

**LEVEL OF INTERNET AND SOCIAL MEDIA DEPENDENCE  
AMONG SENIOR HIGH SCHOOL STUDENTS:  
BASIS FOR AN IEC MATERIAL**

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**ABSTRACT**

As adolescents increasingly immerse themselves in digital environments, concerns have emerged about the adverse consequences of excessive internet and social media use. This study investigated the extent of internet and social media dependence among 276 students in Grades 11 and 12 across the academic strands STEM, ABM, and HUMSS at Saint Mary's University. A descriptive-comparative quantitative design was used. Two validated instruments were used: the Internet Addiction Test (IAT) by Kimberly Young and the Social Media Addiction Scale by Sahin. Quantitative data were analyzed using descriptive statistics, t-test, and ANOVA to determine the differences across profile variables. The overall level of internet addiction was classified as moderate, especially in terms of time management and withdrawal/social issues. The level of social media addiction was assessed as average, with virtual tolerance scoring highest. No significant differences were found in addiction levels based on sex or grade level, except for internet addiction being higher in Grade 11. ABM strand students and those from higher socioeconomic backgrounds had significantly higher levels of internet addiction. Results revealed high daily usage (6–14 hours), physical symptoms (back pain, sleep disturbances), emotional effects (comparison, anxiety), and mixed parental reactions. The study confirms that digital dependence is prevalent and growing among senior high school students. Internet addiction is more pressing than social media addiction, though both show behavioral markers of compulsive use. The patterns observed reflect broader global trends and highlight the need for localized interventions. The development of a TikTok video material aimed to address this through awareness, behavior modification strategies, and accessible guidance for students, teachers, and families. The findings also underscore the role of nursing education in promoting digital health as part of holistic adolescent care.

*Keywords:* Internet and social media dependence, reality substitute, time management, virtual communication, virtual information, virtual problem, virtual tolerance, withdrawal, and social problems

**INTRODUCTION**

In today's digital era, the pervasive use of the internet and social media has deeply influenced the lives of adolescents, especially senior high school students. Their reliance on digital platforms for communication, entertainment, and academic activities has raised concerns about problematic behaviors. This issue has become increasingly relevant as excessive screen time and digital engagement are now associated with a range of psychological, academic, and behavioral consequences. Terms such as internet dependence, compulsive internet use, and social media addiction have emerged in literature to describe this growing concern (Alimoradi et al., 2019).

In this digital society, senior high school students are becoming increasingly immersed in the internet and social media, leading to patterns of dependence that affect various aspects of their lives. According to the Global Connectivity Report 2022 (2022), teenagers are the fastest, most skillful, and knowledgeable in adapting to the internet or technological era compared to other age groups. Many teenagers use the internet as a coping mechanism, making them the most vulnerable group to internet dependence (Maftai, 2023).

This pattern of behavior coincides with the rising global usage of the internet. In January 2024, approximately 5.35 billion people—about 66.2% of the world's population—were active internet users. In addition, 5.04 billion people, or 62.3% of the global population, used social media platforms (Petrosyan, 2024). Not only that, Asia is the region with the highest number of users, with over 2.93 billion people online. Specifically, in the Philippines, internet usage continues to grow significantly. As of January 2023, there were 85.16 million internet users in the country, with a penetration rate of 73.1%—an increase of 10 million users or 13.4% from the previous year (Kemp, 2023). These figures clearly demonstrate that internet use has become deeply embedded in the daily lives of adolescents and adults alike.

However, excessive internet use is not without consequences. It is increasingly being viewed as a public health concern due to its potential to create unhealthy behavioral patterns. Furthermore, scholars have coined several terms to describe this issue, such as internet dependence disorder, compulsive internet use, pathological internet use, and internet addictive behavior—each of which emphasizes the compulsive and often uncontrollable nature of this condition (Alimoradi et al., 2019). These behaviors are not just personal habits; they often lead to broader academic, psychological, and social issues.

International research has also revealed troubling statistics about the prevalence of internet dependence. In a study conducted in India, Goel (2013) found that 74.5% of adolescent users were categorized as moderate or average users, while 0.7% were considered dependent based on the Internet Addiction Test (IAT) by Kimberly Young. In the same way, Karabulut and Aktas (2019), using the same diagnostic tool, assessed students at Sanko University in Turkey and found that 7.9% were likely to be internet-dependent. These findings suggest a consistent trend across different cultures and regions, indicating that internet dependence among youth is not confined to one country or context. In the Philippines, where social media usage is among the highest globally, adolescents who spend more than 4 hours online daily are twice as likely to develop signs of internet dependence (Chua, 2021; Zewde et al., 2022). These findings highlight the urgent need to understand and address the growing trend of internet dependence among adolescents, particularly in settings where digital engagement is exceptionally high.

The study examined the relationship between senior high school students' profiles—sex, socioeconomic status, academic strand, grade level, and types of social media applications used—and their levels of internet and social media dependence. Internet dependence was measured using the Internet Addiction Test by Young, covering time management and performance, withdrawal and social problems, reality substitute, and others. Social media dependence was assessed through the Social Media Addiction Scale by Sahin, focusing on virtual tolerance, virtual communication, virtual problems, and virtual information.

## METHODOLOGY

This study employed a quantitative, descriptive-comparative research design. The descriptive part was used to determine the respondents' profiles, including sex, socioeconomic status, academic strand, grade level, types of social media applications used, and levels of internet and social media dependence. The comparative aspect of the design was used to investigate whether significant differences in levels of dependence exist when students are grouped according to these variables.

The research was conducted at Saint Mary's University Senior High School (SMU-SHS) in Bayombong, Nueva Vizcaya. The respondents of the study were 276 students enrolled in Grades 11 and 12 at SMU-SHS for the school year 2024–2025. They were drawn from a total population of 976 using stratified sampling, ensuring proportional representation across the three

academic strands—Science, Technology, Engineering, and Mathematics (STEM); Accountancy, Business, and Management (ABM); and Humanities and Social Sciences (HUMSS). The sample size was computed using Raosoft's calculator at a 5% margin of error and 95% confidence level. With this method, 209 respondents came from STEM, 40 from HUMSS, and 27 from ABM.

To gather the necessary data, a survey questionnaire was utilized, consisting of four main parts. The first part collected respondents' personal information, including sex, socioeconomic status, grade level, and social media platforms used. The second part adopted the Internet Addiction Test (IAT) developed by Kimberly Young (1998), which was modified into a declarative format to suit the target respondents. This test measured internet dependence across four domains: time management and performance, withdrawal and social problems, reality substitute, and other behavioral indicators. The third part contained items from the Social Media Addiction Scale–Student Form by Şahin (2018), comprising 29 items rated on a 5-point Likert scale. It measured four sub-dimensions, namely virtual tolerance, virtual communication, virtual problems, and virtual information. The fourth and final part contained two open-ended questions that allowed students to describe their internet use and its effects in their own words, providing qualitative support to the quantitative findings. To ensure the validity and reliability of the instrument, pilot testing was conducted with 30 senior high school students from Saint Louis College of Solano, yielding Cronbach's Alpha scores of 0.735 and 0.806, indicating acceptable to good internal consistency. The adviser and research panel also conducted validation.

The survey was administered online via Google Forms, as data collection occurred during a school break. The link to the questionnaire, along with instructions, was shared with the advisers via Messenger, and they in turn relayed it to their students. For data analysis, responses in the profile section were tallied and presented as frequency counts and percentages. Scores from the Internet Addiction Test were summed and interpreted using Young's (1998) scale, which categorizes users as normal, mild, moderate, or severe internet dependents. Social media dependence scores were analyzed using mean and standard deviation, and interpreted using Şahin's (2018) descriptors ranging from very low to severe. To determine differences across profile variables, statistical tests were applied: an independent-samples t-test was used for sex and grade level, while a One-Way Analysis of Variance (ANOVA) was employed for academic strand, socioeconomic status, and types of social media applications used.

## RESULTS AND DISCUSSION

The study sought to determine the extent of internet and social media dependence among 276 senior high school students at Saint Mary's University. The respondents were mostly female (71.7%) and nearly evenly distributed between Grade 11 (49.3%) and Grade 12 (50.7%). A large majority (75.7%) were enrolled in the STEM strand, while only 14.5% came from HUMSS and 9.8% from ABM. In terms of socioeconomic background, most students came from families with moderate financial means: half reported having some savings but no investments, and 46.4% said their income was just enough for daily needs. Very few indicated financial sufficiency or hardship. These figures mirror the economic realities of many Filipino households, where financial security is limited to a minority (Albert et al., 2018).

Digital engagement was nearly universal. Almost all students used Messenger and YouTube (99.64%), while 78.62% used Facebook, 65.58% used TikTok, and 60.14% accessed Instagram. Other platforms, such as Discord, Snapchat, Threads, and Telegram, also had considerable use, showing adolescents' exposure to multiple online spaces. Students typically spend 5–9 hours online during the week and 10–14 hours on weekends. The heaviest use was observed among ABM students, who often relied on digital platforms for communication,

research, and entertainment. The most common reasons for use included relaxation, communication, and following online trends like K-dramas and K-pop. While students acknowledged positive outcomes such as knowledge acquisition and stress relief, they also admitted to problems including sleep disturbances, poor concentration, physical discomfort, and decreased academic productivity. These observations reflect broader findings on Filipino adolescents' intense digital engagement and its double-edged impact (DepEd, 2023; Esteban, 2021).

The results from the Internet Addiction Test revealed a moderate level of internet dependence ( $M=55.55$ ,  $SD=8.58$ ). Across the four factors, time management, performance, withdrawal, and social problems were particularly concerning. Many students admitted to staying online longer than intended, neglecting household chores, and failing to reduce their online time, which affected productivity and academic performance. Withdrawal indicators such as irritability when offline, secrecy about online activities, and preference for virtual over face-to-face interactions were also prevalent. Reality substitute was another area of concern, as many students relied on the internet to escape boredom or stressful situations, often at the expense of sleep. These patterns are consistent with earlier studies suggesting that excessive internet use can lead to compulsive behaviors, escapism, and social withdrawal (Caplan, 2002; Kardefelt-Winther, 2014; Tao et al., 2010). Overall, the findings confirm that while students are not yet at the severe level of addiction, many already display behaviors that compromise their well-being and daily functioning.

Regarding social media dependence, the results revealed an overall average level ( $M=3.28$ ,  $SD=0.37$ ). Among the four domains, virtual tolerance recorded the highest mean score, showing that students increasingly needed prolonged or frequent social media use to feel satisfied. Virtual communication was also high, as many respondents preferred expressing themselves online and sometimes prioritized online friendships over in-person connections. Although the virtual problem scored lower, indicating that interference with family and academics was less pronounced, several students admitted to neglecting homework or experiencing a decline in productivity due to social media use. Finally, virtual information showed that students heavily relied on platforms to stay updated with both personal and academic matters. These findings illustrate that while social media plays a central role in maintaining connections and gaining information, it also fosters patterns of reliance and diminished real-world interaction. This is consistent with previous studies showing that adolescents turn to digital platforms for identity formation, social comparison, and stress coping, but at the cost of communication skills and emotional balance (Boyd, 2014; Bányai et al., 2017; Montag et al., 2019).

Comparative analysis of profile variables showed no significant sex differences in either internet or social media dependence, indicating that both male and female students are equally susceptible to digital reliance. This finding supports research suggesting that dependence is more strongly shaped by psychological and behavioral factors than by gender (Kuss & Griffiths, 2018). Grade level, however, was a differentiating factor: Grade 11 students had significantly higher internet dependence compared to Grade 12 students ( $p=0.011$ ). This difference may be explained by Erikson's psychosocial theory, as Grade 11 students, who are younger and still navigating identity formation, may turn more heavily to online spaces for validation and belonging. Grade 12 students, by contrast, may have already developed greater maturity and self-regulation. Social media dependence did not differ significantly between grade levels, suggesting its widespread appeal across adolescents regardless of age.

Strand and socioeconomic background also influenced dependence levels. ABM strand students showed higher internet dependence than those in STEM or HUMSS, likely due to curricular emphasis on communication, research, and business simulations that require greater

online engagement. Similarly, students from higher-income families reported greater internet dependence, reflecting easier access to devices and internet connectivity, a trend previously identified by Lai and Kwan (2017). In contrast, social media dependence showed no significant differences across income groups, indicating that platforms like Facebook, TikTok, and Messenger remain accessible across all socioeconomic backgrounds, as also noted by the Pew Research Center (2018).

The open-ended responses provided further depth to the findings. Students described daily usage of 6–14 hours, particularly on weekends. Negative consequences included sleep disruption, physical symptoms like eye strain and back pain, anxiety, and difficulties with academic focus. Some admitted to household conflicts arising from prolonged screen time. In contrast, others expressed feeling restless or anxious when disconnected from the internet. Despite these challenges, respondents also emphasized positive uses, such as gaining knowledge, staying socially connected, and relieving stress. Parents were likewise divided: some recognized the educational and social benefits of digital platforms, while others voiced concerns about declining academic performance and health risks. These insights highlight the ambivalence surrounding digital technologies, which serve as both tools for development and sources of potential harm (Twenge et al., 2018; Keles et al., 2020).

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

The results revealed that internet dependence among students had already reached a moderate level, significantly affecting their time management, productivity, and social interactions. Many students reported spending more time online than intended, neglecting responsibilities, and becoming irritable or uneasy when disconnected, reflecting clear signs of behavioral dependency.

Although social media dependence was assessed at an average level, the study revealed particularly concerning indicators under virtual tolerance. It was also found that many students use social media as an escape from reality and tend to prefer virtual interactions over face-to-face relationships. Such behaviors resemble patterns of growing behavioral dependence and align with earlier research highlighting the risks of unregulated digital engagement. Some students confided that endlessly scrolling through TikTok or Instagram helped them cope with stress, loneliness, or academic pressure.

Differences in internet dependence were observed across academic grade levels, strands, and economic status. Grade 11 students in the ABM strand and those from higher-income households showed higher levels of internet dependence. These differences may be linked to factors such as adjustment to senior high school life, curricular demands, and access to technology. Interestingly, no significant differences were observed between male and female students, indicating that internet and social media dependence affect students of both genders.

### Recommendations

To effectively address the growing issue of internet and social media dependence among senior high school students, a collaborative and structured approach involving the school administration, students, and teachers is recommended. For schools, it is essential to establish a supportive environment that prioritizes digital well-being. Schools should also hold regular mental health seminars and digital wellness workshops that focus on managing screen time, dealing with online pressure, and maintaining a healthy balance between online and offline life.

In addition, schools are encouraged to strictly enforce the "No-Cellphone Policy" currently in place, as per DepEd Orders.

Students, on their part, are encouraged to take responsibility for their screen use by practicing time management, recognizing early signs of digital overuse, actively participating in school wellness activities, and also practicing it in their own homes. They should also make space for offline hobbies and social interaction, and seek help when they notice that their internet or social media habits are affecting their mood, sleep, studies, or relationships. Peer-led support groups can be formed to provide students with a space to discuss their digital struggles, with guidance from trained school health staff.

Teachers, as key figures in student development, play a vital role in both modeling and reinforcing healthy digital behavior. Teachers are encouraged to integrate discussions on responsible technology use into their lessons, especially in subjects such as health, values education, and research. Additionally, teachers should be trained to identify early signs of digital dependence, such as frequent fatigue, poor academic performance, or social withdrawal, and refer students to the guidance office or school health personnel for further support. By working together, school leaders, students, and educators can build a learning environment where technology is used purposefully, and student well-being is always a priority. Nursing students are committed to being part of this advocacy and guiding their peers toward a healthier, more mindful digital lifestyle.

Parents and family members play a crucial role in shaping their children's digital habits. It is strongly encouraged that they actively monitor their children's technology use, observing not only the time their children spend online but also the types of content they consume. Families should also foster open communication by encouraging children to talk about their online experiences. This includes addressing concerns about cyberbullying, online peer pressure, or content that may affect their mental health. Studies show that parental involvement in digital discussions reduces the likelihood of internet-related problems and builds children's digital resilience.

Future researchers are encouraged to continue and broaden this line of inquiry, as digital dependence remains a growing and evolving concern in today's technology-driven world. Future studies may benefit from examining psychological correlates such as anxiety, depression, self-esteem, and sleep quality. Including these variables could provide a deeper understanding of the relationship between digital dependence and mental health outcomes, which is highly relevant in adolescent populations. A longitudinal research design can be used to observe changes in internet and social media dependence over time. Digital habits can shift quickly due to changing trends, academic pressure, and personal development. Monitoring these behaviors over a longer period may uncover meaningful patterns in how dependence develops.

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