaneously recognize both the benefits and drawbacks of social media. While it provides entertainment, information, and emotional support, excessive use is also perceived as detrimental to mental well-being and overall quality of life. This dual perception highlights the complexity of smartphone use, in which positive and negative outcomes coexist depending on how the technology is used. In conclusion, the results confirm that a dynamic interaction between cognitive needs, emotional states, and behavioral patterns shapes students' perceptions of social media. The study implies that effective interventions should not only focus on reducing usage but also on promoting healthier digital engagement, such as developing adaptive coping strategies, strengthening intrinsic motivation, and encouraging balanced use of technology. By doing so, smartphones can be utilized more constructively to support students' well-being and academic development in the digital era.

CONCLUSION

The findings of this study confirm that smartphone usage has a significant and multidimensional impact on students, aligning with the research objective of examining its effects on psychological, emotional, physical, social, and academic aspects. The results show that high-intensity social media use is consistently associated with decreased concentration, emotional disturbances, physical health problems, reduced face-to-face interaction, and lower academic productivity. At the same time, students demonstrate awareness of these impacts and attempt to manage their usage, although self-regulation remains inconsistent. This study contributes to the existing literature by providing a more comprehensive and integrated analysis of smartphone use, combining multiple dimensions—psychological, physical, social, and academic—within a single framework. Unlike previous studies that often focus on isolated variables, this research highlights the interconnected nature of these factors, showing how behavioral patterns, emotional responses, and academic outcomes influence one another. The practical implications of this study are significant. For students, it emphasizes the importance of developing self-regulation skills, such as time management and controlled smartphone use. For lecturers, the findings suggest the need to design learning strategies that minimize digital distractions while integrating technology effectively. At the institutional level, universities are encouraged to implement policies and programs that promote digital literacy, balanced technology use, and student well-being. However, this study has several limitations. The use of a non-probability voluntary sampling method may introduce sampling bias and limit the generalizability of the findings. Reliance on self-reported data may lead to response bias, as participants may underreport or overreport their smartphone use. Future research is recommended to employ more robust sampling techniques and incorporate mixed-method approaches to gain deeper insights into students' experiences. Further studies could also explore intervention-based strategies, such as digital well-being programs or classroom policies, to examine their effectiveness in reducing the negative impacts of smartphone use while enhancing its benefits for learning. Overall, this study confirms that while smartphones offer substantial benefits, their excessive and uncontrolled use poses significant risks, underscoring the need for balanced, regulated use to support students' academic success and overall well-being.

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