

The Relationship between the Intensity of Social Media Use and Eating Behavior among Nursing Students

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Abstract

Introduction: The quick development of social media has become an important aspect of students' lives, including its influence on lifestyle formation and eating behavior patterns. Extensive exposure to visual content, food-related posts, digital advertisements, and online social interactions has the potential to affect tendencies toward uncontrolled eating and emotional eating.

Objective: The purpose of this study is to ascertain how nursing students at the Indonesia university of education, Sumedang Campus, use social media in relation to their eating habits.

Methods: A quantitative method with a cross-sectional design was used, which included 215 respondents selected through probability sampling. Data were collected using the Social Networking Time Use Scale (SONTUS) to measure social media use intensity and the Dutch Eating Behavior Questionnaire (DEBQ) to assess eating behaviors. Data analysis was conducted using the Chi-Square test.

Result: The results indicate a significant relationship between social media use intensity and students' eating behavior ($p\text{-value} < 0.05$). These findings suggest that higher social media use intensity may influence eating patterns, including tendencies toward uncontrolled eating, emotional eating, and eating triggered by digital environmental cues.

Conclusion: This study provides a foundation for developing digital literacy programs and promotive interventions aimed at encouraging healthy eating behaviors among university students.

Keywords: eating behavior, nursing students, social media, usage intensity

Introduction

Social media functions as more than merely a communication channel in the digital era; it is also widely used as a medium for obtaining information, entertainment, and lifestyle references (Sikumbang et al., 2024). According to data from the Ministry of Communication and Informatics (Kominfo), approximately 80% of children and adolescents, or nearly 30 million individuals, use the internet, with digital media serving as the primary means of communication (Kominfo, 2020, as cited in Septiana, 2021). Globally, people actively use at least one social media platform, with Instagram, TikTok, and YouTube being the most popular platforms. A study conducted by Nuramadan et al. (2023) stated that 61% of adolescents experienced smartphone addiction, while 39% were not classified as addicted.

Digital media has increasingly been utilized as an effective tool for health education and behavior modification. Previous studies have demonstrated that health education delivered through audiovisual and digital media can significantly improve individuals' understanding and engagement in healthy behaviours. A study published in *Genius Journal* reported that audiovisual-based health education effectively enhanced participants' knowledge and skills in health-related practices, highlighting the potential of digital media as a strategic medium for health promotion (Herman & Thalib, 2025). This evidence suggests that digital platforms, including social media, hold substantial potential not only as sources of information but also as influential environments that shape health-related behaviours, including eating behaviour among university students. Health education delivered through video-based digital content has been shown to significantly improve health knowledge and awareness. A study in *Genius Journal* found that video-based education effectively increased participants' understanding of health-related screening and preventive behaviours (Tauba et al., 2025). Considering that social media platforms are dominated by short-form video content, such findings indicate that repeated exposure to health or food-related videos may influence students' perceptions, preferences, and eating-related decision-making processes.

The intensity of social media use can be defined as the frequency, duration, and level of concentration demonstrated by an individual when using social media (Larasati & Sunarto, 2020). However, such intensive use raises concerns regarding its impact on health, including individuals' behaviours and daily habits (F. A. Putri et al., 2024). Social media content today is often dominated by portrayals of ideal body aesthetics, extreme dieting, or excessive physical activity, which directly influence students' eating behaviours. Global studies indicate that one in three university students exhibits unhealthy eating patterns triggered by exposure to high-calorie food content on social media (Alhaj et al., 2022).

Psychological factors also play an important role in shaping health-related behaviours among nursing students. A study published in *Genius Journal* reported a significant relationship between coping strategies and stress levels among undergraduate nursing students, indicating that maladaptive coping may contribute to unhealthy behavioral responses (Barkah et al., 2025). In the context of high social media use, students may rely on digital platforms as a coping mechanism for stress, which can indirectly influence eating behaviour, particularly emotional and external eating. This highlights the importance of considering psychological and behavioral factors when examining the relationship between social media use intensity and eating behaviour among nursing students.

Eating behaviour refers to an individual's actions toward food that are influenced by their perceptions and knowledge. This aspect plays an important role in daily life because it is closely related to long-term health conditions. Various health problems and nutritional deficiencies may result from unhealthy eating patterns, such as skipping meals, consuming

low-nutrient foods, and having irregular eating schedules (R. A. Putri et al., 2020). In contrast, healthy eating patterns can help regulate metabolism and prevent disease (Rafkhani & Mulyati, 2025). A study conducted by Intani and Nurdiani (2025) reported that more than half of university students still exhibit picky eating behaviors, which negatively affect optimal nutritional intake.

Eating behavior is classified into three categories: emotional eating, restrained eating, and external eating. The term emotional eating describes a person's propensity to eat in reaction to unpleasant feelings rather than genuine hunger. Deliberate attempts to restrict food intake in order to avoid gaining weight are referred to as restrained eating. Meanwhile, external eating is characterized by eating behavior triggered by external stimuli, such as the appearance, aroma, and taste of food, without consideration of psychological feelings of hunger or satiety (Snoek et al., 2013, as cited in Nurdiani et al., 2023).

A preliminary study was also conducted among nursing students at Universitas Pendidikan Indonesia (UPI), Sumedang Campus, using a questionnaire distributed via Google Forms that contained several questions related to the research topic. The preliminary study involved 15 nursing students and was conducted to assess whether the selected population was appropriate for the research topic. The questionnaire was divided into two sections to distinguish the types of questions: the first section addressed the intensity and patterns of social media use, while the second section focused on eating behavior and dietary patterns. The results showed that 43.8% of respondents reported using four to six hours a day on social media, while 41.7% reported using it for more than 6 hours daily. The most frequently used platforms were TikTok and Instagram. In addition, 73.2% of students reported frequently using social media while eating, 51.2% reported frequently purchasing food after seeing it on social media, and the types of food most commonly purchased after exposure to social media content were snacks (52.1%) and instant or fast food (43.8%). In the second section, 58.3% of respondents reported frequently experiencing symptoms such as stomach discomfort, nausea, or epigastric pain one to two times per month.

Based on previous studies, thus it may be said that most research on social media use has focused only on specific platforms, such as Instagram, or solely on smartphone usage. Some studies have examined similar topics but have not explicitly explained the intensity of social media use, and the samples used generally consisted of university students in a particular city rather than students in health-related fields. Consequently, there is still limited research examining the relationship between the intensity of social media use and eating behavior with a specific focus on nursing students.

Objective

The purpose of this study is to investigate the connection between eating habits and social media usage intensity.

Method

Design and setting

This investigation used a quantitative correlational design within a non-experimental framework, aiming to examine the relationship between the intensity of social media use and eating behavior without any intervention or manipulation of the population or sample. A cross-sectional approach was applied, since information was gathered all at once without repetition across different periods.

Population and sampling

The study's participants included active nursing students in their undergraduate years from the 2022, 2023, and 2024 cohorts in the Nursing Study Program at Universitas Pendidikan Indonesia (UPI), Sumedang Campus, who served as respondents in completing questionnaires on the intensity of social media use and eating behavior. The sample was chosen proportionate stratified random sampling. The requirements for inclusion were: (1) undergraduate nursing students from the 2022, 2023, and 2024 cohorts; (2) active social media users with a minimum usage duration of one hour per day; and (3) willingness to participate as respondents and complete the provided questionnaire instruments. The exclusion criteria included students who were ill or on academic leave, as well as respondents who were unwilling to continue their participation in the study.

Data collection and analysis

Data was gathered using an online questionnaire administered through Google Forms. The Social Networking Time Use Scale (SONTUS) developed by (Olufadi, 2016) was employed to gauge the intensity of social media use, while the Dutch Eating Behavior Questionnaire (DEBQ) developed by (van Strien et al., 1986) was used to assess eating behavior. The questionnaire link was distributed through class group chats via class representatives. The total study population consisted of 466 students, and the final sample that met the inclusion criteria comprised 215 respondents. The questionnaire completion process took place in November 2025. Data collection was conducted online through the questionnaire link. The relationship between variables was examined using JASP and the Chi-square test with a significance level of $\alpha = 0.05$.

Result

Table 1. Respondent Characteristics

Variables	Frequency	Percentage
Gender		
Male	24	11.20
Female	191	88.80
Age		
17-19 Year	97	45.10
20-22 Year	114	53.00
23-25 Year	4	1.90
Generational characteristics		
2022	73	34.00
2023	72	33.50
2024	70	32.50
Social Media Most Frequently Used		
Instagram	136	63.20
Instagram, You Tube, TikTok, Twitter	37	17.20
TikTok	20	9.30
Twitter	7	3.30
You Tube	15	7.00

Variables	Frequency	Percentage
Content Frequently Accessed		
Entertainment	44	20.50
Entertainment, Culinary, and Beauty Content	92	42.80
Beauty Content	10	4.70
Culinary	69	32.00

Table 1 presents the demographic and social media characteristics of the respondents. The gender distribution indicates that the majority of students were female, accounting for 191 respondents or 88.8% of the total sample, while male students comprised only 11.2%. This shows a strong dominance of female respondents in the study.

In terms of age, most respondents were in the 20–22 years age group, with 114 students (53.0%), followed by those aged 17–19 years, totaling 97 students (45.1%). Only a small proportion of respondents were aged 23–25 years, accounting for 1.9% of the sample. This indicates that the respondents were predominantly in the typical undergraduate age range.

Regarding generational characteristics, the distribution of respondents was relatively balanced across cohorts. The largest group came from the 2022 cohort, consisting of 73 students (34.0%), followed closely by the 2023 cohort with 72 students (33.5%) and the 2024 cohort with 70 students (32.5%). This suggests an even representation of students from different entry years.

With respect to social media usage, Instagram was identified as the most frequently used platform, utilized by 63.2% of respondents. A considerable proportion of students (17.2%) reported using multiple platforms, including Instagram, YouTube, TikTok, and Twitter. Other platforms such as TikTok, YouTube, and Twitter were used by smaller percentages of respondents.

Finally, the type of content most frequently accessed by respondents was a combination of entertainment, culinary, and beauty content, accounting for 42.8%. This was followed by culinary content alone (32.0%) and entertainment content (20.5%), while beauty content was accessed by a smaller proportion of respondents (4.7%). These findings indicate that respondents tend to consume diverse and lifestyle-oriented content on social media.

Univariate Analysis

Table 2. Frequency Distribution of Social Media Use Intensity

Social Media Use Intensity	Frequency	Percentage
Low	84	39.00
Moderate	96	44.70
High	35	16.30

Table 3. Frequency Distribution of Eating Behavior

Eating Behavior	Frequency	Percentage
Emotional eating	20	9.30%
External eating	144	67.00%
Restrained eating	51	23.70%

Table 2, indicates that most of Nursing students at Universitas Pendidikan Indonesia from the 2022, 2023, and 2024 cohorts accessed social media at a moderate intensity, totaling

84 out of 215 students (39%). Based on Table 3, the majority of students exhibited external eating behavior, with 144 out of 215 students (67%).

Bivariate Analysis

Table 4. Chi-Square Test of the Relationship Between Social Media Use Intensity and Eating Behavior

Social Media Use Intensity	Eating Behavior			Total	P-Value
	Emotional Eating	External Eating	Restrained Eating		
Low	10	41	33	84	<0,001
Moderate	7	75	14	96	
High	3	28	4	35	

Based on Table 8, after the categories were combined, the analysis showed a significance value of $p < 0.001$. Since this p-value is less than 0.05, it can be inferred that there is a statistically significant relationship between social media use intensity and eating behavior among the respondents.

Discussion

The intensity of social media use is widely believed to influence individuals' eating behavior. The outcomes of the Chi-square analysis presented in Table 4.8 indicate a statistically significant relationship between social media use intensity and eating behavior among 215 students ($\chi^2 = 22.043$; $p < 0.001$). These findings confirm that variations in social media use intensity are associated with differences in eating behavior patterns among respondents.

The frequency distribution revealed that students with low social media use intensity predominantly exhibited *emotional eating* (41 respondents) and *restrained eating* (33 respondents). In the moderate-intensity category, the majority of respondents demonstrated *external eating* behavior (75 respondents). Similarly, in the high-intensity category, *external eating* was the most dominant eating behavior (28 respondents), compared with *emotional eating* (3 respondents) and *restrained eating* (4 respondents). This pattern suggests that higher intensity of social media use is associated with a greater tendency toward externally driven eating behavior. Exposure to visually appealing food content, digital food promotions, and viral food trends may stimulate eating behavior even in the absence of physiological hunger.

The findings of this study are consistent with those reported by Alhaj et al. (2022), who demonstrated that, globally, one in three university students exhibits unhealthy eating patterns triggered by exposure to high-calorie food content on social media. Moreover, these results align with the study by Kim and Oh (2024), which found that exposure to food-related content on digital platforms such as *mukbang*, food vlogs, and visual food content can increase cravings and promote impulsive or *external eating* behaviours. Their research involving adolescents and university students also identified associations between social media use and increased *emotional* and *external eating*, as well as changes in food consumption preferences following exposure to food content on platforms such as YouTube, Instagram, and short-video platforms.

In addition to exposure to food-related content, information regarding dietary patterns and eating practices disseminated through digital media may also influence individuals' eating

behaviour. Maryana et al. (2025) reported that exposure to information about specific dietary patterns, such as the *Paleo diet*, was associated with changes in food choices and eating behaviour. Although the diet demonstrated short-term effectiveness in weight reduction, the study highlighted challenges related to long-term adherence, suggesting that exposure to dietary information without adequate nutritional literacy may lead to unregulated eating behaviours. This finding supports the notion that social media exposure may not only stimulate *external eating* through visual cues but also shape eating behaviour through the promotion of certain diet trends that are not always accompanied by appropriate educational guidance.

Furthermore, eating behaviour is closely related to individuals' nutritional knowledge and health awareness. Khoirunnisa et al. (2025) found that healthier dietary practices were significantly associated with better nutritional outcomes among adolescents, emphasizing the importance of nutrition education in shaping eating behaviour. These findings reinforce the results of the present study, indicating that high social media use intensity, when not balanced with sufficient nutritional literacy, may increase vulnerability to *external eating* among university students.

These findings have important implications for health promotion efforts among university students. High intensity of social media use may increase the risk of *external eating*, which over time could contribute to unhealthy dietary patterns and adverse nutritional outcomes. Therefore, enhancing digital media literacy is essential to help students critically evaluate food-related content encountered on social media. Educational institutions and health professionals should consider developing interventions that encourage responsible social media use and promote healthier food choices within the digital environment. This study has a number of limitations despite its important findings. Initially, the cross-sectional design restricts the capacity to deduce causal relationships between social media use intensity and eating behavior. Second, data were collected utilizing self-report surveys, which may be impacted by social desirability bias and recollection bias. Additionally, discrepancies with previous research like that conducted by Firdausi et al. (2022) and Karini et al. (2022), which found no significant relationship between social media use and eating behavior suggest that contextual factors, including respondent characteristics, kind of social media sites examined, and differences in research instruments and study designs, may influence outcomes.

Based on the results and constraints of this research, future research is recommended to use experimental or longitudinal methods to more clearly determine the causal connections between eating habits and social media use. Further studies should also explore the influence of specific social media platforms and types of content, as well as incorporate additional psychological factors such as stress, body image, and self-control. Qualitative approaches may also provide deeper insights into students' subjective experiences and perceptions of social media posts about food, contributing to a more comprehensive understanding of this phenomenon.

Conclusion

According to the study's chi-square test results, there is a substantial correlation between the intensity of social media use and students' eating behavior ($p\text{-value} < 0.001$). In the groups with moderate and high social media usage intensity, the number of respondents exhibiting external eating behavior was more dominant compared to emotional eating and restrained eating. This suggests that the greater the intensity of social media use, the higher

the propensity for students to engage in external eating, triggered by visual exposure, influencer recommendations, food vlogs, and digital culinary content. These findings are in line with Social Cognitive Theory (Bandura), which explains that individual behavior can be shaped through observational processes in response to environmental stimuli, including digital environments such as social media.

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Author Contribution

All authors actively participated in every stage of this research, including study design, data collection, analysis, and manuscript preparation. Each author has examined and accepted the completed manuscript and takes full responsibility for its content and originality.

Conflict of Interest

The writers affirm that they have no competing interest exist concerning the execution or release of this study. The investigation was conducted independently, without influence or pressure from any external parties. Ethical principles were upheld throughout the study to ensure openness, precision, and integrity in reporting. Informed consent was acquired, and participation was entirely voluntary, and respondents' privacy and confidentiality was strictly maintained.

Ethical Clearance

The Universitas Negeri Malang research ethics committee granted ethical permission for this investigation under decision number No.04.11.06/UN32.14.2.8/LT/2025. All data collection procedures and the confidentiality of respondents' identities were carried in compliance with the ethical guidelines for human subjects research.

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