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A Cross-Sectional Study on Social Media Addiction in Students at the School of Nursing

Fiorela Nicoll Bocanegra Cuadros[1,2*], Carla Beatriz Goñi Maquin[1], Enzo Paolo Gutierrez Vasquez[1], Vania Yulisa Abanto Castro[2], Kennedy Luigui Quispilaya Capcha[3], Telmo Mejía Garcia[2,3]

[1]Nursing School, University of Sciences and Humanities, Los Olivos 15304, Perú
[2]e-Health Research Center, University of Sciences and Humanities, Los Olivos 15304, Perú
[3]Faculty of Health Sciences, University of Sciences and Humanities, Los Olivos 15304, Perú

[*]Corresponding Author's Email: fiobocanegracua@uch.edu.pe

ABSTRACT

Background: The use of various social networks, combined with the consolidated time that internet users spend on these sites, constitutes a global public health problem, given that more than 90% of university students interact with these platforms on a daily basis. **Objectives:** aim of the study is to identify the level of social media addiction among first-semester nursing students at a private university in a metropolitan setting. **Methods:** A quantitative, descriptive and cross-sectional study was conducted with 95 nursing students enrolled in the first academic semester at a private university in the northern area of Lima, Los Olivos, Peru (South America). Data were collected during the first semester of 2025 using a validated digital questionnaire on social media addiction (AMS- addiction to mobile social media). Ethical approval for this study was obtained from the Institutional Ethics Committee. **Results:** The results showed that the level of social media addiction among nursing students was predominantly moderate (34.7%), followed by low and high levels with similar proportions. The dimensions of excessive use and obsession showed balanced patterns across the three levels, while lack of control presented a higher predominance of the low level (53.7%). No significant differences were found according to sex ($p > 0.05$). The Shapiro–Wilk test confirmed a non-normal distribution, justifying the use of non-parametric tests. **Conclusion:** Students exhibit a moderate level of social media addiction, with marked impact in excessive use and obsession, despite retaining some control over their connection time. This phenomenon affects both sexes equally and highlights the need to promote educational interventions aimed at responsible and healthy social media use.

Keywords: Addiction; High-frequency Use; Lack of Control; Obsession; Social Media

INTRODUCTION

Interest in analyzing social media addiction among adolescents has increased notably in recent years, but a significant research gap persists regarding the in-depth examination of its specific causes and consequences within the academic context. Adolescence represents a crucial developmental stage in which young people actively interact with social networks and are continually exposed to digital content (Engel *et al.*, 2023). Individuals between 16 and 24 years old constitute one of the most active user groups: women spend an average of more than three hours per day on these platforms, while men spend nearly three hours daily (Ahmed *et al*., 2024). Social media addiction is conceptualized as a form of behavioral addiction characterized by compulsive and excessive use of digital platforms, resulting in adverse physical and psychosocial health consequences (Sari *et al.*, 2024). When students are unable to effectively control the time they spend on social media, their likelihood of developing addictive behaviors increases, along with the associated negative academic, psychological, and social consequences (Salari *et al.*, 2025).

The Royal Spanish Academy (RAE) defines a "social network" as an online service that allows users to create profiles, form communities, and interact through shared content (Valencia-Ortiz & Garrido, 2019). The widespread use of these platforms has become a major global public health problem. More than 90% of university students access social media daily in a synchronous manner, a pattern that increasingly influences

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various dimensions of their lives, particularly their academic performance, and contributes to a global user base exceeding two billion people (Domínguez-Fernández *et al*., 2020). Social media addiction (SMA), also known as problematic social media use, is recognized as an impulse control disorder characterized by compulsive interaction with digital platforms. This condition leads to emotional and behavioral disturbances, as well as deterioration of psychological, physical, and social well-being. Like other behavioral addictions, SMA involves a significant loss of control, a persistent preoccupation with social media activities, and continued use despite awareness of its negative consequences (Alshowkan & Shdaifat, 2025; Jameel *et al*., 2025).

According to a report by the United Nations Educational, Scientific and Cultural Organization (UNESCO), 32% of young people worldwide experience negative body image and diminished self-esteem because of social media use. These data underscore the growing influence of social networks and their effects on young people's mental health and well-being. The report also highlights the highly addictive design of TikTok, which may interfere with students' academic performance and extracurricular participation (Copaja-Corzo *et al*., 2022). Similarly, the United Nations (UN) indicates that nearly 2.5 billion people use Facebook, 2 billion use YouTube, and 1.6 billion use WhatsApp. In 2023, the UN proposed a comprehensive strategy to address the negative consequences of these platforms, including issues related to hate speech and manipulation on social networks, which pose serious threats to social cohesion and global stability. These figures reflect the enormous influence of social media and reinforce the need for coordinated actions to mitigate its harmful effects (Delgado, 2023).

A study by the United Nations Children's Fund (UNICEF) conducted in Spain reveals that between 65% and 85% of adolescents use social media indiscriminately, and approximately 40% are unaware of the need for safe and restrictive good-use practices. Moreover, and with concerning standards, 16.9% of adolescents lack any form of parental control over their access to internet pages (Collantes & Tobar, 2023). In Peru, approximately 80% of adolescents and young adults use social media daily, which confirms the high interaction frequency with platforms such as WhatsApp, Facebook, TikTok, and YouTube. This high level of exposure has been associated with various mental health problems in this age group (Condori *et al*., 2023). Globally, people spend an average of approximately two hours per day on social networks, with platforms such as Facebook, YouTube, WhatsApp, Instagram, and TikTok being the most widely used. In countries such as Pakistan, many medical students access the internet primarily to interact with social media. In Saudi Arabia, social media addiction has been reported in 55.2% of medical students (Alshanqiti *et al*., 2023). Social media represents one of the most frequent activities among adolescents, as 97% of young people aged 13 to 17 use at least one platform, particularly YouTube (85%), Instagram (72%), and Snapchat (69%) (Durmuş *et al*., 2025).

The Ministry of Education (MINEDU), in collaboration with various health organizations, has implemented campaigns to promote responsible social media use among students. These initiatives include educational programs that incorporate guidelines for appropriate platform use within school curricula, with the aim of helping students manage their time and resources more effectively. These initiatives not only support academic development but also improve students' personal and social well-being (Navarro *et al*., 2022). In the Peruvian university context, Chavez *et al*. (2025) report that 92.7% of young people under 18 use the internet primarily for recreational purposes. This pattern often leads students to prioritize non-academic activities, thus delaying their educational responsibilities. The present study seeks to contribute to the understanding of the potentially harmful impact of social media use and examine its consequences for the mental health of university students enrolled in a demanding academic program. The findings will not only expand current knowledge but also help identify key strategies for prevention and appropriate interaction with social networks among university students. Social media addiction in this population may negatively affect academic performance, especially in health-related disciplines such as nursing, which require physical and mental well-being. Therefore, this study aims to determine the level of social media addiction among first-semester nursing students at a private university in a metropolitan environment.

Research Question

In line with this objective, the main research question guiding the study is, "What is the level of social media addiction among first-semester nursing students at a private university?"

METHODOLOGY

Research Design

This study adopted a quantitative approach, as it deals with phenomena that can be measured using statistical techniques for the analysis of collected data. It employed a descriptive design, whereby the researcher focuses on measuring the presence, characteristics, or distribution of a phenomenon within a population at a specific moment in time. This type of design is commonly used in studies describing the existence of an environmental factor, a particular disease, or mortality rates in a given population, among others. A cross-sectional investigation involves observing a group of individuals or collecting certain information at a single point in time or within a short period (Sánchez, 2019; de Cabo *et al*., 2008).

Population

The study population consisted of nursing students enrolled in the first academic semester of 2025 at a private university located in Lima, Peru.

Sample

The sample was census-based and comprised 95 students, given that all individuals in the available population during the study period were included. A census sample incorporates every element of the target population, allowing full data collection without sample selection procedures (Tyrer & Heyman, 2016).

Sampling Method

A non-probability convenience sampling method was used, selected on the basis of direct access to participants and the established inclusion and exclusion criteria. This form of sampling is appropriate when participant selection is based on availability and ease of access, particularly in small or accessible populations (Arrogante, 2021).

Although the sample was referred to as census-based, meaning all students in the available population were invited to participate, the sampling method used was non-probability convenience sampling. This method was employed due to the availability and accessibility of students during the data collection period.

Validity Procedures

The main variable was social media addiction, measured using the Social Media Addiction Survey (ARS), developed by Escurra and Salas (2014) and later adapted by Dill and del Rosario (2020). The instrument demonstrated a reliability of 0.85 according to the Kaiser-Meyer-Olkin scale and a Cronbach's alpha of 0.90. The questionnaire consists of 24 items measured on a five-point Likert scale (0 = never, 1 = almost never, 2 = sometimes, 3 = almost always, 4 = always). Total scores range from 24 to 120, with higher scores indicating greater levels of social media addiction.

Inclusion and Exclusion Criteria

Inclusion criteria comprised students who were regularly enrolled in the first semester of the nursing programme, agreed to participate by signing informed consent, were aged over 18 years, and used at least one social media platform. Students of both sexes and from morning and evening study schedules were included.

Exclusion criteria included students not enrolled in the first semester, belonging to other academic programs, being under 18 years of age, or not signing the informed consent. Additionally, students who did not complete the full Google Forms questionnaire were excluded.

Data Collection Tools

Data was collected during the first semester of 2025. The questionnaire was administered using Google Forms and distributed to students via institutional e-mail, QR code and WhatsApp. The first section of the instrument contained an informed consent form, which participants were required to acknowledge before completing the survey.

Study Setting

The study was conducted among first-semester nursing students, as previous literature indicates that social

media use tends to increase during this stage of academic training. Participants belonged to the School of Nursing at a private university in Peru, located in an urban area of Lima. Most students resided in districts with low to middle socioeconomic status. The study was undertaken by a research center affiliated with the Faculty of Health Sciences at the same institution, where data collection took place.

Data Analysis Software

Data was coded in Microsoft Excel and analyzed using SPSS Statistics version 27. Descriptive analyses, including frequencies and percentages, were carried out to summarize the findings. The statistical analysis began with descriptive exploration using absolute frequencies, percentages, means and standard deviations, according to the type of variable. Normality of data distribution was assessed using the Shapiro–Wilk test, the results of which indicated that the study variables did not follow a normal distribution ($p < 0.05$). A 95% confidence interval was used. The Shapiro–Wilk test is one of the most widely used and reliable tests to evaluate normality; introduced in 1965 by Shapiro and Wilk, it is considered one of the most robust procedures for normality testing. It is particularly appropriate for small samples, although it can also be applied to larger samples (over 50 participants). Its result enables determination of whether data follow a normal distribution and whether transformations are required before applying additional statistical tests (Sánchez-Solis *et al*., 2024). Consequently, non-parametric statistical tests were used. The Mann–Whitney U test was employed to compare dimensions of social media addiction according to sex. Statistical power was also calculated to estimate the ability to detect differences between groups. All analyses were performed using a 5% significance level ($\alpha = 0.05$).

Ethical Consideration

The researchers obtained ethical clearance from the Institutional Ethics Committee from the University of Sciences and Humanities, Los Olivos, Peru, with reference number CEI RECORD No. 156, Code 191-24 on 29th November 2024.

The study complied with the fundamental ethical principles: autonomy was ensured through informed consent; beneficence, by promoting participants' well-being and minimizing risks; non-maleficence, through the anonymous collection of data; and justice, by guaranteeing equal and non-discriminatory treatment for all participants (Ferro *et al*., 2009).

RESULTS

Winsorization was applied to the dataset to address the presence of extreme values (outliers) that could distort the descriptive statistics and affect the stability of the non-parametric tests used. This technique was chosen over data deletion to retain the full dataset and ensure a more stable estimation of central tendencies.

In this study, upon initiating the database processing, extreme values of dispersion were detected in the analysis; therefore, Winsorization was performed to stabilize the central tendencies (Table 1). This is reflected in the significant decrease in the standard deviation, the minimum and maximum values, and the range. Symmetry was also observed in the data distribution (Figure 1). Furthermore, robust measures such as Trimmed and Median Absolute Deviation (MAD) remained stable, demonstrating that the main changes occurred only in the outliers.

Table 1: Data Processing

	Original Data				Winsorised Data			
Variable	**Obsession**	**Lack of Control**	**High-frequency Use**	**Addiction**	**Obsession**	**Lack of Control**	**High-frequency Use**	**Addiction**
Mean	14.24	9.21	12.65	36.11	14.17	9.21	12.63	36.01
SD	4.28	2.8	3.74	9.82	3.8	2.1	2.5	7.4
Median	15	9	13	37	15	9	13	37
Trimmed	14.71	9.27	12.87	36.92	14.71	9.27	12.87	36.87
MAD	2.97	1.48	2.97	4.45	2.97	1.48	2.97	4.45
Minimum	2	0	0	4	4.7	4.7	6.7	16.1
Maximum	29	20	29	78	19	13	16	48
Range	27	20	29	74	14.3	8.3	9.3	31.9
Skewness	-0.75	-0.03	-0.07	-0.37	-1.25	-0.32	-0.78	-1.16
Kurtosis	2.01	3.24	5.26	4.58	0.99	-0.32	0.05	1.33
SE	0.44	0.29	0.38	1.01	0.39	0.22	0.26	0.76

SD=Standard Deviation; MAD=Median Absolute Deviation; SE=Standard Error

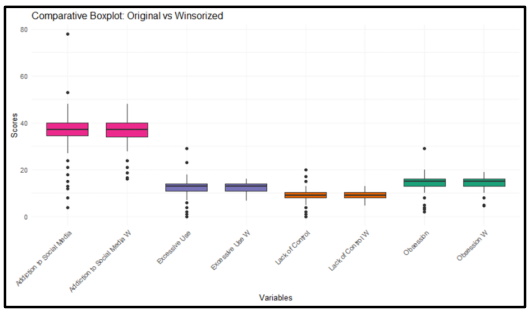

Figure 1: Comparative Boxplot: Original vs. Winsorised

Figure 1 illustrates the winsorization of the data, resulting in more stable and symmetric distributions without substantially altering the informational content of the variables.

In this study, a total of 95 first-cycle nursing students from a private university in northern Lima agreed to participate in the research and completed the questionnaire. The study reveals a predominance of female students, accounting for 68.4%, compared with 31.6% male students (Table 2). The majority of students fall within the younger age ranges, specifically between 18 and 21 years and between 22 and 25 years, representing 44.2% and 48.4%, respectively.

Table 2: General Information of the Nursing Students

Variable		Frequency (n)	Percentage (%)
Sex	Male	30	31.6
	Female	65	68.4
Age range	18 to 21	42	44.2
	22 to 25	46	48.4
	26 to 29	5	5.3
	30 years and over	2	2.f1
Total		**95**	**100**

In Table 3, it can be observed that the levels of social media addiction show similar percentages across the low, medium, and high categories, with 33.7%, 34.7%, and 31.6%, respectively. In contrast, in the "lack of control" dimension, a predominance of the low level is evident at 53.7%, followed by the high level at 25.3% and the medium level at 21%. Likewise, the "excessive use" and "obsession" dimensions display similar values across the three levels.

Table 3: Level of Social Media Addiction among Nursing Students

Variable	Low (n / %)	Medium (n / %)	High (n / %)
Addiction	32 (33.7%)	33 (34.7%)	30 (31.6%)
Lack of control	51 (53.7%)	20 (21.0%)	24 (25.3%)
High-frequency Use	39 (41.0%)	34 (35.8%)	22 (23.2%)
Obsession	38 (40.0%)	35 (36.8%)	22 (23.2%)

Likewise, the results of this research showed *p*-values lower than 0.05 when calculating the normality test, indicating that none of the variables exhibited a normal distribution (Table 4). Based on these analyses, nonparametric tests were applied.

Table 4: Shapiro–Wilk Normality Test for Study Variables

Variable	Shapiro-Wilk	Frequency *(n)*	*p*-value	Interval (95%) for Skewness	Effect Size (Cohen's d)
Obsession	0.845	95	1.54×10^{-8}	[-0.75, -0.63]	0.38
Lack of Control	0.953	95	0.0019	[-0.32, 0.05]	0.41
High-frequency Use	0.915	95	1.28×10^{-05}	[-0.68, -0.42]	0.44
Addiction	0.8746	95	1.93×10^{-07}	[-0.70, -0.49]	0.39

Note: The Shapiro-Wilk test was conducted with n = 95 participants. Confidence intervals for skewness provide an additional measure of the distribution's asymmetry. Effect size (Cohen's d) is reported to assess the magnitude of differences from normality. The results indicate non-normal distributions ($p < 0.05$) for all variables, justifying the use of non-parametric tests.

According to the results shown in Table 5, no significant differences were identified between the groups, as the significance values for all variables were greater than 0.05 ($p > 0.05$). This finding is further supported by the statistical power levels, which ranged from 0.10 to 0.27, indicating a limited ability to detect real differences if they existed. Overall, these results suggest that the levels of obsession, lack of control, high-frequency use, and potential addiction to social media are comparable between males and females; however, these behaviors appear to manifest indistinctly in both sexes.

Table 5: Comparison of Variables According to Sex, Based on the Mann Whitney U test

Variable	U-Statistic	*p*-value	Power
Obsession	1045.5	0.5719	0.10
Lack of control	1091	0.3484	0.18
High-frequency Use	1048	0.5578	0.10
Addiction	1127	0.2236	0.27

However, it is important to note that the low statistical power reduces the reliability of these findings, as the absence of significant differences could be due to an insufficient sample size rather than true equivalence between the groups. Therefore, the results should be interpreted with caution, and it is recommended that future studies use larger samples to confirm these patterns.

DISCUSSION

The results indicate that the overall level of social media addiction presents a balanced distribution across the low, medium, and high levels, indicating that problematic use is similarly widespread among students. However, the dimensional analysis reveals more specific patterns: lack of control shows a predominance of the low level (53.7%), followed by the high level (25.3%), suggesting that although students frequently use social media, a considerable proportion still maintains some degree of control over their usage. In contrast, the dimensions of excessive use and obsession present similar percentages across the three levels, indicating that students tend to engage in compulsive behaviors and spend more time than planned on social media, even when their perceived level of control is moderate or high. These findings indicate that addiction does not manifest uniformly but rather is expressed more intensely in the dimensions associated with compulsive use and the persistent preoccupation with social media. The findings suggest a moderate level of social media addiction, with significant impacts in excessive use and obsession. Further research should focus on behavioral interventions rather than neurological mechanisms, as these are not directly relevant to the current study. International studies support these results: in Iran, 82.39% of students presented some degree of addiction, while in Malaysia, 95% used social media for more than four hours per day (Aslan & Polat, 2024).

These findings align with previous studies showing that excessive use affects sleep quality (Bozzola *et al*., 2022), increases anxiety (De Bérail *et al*., 2019), and deteriorates concentration and academic performance (Aslan & Polat, 2024; Takieddin *et al*., 2022). Continuous exposure to idealized online content encourages negative self-comparisons and feelings of dissatisfaction (Gopakumar *et al*., 2025). These results suggest that university students lack adequate time-management practices to maintain effective academic habits. The results of the present study partially coincide with those reported by Escurra and Salas (2014), who found that the dimensions related to excessive use and obsession tend to show higher levels of impairment among university students, as these areas reflect early patterns of emotional dependence and compulsive behavior. In line with their findings, our sample exhibited balanced percentages in these two dimensions, reinforcing the notion that social media addiction initially manifests through repetitive behaviors, overuse, and persistent thoughts about digital activity.

However, unlike the referenced study, the lack of control dimension in our research showed a predominance of the low level, suggesting that these students retain a certain degree of self-regulation, possibly influenced by academic demands or the training-related workload inherent to nursing studies. This comparison underscores the need to analyze the dimensions separately, as not all develop with the same intensity nor represent the same level of risk in the early stages of problematic use.

The results address the research question by showing that the level of social media addiction among

nursing students is predominantly moderate, with a relatively balanced distribution across the low (33.7%), moderate (34.7%), and high (31.6%) levels. This pattern indicates that, although most students do not present severe addiction, there is problematic use that affects various areas of academic and emotional functioning. According to Escurra and Salas (2014), a moderate level implies a partial loss of control over connection time, frequent interference with academic responsibilities, the presence of irritability and anxiety when access to platforms is not possible, and compulsive use associated with temporary emotional relief. These patterns are consistent with international studies indicating that young adults exhibit greater vulnerability due to neuropsychological and contextual factors (Ahmed *et al*., 2024; Zhu *et al*., 2023). On the other hand, the research conducted by Joseph's group (2025), which reports negative patterns in personal relationships in 13% of participants and addiction tendencies of 11.3% associated with three hours of daily use of social media, has served as a solid and consistent reference supporting our study, particularly regarding the lack of control observed in 53.7% of students, which has likely contributed to certain interpersonal conflicts. In parallel, problematic manifestations of chronic and recurrent personal social anxiety among social media users have been documented in a study conducted in the city of Kolkata, demonstrating dependence and significant associations with anxiety and depression among medical students; at the same time, an overload of multiple messages across electronic communication channels has been linked to psychological distress and anxiety (Mukhopadhyay *et al*., 2018; Chen & Lee, 2013). The moderate level of social media addiction identified in this study (34.7%) may be supported by a more recurrent association with personalized anxiety, as shown in the findings of Lai *et al*. (2023), who reported a tendency towards higher levels of anxiety, thereby confirming our results in this investigation. Comparative analysis with analogous studies by Azizi *et al*. (2019) indicates that excessive social media usage diminishes study time and adversely impacts academic performance, while also inducing fatigue and sleep disturbances that hinder concentration and learning.

In this way, other studies may be explained at the psychological level based on how the reward system functions in the brain. Thus, regular use of social media may trigger dopamine-driven behaviors that, over time, prolong excessive use and lead individuals to disregard their own personal relationships (Gopakumar *et al*., 2025). In this context, it is well known that social media engages the brain's reward system through the mesolimbic region, releasing the neurotransmitter dopamine following exposure to gratifying stimuli. Therefore, this research would suggest that a moderate level of addiction (34.7%) may result in more prolonged use and difficulty in disconnecting, owing to these reward expectations (Mujica *et al*., 2022). Likewise, the cognitive functions of brain regions such as the amygdala, basal ganglia, and prefrontal cortex are negatively affected in addictive behaviors. Functional alterations in these three regions may increase sensitivity to incentives and weaken decision-making, control, actions, emotions, and impulses (Altbäcker *et al*., 2015).

The results presented in Table 5 indicate that there are no statistically significant differences between men and women in levels of obsession, lack of control, excessive use, and social media addiction, given that all *p*-values exceed 0.05. This suggests that addictive behavior towards social media manifests similarly in both sexes within this sample. This comparison was performed using the Mann-Whitney U test; however, the statistical power reported is low across all dimensions (0.10–0.27), which implies a limited capacity to detect real differences if they do exist. Therefore, although the findings point to an absence of sex-based differences, they should be interpreted with caution, considering that the sample size and reduced power may be limiting the identification of significant effects. These results are consistent with those reported by Kuss and Griffiths (2017), who found that gender differences in problematic social media use are minimal or non-significant, particularly among university populations. According to these authors, patterns of compulsive use and the tendency towards over connection depend more on psychological factors such as anxiety, social reinforcement, and emotional regulation than on biological sex. In line with their study, the lack of significant differences in our research suggests that both men and women may be equally vulnerable to the development of addictive behaviors, especially in contexts where social media fulfill academic, communicative, and socio-emotional functions. Nevertheless, the low statistical power observed in our analyses implies that future studies should incorporate larger samples to more robustly confirm potential sex-based differences. Other findings in the literature complement the sex indicator, showing that women tend to engage more frequently in digital social interactions, whereas young adults use social media as their main means of communication (Durmuş *et al.*, 2025; Lee, 2024).

Limitations

This study has several limitations, including the inability to control confounding variables such as socioeconomic status, study habits, and access to technology, which may affect the accuracy of the findings. The cross-sectional design limits the capacity to identify causal relationships or detect temporal variations in digital behavior, whereas non-probabilistic sampling and a constrained data collection period diminish the generalizability of the findings. Furthermore, dependence on self-reported data may have induced response bias, thereby compromising the accuracy of the reported social media usage.

CONCLUSION

This study shows that most students are only mildly or moderately addicted to social media, which can lead to cognitive, emotional, and behavioral problems. Even though these levels didn't indicate severe addiction, the patterns of excessive use, emotional dependence, and performance impairment point to compulsive behaviors. On the other hand, lower scores in use regulation and time management mean that these areas are less likely to be a problem. The study's limitations encompass the lack of confounding variables, including socioeconomic status, personality traits, and study habits, which may affect social media usage patterns. These omissions restrict the generalizability and causal interpretation of the findings. Subsequent research ought to integrate these variables and investigate the enduring effects of social media utilization, emphasizing preventive measures and educational approaches to foster healthy digital practices.

Future studies should incorporate longitudinal follow-up to examine the long-term effects of social media addiction on academic performance and mental health. It is also recommended to include broader sociodemographic variables, such as age, gender and educational level, to identify groups at particularly high risk. Moreover, the implementation and evaluation of targeted intervention programs, including digital literacy training and behavioral self-regulation strategies, would provide valuable evidence for developing institutional policies aimed at reducing problematic social media use among nursing students.

Conflict of Interest

The authors declare that they have no conflicts of interest related to the conduct, analysis, or publication of this study.

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REFERENCES

Ahmed, O., Walsh, E. I., Dawel, A., Alateeq, K., Oyarce, D. A. E., & Cherbuin, N. (2024). Social media use, mental health, and sleep: A systematic review with meta-analysis. *Journal of Affective Disorders, 367*, 701–712. https://doi.org/10.1016/j.jad.2024.08.193

Alshanqiti, A., Alharbi, O., Ismaeel, D., & Abuanq, L. (2023). Social media use and academic performance among medical students in Medina, Saudi Arabia. *Advances in Medical Education and Practice, 14*, 1401–1412. https://doi.org/10.2147/amep.s434150

Alshowkan, A., & Shdaifat, E. (2025). Fear of missing out, social media addiction, and personality traits among nursing students: A cross-sectional study. *JMIR Nursing, 8*, e71502. https://doi.org/10.2196/71502

Altbäcker, A., Plózer, E., Darnai, G., Perlaki, G., Horváth, R., Orsi, G., Nagy, S. A., Bogner, P., Schwarcz, A., Kovács, N., Komoly, S., Clemens, Z., & Janszky, J. (2015). Problematic internet use is associated with structural alterations in the brain reward system in females. *Brain Imaging and Behavior, 10*(4), 953–959. https://doi.org/10.1007/s11682-015-9454-9

Arrogante, O. (2021). Técnicas de muestreo y cálculo del tamaño muestral: Cómo y cuántos participantes debo seleccionar para mi investigación [Sampling techniques and sample size calculation: How and how many participants should I select for my research?]. *Enfermería Intensiva, 33*(1), 44–47. https://doi.org/10.1016/j.enfi.2021.03.004

Aslan, İ., & Polat, H. (2024). Investigating social media addiction and impact of social media addiction, loneliness, depression, life satisfaction and problem-solving skills on academic self-efficacy and academic success among university students. *Frontiers in Public Health, 12*, 1359–1391. https://doi.org/10.3389/fpubh.2024.1359691

Azizi, S. M., Soroush, A., & Khatony, A. (2019). Relationship between social media addiction and academic performance in Iranian medical sciences students: A cross-sectional study. *BMC Psychology, 7*(1), 28. https://doi.org/10.1186/s40359-019-0305-0

Bozzola, E., Spina, G., Agostiniani, S., Barni, S., Russo, R., Scarpato, E., Di Mauro, A., Di Stefano, A. V., Caruso, C., Corsello, G., & Staiano, A. (2022). Social media use in children and adolescents: A scoping review of potential risks. *International Journal of Environmental Research and Public Health, 19*(16), 9960. https://doi.org/10.3390/ijerph19169960

Chavez, S. E. F., Vera-Calmet, V. G., Aguilar-Armas, H. M., Alva, L. A. Y., Ballesteros, M. A. A., & Silva, C. E. A. (2025). Social media addiction and procrastination in Peruvian university students: Exploring the role of emotional regulation and moderation according to age. *Healthcare, 13*(9), 1072. https://doi.org/10.3390/healthcare13091072

Chen, W., & Lee, K. (2013). Sharing, liking, commenting, and distress? The pathway between Facebook interaction and psychological distress. *Cyberpsychology, Behavior, and Social Networking, 16*(10), 728–734. https://doi.org/10.1089/cyber.2012.0272

Collantes, K. D., & Tobar, A. (2023). Adicción a redes sociales y su relación con la autoestima en estudiantes universitarios [Social media addiction and its relationship with self-esteem in university students]. *LATAM Revista Latinoamericana de Ciencias Sociales y Humanidades, 4*(1), 848–860. https://doi.org/10.56712/latam.v4i1.300

Condori Sinty, T., Quispe Mamani, A., & Quiro Sucapuca, Y. (2023). Adicción a redes sociales y cansancio emocional en estudiantes Universitarios de la carrera de Psicología de una universidad privada en la ciudad de Juliaca, 2022 [Addiction to social networks and emotional exhaustion in university students studying Psychology at a private university in the city of Juliaca, 2022]. *Revista Científica de Ciencias de la Salud, 16*(2), 18–32. https://doi.org/10.17162/rccs.v16i2.1959

Copaja-Corzo, C., Aragón-Ayala, C. J., & Taipe-Rondan, A. (2022). Nomophobia and associated factors in Peruvian medical students. *International Journal of Environmental Research and Public Health, 19*(9), 5006. https://doi.org/10.3390/ijerph19095006

De Bérail, P., Guillon, M., & Bungener, C. (2019). Relationships between YouTube addiction, social anxiety, and parasocial relationships with YouTubers: A moderated mediation model based on a cognitive-behavioural framework. *Computers in Human Behavior, 99*, 190–204. https://doi.org/10.1016/j.chb.2019.05.007

de Cabo, J. V., Díez, E. F., & Verdejo, M. Z. (2008). Modelos de estudios en investigación aplicada: conceptos y criterios para el diseño [Applied research study models: Concepts and criteria for design]. *Medicina y Seguridad del Trabajo, 54*(210), 81–88. https://doi.org/10.4321/S0465-546X2008000100011

Delgado, M. Á. B. (2023). Factores asociados a la adicción a redes sociales en universitarios: una revisión sistemática y metaanálisis [Factors associated with social media addiction in university students: A systematic review and meta-analysis]. *Persona, 26*(1), 11–56. https://doi.org/10.26439/persona2023.n26(1).6189

Dill, E. M., & del Rosario, G. (2023). Uso de las redes sociales y celos en estudiantes de Psicología de una

universidad de Villa El Salvador [Use of social networks and jealousy in Psychology students of a university of Villa El Salvador], [Bachelor's thesis, Universidad Autónoma del Perú]. *Repository of the Universidad Autónoma del Perú*. https://hdl.handle.net/20.500.13067/2317

Domínguez-Fernández, G., Prieto-Jiménez, E., Backhouse, P., & Ismodes, E. (2020). Cybersociety and university sustainability: The challenge of holistic restructuring in universities in Chile, Spain and Peru. *Sustainability, 12*(14), 5722. https://doi.org/10.3390/su12145722

Durmuş, M., Sarman, A., Çiftci, N., & Durmuş, Y. (2025). The mediating role of hopelessness in the relationship between social media addiction and loneliness in adolescents. *Journal of Child and Adolescent Psychiatric Nursing, 38*(2), e70024. https://doi.org/10.1111/jcap.70024

Engel, E., Gell, S., Heiss, R., & Karsay, K. (2023). Social media influencers and adolescent health: A scoping review of the research field. *Social Science & Medicine, 340*, 116387. https://doi.org/10.1016/j.socscimed.2023.116387

Escurra Mayaute, M., & Salas Blas, E. (2014). Construcción y validación del cuestionario de adicción a redes sociales (ARS) [Construction and Validation of the Social Media Addiction Questionnaire]. *Liberabit, 20*(1), 73-91. http://www.scielo.org.pe/pdf/liber/v20n1/a07v20n1.pdf

Ferro, M., Molina Rodríguez, L., & Rodríguez, G. W. A. (2009). La bioetica y sus principios [Bioethics and its principles]. *Acta Odontológica Venezolana, 47*(2), 481–487. https://ve.scielo.org/scielo.php?script=sci_arttext&pid=S0001-63652009000200029

Gopakumar, G., Surathkumaar, H., T. R., V. A., Viswanath, S., & Joseph, J. (2025). Prevalence of social media addiction and its determinants among university students in the Chengalpattu district, Tamil Nadu. *Cureus, 17*(5), e84625. https://doi.org/10.7759/cureus.84625

Jameel, A., Guo, W., Hussain, A., Kanwel, S., & Sahito, N. (2025). Exploring the mediating role of insomnia in the relationship between social media addiction and mental health in university students. *Scientific Reports, 15*(1), 17872. https://doi.org/10.1038/s41598-025-03163-9

Kuss, D. J., & Griffiths, M. D. (2017). Social networking sites and addiction: Ten lessons learned. *International Journal of Environmental Research and Public Health, 14*(3), 1–17, 311. https://doi.org/10.3390/ijerph14030311

Lai, F., Wang, L., Zhang, J., Shan, S., Chen, J., & Tian, L. (2023). Relationship between social media use and social anxiety in university students: Mediating effect of communication skills. *International Journal of Environmental Research and Public Health, 20*(4), 3657. https://doi.org/10.3390/ijerph20043657

Lee, J. P. (2024). Social anxiety and susceptibility to social media addiction in university students: A moderated mediation model of narcissism and gender. *PLoS One, 19*(6), e0304741. https://doi.org/10.1371/journal.pone.0304741

Mujica, A. L., Crowell, C. R., Villano, M. A., & Uddin, K. M. (2022). Addiction by design: Some dimensions and challenges of excessive social media use. *Archives of Medical Research (European Society of Medicine), 10*(2), 1-29. https://doi.org/10.18103/mra.v10i2.2677

Mukhopadhyay, D., Barman, L., & Bandyopadhyay, G. (2018). Use of social networking site and mental disorders among medical students in Kolkata, West Bengal. *Indian Journal of Psychiatry, 60*(3), 340-345. https://doi.org/10.4103/psychiatry.IndianJPsychiatry_210_18

Navarro, M., Espinoza, F., Vejarano, M., Chunga, G., & Cerna, C. (2022). Influence of social networks on the academic effectiveness in mining students in Peru. *Journal of Positive School Psychology, 6*(2), 54–61. https://www.journalppw.com/index.php/jpsp/article/view/1120/

Salari, N., Zarei, H., Rasoulpoor, S., Ghasemi, H., Hosseinian-Far, A., & Mohammadi, M. (2025). The impact of social networking addiction on the academic achievement of university students globally: A meta-analysis. *Public Health in Practice, 9,* 100584. https://doi.org/10.1016/j.puhip.2025.100584

Sánchez Flores, F. A. (2019). Epistemological foundations of qualitative and quantitative research: Consensus and dissent. *Revista Digital de Investigación en Docencia Universitaria, 13*(1), 102–122. https://doi.org/10.19083/ridu.2019.644

Sánchez-Solis, Y., Raqui-Ramirez, C. E., Huaroc-Ponce, E. J., & Huaroc-Ponce, N. M. (2024). Importancia de conocer la normalidad de los datos utilizados en los trabajos de investigación por tesistas [Importance of knowing the normality of data used in research projects by thesis students]. *Revista Docentes 2.0, 17*(2), 404–413. https://doi.org/10.37843/rted.v17i2.554

Sari, E. S., Terzi, H., & Şahin, D. (2024). Social media addiction and cognitive-behavioural physical activity in adolescents: A cross-sectional study. *Public Health Nursing, 42*(1), 61–69. https://doi.org/10.1111/phn.13446

Takieddin, S. Z., Alghamdi, F. S., Fida, H. L., Alghamdi, M. K., Kamfar, R. A., Alsaidlani, R. H., & Khojah, I. M. (2022). Effects of social media on academic performance and self-esteem: A cross-sectional study among medical students. *Journal of Family Medicine and Primary Care, 11*(10), 6221–6226. https://doi.org/10.4103/jfmpc.jfmpc_528_22

Tyrer, S., & Heyman, B. (2016). Sampling in epidemiological research: Issues, hazards, and pitfalls. *BJPsych Bulletin, 40*(2), 57–60. https://doi.org/10.1192/pb.bp.114.050203

Valencia-Ortiz, R., & Garrido, C. C. (2019). Use and abuse of social media by adolescents: A study in Mexico. Pixel-Bit. *Revista de Medios y Educación, 54*, 125–142. https://doi.org/10.12795/pixelbit.2019.i54.01

Zhu, X., Zheng, T., Ding, L., Zhang, X., Li, Z., & Jiang, H. (2023). Exploring associations between social media addiction, related fatigue, fear of missing out, and sleep quality in university students: A cross-sectional study.