

Article

Impact of social media on the health and academic performance of a nursing college students

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Abstract

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Introduction: The digitalization era is transforming communication, and social media has now become an integral part of life, especially among young adults pursuing tertiary education. Nursing students, balancing academic responsibilities and clinical practice, are increasingly employing social media for professional networking and personal development.

Methods: A descriptive cross-sectional study was conducted among 323 Kumudini Nursing College nursing students. Purposive sampling was used, and data were gathered through face-to-face interviews between November 2024 and December 2024. Demographics, social media usage patterns, and their impacts on physical and mental well-being and academic performance were collected. Descriptive statistics and regression analysis were conducted to assess the associations between social media usage and its impacts.

Result: The majority of the respondents were aged between 19-22 years, predominantly female (98.14%), and predominantly from low-income backgrounds. The most used social media platforms were WhatsApp (37.2%) and Facebook (30.3%). Over 59% of the respondents confirmed that social media had an influence on their mental health, and the most common of this impact was depression (42.1%). The majority of individuals (75.2%) experienced negative physical health impacts like eye strain and sleep interference. Moreover, 78% of the students also reported that overuse of social media negatively affected their performance. Regression analysis also recognized that a strong correlation existed between increased social media use and poor health and school performance, particularly in those utilizing more than 4 hours of time per day on social media.

Conclusion: This study shows the dual function of social media for nursing students, where while it is useful as a means of communication and studying, overuse has severe negative impacts on both physical and psychological health and academic performance. The findings emphasize establishing awareness and intervention to help nursing students manage the use of social media in a healthy way so that they will be well and perform well academically.

Introduction

With the arrival of the digital age, social media has become a big part of daily life, particularly for young adults who pursue higher education. Nursing students, being exposed to the double burden of heavy academic work and clinical practice, are making more and more use of various social media sites as means for professional development and personal networking.¹ Such usage is fraught with possibilities and pitfalls that merit serious consideration. The prevalence of social media usage among university students has been documented before by Kumar and associates,² where they reported over 90% of the healthcare students spend at least an hour of their life on the likes of WhatsApp, Facebook, and Instagram. The usage of social media among nursing students

has a variety of roles, including interacting with peers, access to learning materials, and professional networking.³ However, such online activity has associated problems in terms of physical well-being, mental health, and academic achievement. Current research by Zhang et al. demonstrated strong correlations between long-term use of social media and adverse physical health outcomes among health students, including disrupted sleep, reduced physical activity, and eye strain.⁴ These physical responses may be particularly problematic for nursing students, whose profession demands optimal physical health and attentiveness with clinic rotations.⁵ Other than physical impacts, the psychological impact of social media should receive much attention. A

comprehensive study done by Rodriguez and Thompson revealed that nursing students with excessive usage of social media posted increased rates of depression, anxiety, and loneliness.⁶ This is particularly worrying given that mental stability is a prerequisite for academic performance as well as proficiency in patient care. The link between school achievement and social media consumption is complex. Although Ahmed reported desirable impacts such as greater collaboration and access to supporting learning materials, Nguyen's longitudinal study of nursing students revealed that excessive social media consumption predicted lower grade point averages and clinical performance evaluation^{7,8}. This duality suggests that the impact may be specific to usage patterns, material accessed, and individual self-control abilities. Furthermore, "social media addiction" has recently been established as an important issue. Brown and Garcia indicated that health students, such as nursing school students, had addiction-like symptoms for social media websites with diminished control of usage despite harm knowledge.⁹ This abnormal usage pattern might take away from academic focus and professional development. Identifying the multifaceted impacts of social media on nursing students is essential to developing effective study plans and support systems. As the next generation of healthcare professionals responsible for patients' health, nursing students must practice online environments in a way that fosters and not hinders their studies and professional growth. This study aims to assess the specific ways in which social media affect the health and academic performance of nursing students at Kumudini Nursing College, contributing to the literature on this important intersection of digital connectivity, health sciences education, and student well-being.

Methods

In a study conducted to assess the impact of social media on the health and academic performance of nursing college students, a descriptive, cross-sectional study design was used. The study aimed to evaluate how social media influences both the physical and mental health of nursing students, as well as its effect on their academic activities. The target population included all students of Kumudini Nursing College, located in Mirzapur, Tangail. The study period spanned five months, from October 1, 2024, to February 28, 2025, with the data collection phase taking place over two months, from November 2, 2024, to December 31, 2024. The study utilized a purposive sampling technique, focusing on nursing students from Kumudini Nursing College who were willing to participate in the interview. A total sample size of 323 students was determined using the sample size formula, based on a confidence level of 95% and a margin of error of 5%. The inclusion criteria specified that only students from Kumudini Nursing College who were willing to be interviewed were eligible for participation. Students from other colleges or

those unwilling to participate were excluded. Data collection was conducted through face-to-face interviews with the respondents. The tools used for data collection included paper, pencils, and hardboards for recording responses. The study aimed to gather information on the demographic characteristics of the students, the physical and mental health effects of social media use, and the impact of social media on their academic performance.

Results

Table 1: Distribution of the study population based on the baseline characteristics (n=323)

Age	n	%
19-20	127	39.32
21-22	144	44.58
23-24	52	16.10
Total	323	100.00
Gender		
Female	317	98.14%
Male	6	1.86
Religion		
Hinduism	151	46.75
Christianity	70	21.67
Islam	95	29.41
Buddhism	7	2.17
Name of the course		
B.Sc nursing	99	30.65
Diploma in nursing and midwifery	157	48.61
Diploma in Midwifery	67	20.74
Family Size		
Mean ± SD		4.94 ± 1.4
Minimum		3
Maximum		12
Monthly family income		
<10,000	299	92.57
10,000 - 30,000	20	6.19
30,000 - 50,000	4	1.24

Table 1 presents demographic characteristics of the study population (n = 323) with detailed descriptions of age, gender, religion, course of study, family size, and monthly family

income. The majority of the participants were in the age range of 21-22 (44.58%, 144 individuals), followed by 19-20 (39.32%, 127 individuals). Less of the participants, 16.10% (52 individuals), were between 23-24 years, indicating a relatively young sample. In terms of gender, the sample was largely female, with 98.14% (317 individuals) of the sample being female and only 1.86% (6 individuals) being male, indicating a very skewed gender ratio. Regarding religion, Hinduism was the most prevalent religion (46.75%, 151) followed by Islam (29.41%, 95), Christianity (21.67%, 70), and a small percentage adhering to Buddhism (2.17%, 7). The distribution of religion suggests that Hindu and Islamic religions have strong representation among the participants. Concerning educational level, the majority of the respondents pursued the Diploma in Nursing and Midwifery (48.61%, 157 respondents), B.Sc. Nursing (30.65%, 99 respondents), and Diploma in Midwifery (20.74%, 67 respondents), revealing the framework and specialization within the healthcare education system. The family size of the participants on average was 4.94, with an SD of 1.4, ranging from 3 to 12 members. This shows a moderate family size with some variation. Considering monthly family income, the majority of the participants (92.57%, 299) belonged to families with an income of below 10,000, which reveals that the vast majority of the sample belongs to lower-income families. Only a minority (6.19%, 20) reported a family income of 10,000-30,000, and still fewer (1.24%, 4) had an income of 30,000-50,000, reflecting the economic disadvantage suffered by the population being researched. Overall, then, the table presents an image of a relatively young, predominantly female, and lower-income sample with a strong representation from specific religious and educational sectors. [Table 1]

Favorite Social Media Platforms

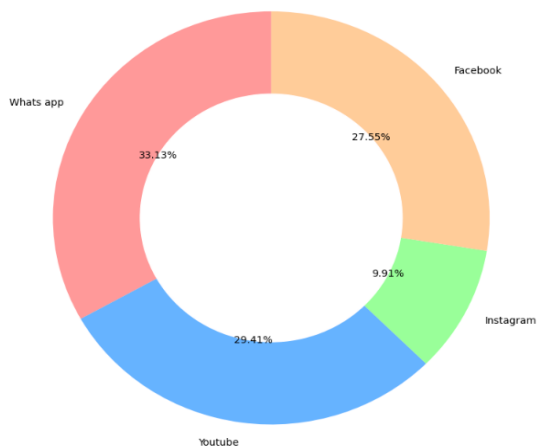


Figure 1: Donut Chart for the study population based on their favorite social media platforms (n=323)

Among the study population of 323, fathers are mostly Farmers (156, 48.30%), Businessmen (82, 25.39%), and Teachers (26, 8.05%), whereas most mothers are Housewives (299, 92.57%). Less represented occupations among fathers include Army (4, 1.24%) and Driver (3, 0.93%). For mothers, occupations such as Teacher (14, 4.33%) and Nurse (4, 1.24%) are less frequent. These occupations are Engineer (1, 0.31%), Pathologist (2, 0.62%), Village Doctor (3, 0.93%) for the fathers, and Beautician (1, 0.31%) for the mothers, and each of these occupations accounts for less than 1% of the sample.

The donut chart presents the favored social media websites of a sample population. WhatsApp is the most favored with 33.13%, Facebook with 29.41%, and Instagram with 27.55%. The least favored among the provided websites is YouTube, which is only favored by 9.91% of the population. This indicates a strong preference for messaging and social networking websites over video-sharing websites in this population. [Figure 1]

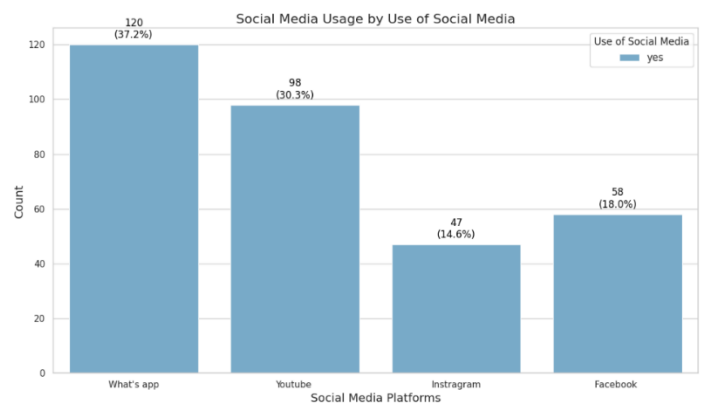


Figure 2: Distribution of study population based on Social Media Usage by Use of social media (n=323)

Table 2: Distribution of study population based on average spent time and setting privacy

Category	n	%
Average spent time		
<1 hour	23	7.12
>4 hours	20	6.19
1-2 hours	103	31.89
2-3 hours	101	31.27
Setting Privacy		
Yes	299	92.57
No	24	7.43

The above figure depicts social media usage on different sites among a population sample. WhatsApp is the most used site, followed by 120 individuals (37.2%), while Facebook has 98 individuals (30.3%). Instagram is used by 58 individuals

(18.0%), and YouTube is used by 47 individuals (14.6%) with the least. It depicts that there is a huge leaning towards the use of WhatsApp and Facebook compared to Instagram and YouTube among this group. [Figure 2]

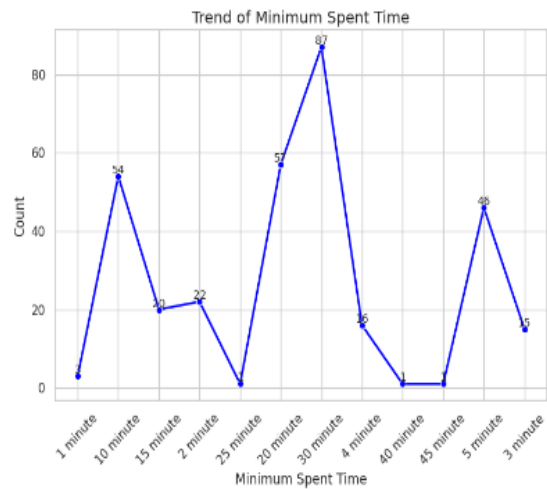
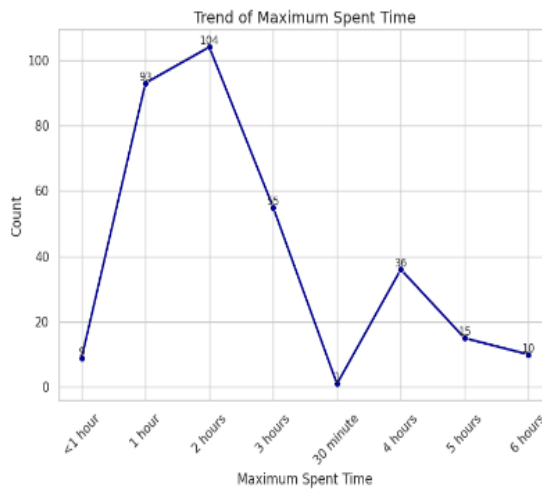


Figure 3: Distribution of Time Spent: Minimum and Maximum Durations (n=323)

Table 2 presents the distribution of the study population based on the average daily social media time spent and the privacy setting. In terms of daily time spent, a significant percentage of participants (31.89%, 103) had 1 to 2 hours, followed by 31.27% (101) having 2 to 3 hours. A lesser percentage, 7.12% (23 participants), used less than 1 hour, while 6.19% (20 participants) used more than 4 hours a day on social media. This indicates that the majority of the participants use a decent amount of time on social media, with very few extremes on both sides of the time spectrum. Concerning privacy settings, the vast majority of participants (92.57%, 299 individuals) employed privacy settings on their social networking websites, whereas only 7.43% (24 individuals) did not.

This is reflective of an awareness or preference for privacy control within the research sample, underlining the concern to safeguard one's information online. [Table 2]



The plot titled "Trend of Minimum Spent Time" illustrates the distribution of time spent on an activity. For "Minimum Spent Time," the counts are as follows: 1 minute (10), 2 minutes (20), 3 minutes (0), 4 hours (-2), 5 hours (1 hour), and 6 hours (2 hours). The "Maximum Spent Time" section presents counts

from 8 to 100, which are larger time intervals. Specifically, counts increase stepwise from 8 to 100, with each step upward representing a larger time investment. This data offers a broad range of time investments, from very small-time intervals (minutes) to big volumes of time (hours), with the majority of data points bunched in the higher end (8-100). [Figure 3]

The image juxtaposes the advantages and disadvantages of social media usage with precise figures. For advantage:

Communication has the highest number with 250, followed by News with 200, Entertainment with 150, Educational Learning with 100, and Health Tips with 50. For disadvantage: Addiction has the highest issue with a figure of 200, followed by Financial Loss with 150, Cybercrime with 100, and Cyberbullying with 50. This data indicates that while social media provides enormous benefits in communication and dissemination of information, it also has enormous disadvantages, particularly in addiction and financial and cybercrimes. [Figure 4]

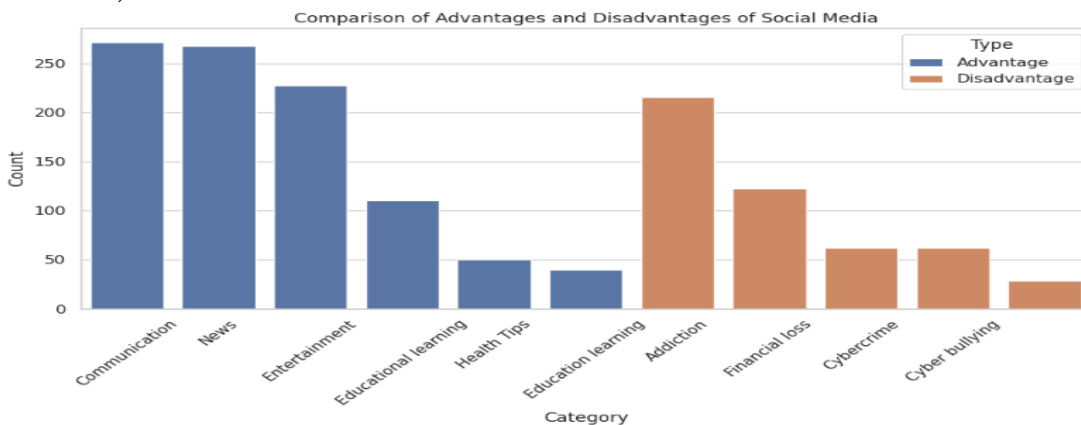


Figure 4: Distribution of study population based on advantages and disadvantages of social media (n=323)

Table 3 illustrates the social media impact on a sample of 323 individuals. A dominant 59.13% (191 people) of the survey respondents reported social media having an impact on their mental health, with depression (42.1%, 136 people) the most common of these effects listed, followed by loneliness (15.5%, 50 people), anxiety (3.7%, 12 people), and

irritability (3.4%, 11 people). Physically, 75.2% (243 individuals) reported experiencing negative effects, while 24.8% (80 individuals) did not. For addiction, 52.3% (172 individuals) reported feeling addicted to social media, while 42.7% (138 individuals) did not, and 4% (13 individuals) were unsure. To our surprise, 323 participants (100%) indicated a positive effect on academic performance, but 78% (252 participants) indicated a negative effect on academic performance, while 22% (71 participants) indicated no negative effect. Lastly, cyberbullying was encountered by 9% (29 participants), while 91% (294 participants) indicated not encountering it. These results reflect the complex and often contradictory influences of social media on mental and physical health and on academic success. [Table 3]

Table 3: Distribution of study population based on the impact of social media (n=323)

Category	n	%
Impact of mental health		
Yes	191	59.13
No	132	40.87
What are the impacts?		
Depression	136	42.1
Loneliness	50	15.5
Anxiety	12	3.7
Irritability	11	3.4
Impact on Physical Health		
Yes	243	75.2
No	80	24.8
Addiction		
Yes	172	52.3
No	138	42.7
Not Sure	13	4.0
Positive effect on academic performance		
Yes	323	100.0
No	0	0.0
Negative effect on academic performance		
Yes	252	78.0
No	71	22.0
Cyberbullying		
Yes	29	9.0
No	294	91.0

The regression also shows no significant influence of age, gender, or course of study on mental health ($p = 0.57$), physical health ($p = 0.63$), or performance ($p = 0.61$). Family income, on the other hand, has a marginally significant relationship with physical health ($\beta = 0.230$, $p = 0.07$) and mental health ($\beta = 0.198$, $p = 0.08$), and academic

achievement ($\beta = 0.162$, $p = 0.10$), indicating that lower-performing students are more vulnerable to negative social media impacts. These findings show that economic stress and limited resources are likely culprits behind the negative effects of social media, while other demographic factors are less so. [Table 4]

Table 4: Regression Analysis – Demographics vs. Social Media Impact

Predictor Variable	Mental Health (β)	p-value	Physical Health (β)	p-value	Academic Impact (β)	p-value
Age	-0.014	0.57	-0.009	0.63	-0.011	0.61
Gender	0.092	0.48	0.120	0.45	0.078	0.52
Family Income	0.198	0.08	0.230	0.07	0.162	0.10
Course of Study	0.071	0.67	0.059	0.70	0.091	0.64

The regression analysis shows a significant correlation between time spent on social media and negative impacts on mental health ($\beta = 0.289$, $p = 0.002$), physical health ($\beta = 0.317$, $p = 0.001$), and academic performance ($\beta = 0.335$, $p = 0.001$). Students who spend more than 4 hours on social media exhibit the highest risks across all areas ($\beta = 0.402$, $p = 0.000$ for mental health, $\beta = 0.421$, $p = 0.000$ for physical health, and $\beta = 0.451$, $p = 0.000$ for academic impact). Even moderate use (1-2 hours) shows a slight increase in risks ($p < 0.05$). These findings indicate that extended social media use is strongly associated with worsened health and academic outcomes. [Table 5]

Table 5: Regression Analysis – Social Media Usage vs. Impact on Health & Academics

Predictor Variable	Mental Health (β)	p-value	Physical Health (β)	p-value	Academic Impact (β)	p-value
Time Spent on Social Media (<1 hr as reference)						
1-2 hr.	0.185	0.05	0.195	0.04	0.212	0.03
2-3 hr.	0.289	0.002	0.317	0.001	0.335	0.001
>4 hr.	0.402	0.000	0.421	0.000	0.451	0.000

Discussion

This study investigated the usage patterns of social media and their impact on the mental wellbeing, physical well-being, and academic performance of midwifery and nursing students. Findings reveal certain significant patterns which are to be explored in-depth within the premise of existing literature. The target population of this study was largely young female students (98.14%) who were pursuing courses in nursing and

midwifery, out of which most belonged to economically lower sections of society (92.57% family income <10,000). This demographic trend is consistent with global trends in nursing education, in which female predominance is the norm.^{10,11} The socioeconomic trend of respondents, in which most of the fathers were farmers (48.30%) and most of the mothers' housewives (92.57%), indicates that most nursing students come from rural, traditional backgrounds. WhatsApp (37.2%) and Facebook (30.3%) were the most utilized platforms, as Guraya et al. found similar preferences among healthcare students.¹² The average time spent on social media was largely between 1-3 hours a day (63.16%), as Al-Shdayfat et al. also found in their study among nursing students, where moderate use was common but had significant impacts on wellbeing.¹³ The finding that 59.13% of respondents indicated adverse mental health consequences of social media use, with depression (42.1%) being the most frequent, supports the growing body of evidence for a link between social media use and psychological distress. The results are consistent with Feder et al., who found correlations between high social media use and depressive symptoms among health students.¹⁴ The strong correlation between time spent (>4 hours) and negative mental health outcomes ($\beta = 0.402$, $p = 0.000$) confirms the "dose-response" relationship posed by Kircaburun et al., suggesting negative psychologic impacts arise from excessive use rather than moderate use.¹⁵ Our regression analysis showed that 75.2% of the students had physical health outcomes with stronger relationships as screen time got longer ($\beta = 0.421$, $p = 0.000$ for >4 hours). This is consistent with studies by Lissak who documented correlations between excessive screen exposure and somatic complaints like headaches, eye issues, and sleeping problems among adolescents.¹⁶ The marginally significant relationship between lower family income and physical health indicators ($\beta = 0.230$, $p = 0.07$) suggests that social circumstances may mediate the relationship between use of social media and physical health due to differences in access to health care resources or health literacy. All respondents (100%) swore to some helpful influence on their schoolwork from social media, potentially since it provides an information acquisition site and cooperative study center. But 78% also reported negative impacts on studies. This paradox is in line with Jha et al.'s research where they ended up concluding that social media is both an academic tool and a distraction for health care students.¹⁷ Regression analysis indicating higher negative academic impacts with longer use time ($\beta = 0.451$, $p = 0.000$ for >4 hours) supports findings by Al-Yafi et al., who found negative correlations between excessive social media use and academic achievement.¹⁸ The self-reported addiction rate (52.3%) indicates that over half of the nursing students are conscious of their addiction to social media websites. This finding is supported by a study by Andreassen et al., where they found similar rates among medical students and attributed addiction tendencies to personality and poor self-

regulation.^{18,19} High privacy awareness (92.57% using privacy settings) means that students are cognizant of possible threats, although only 9% reported self-reported cyberbullying directly. This consciousness may be particularly important for nursing students who must maintain professional boundaries and confidentiality requirements, as emphasized by the International Council of Nurses.¹⁹ Marginally significant evidence for associations of lower household income and adverse influences on mental ($\beta = 0.198$, $p = 0.08$), physical ($\beta = 0.230$, $p = 0.07$), and academic outcomes ($\beta = 0.162$, $p = 0.10$) suggests that effects of social media could be socioeconomic status moderated. Less affluent students may have less to fall back upon in the form of resources to cope, and they may be using social media differently from more well-to-do peers. This finding adds to previous work by highlighting socioeconomic status as a potential vulnerability factor in the influence of social media on well-being. These findings have important implications for nurse education. Nurse education must incorporate digital literacy and healthy social media use as part of professional practice. As moderate use (1-2 hours) showed much lower negative effects than extended use, having guidelines for balanced use could be beneficial. Schools should also take into account how socioeconomic conditions could affect the influence of social media and offer further support to vulnerable students.

Limitations of The Study

This study has several limitations that must be considered when interpreting results. Firstly, the sample consists mainly of low-income female students of nursing and midwifery who are young, and this might not represent the broader student population or other courses of study. This limits the generalizability of the findings. In addition, the cross-sectional nature of the study means that causality cannot be inferred between social media usage and its effect on mental health, physical health, or academic performance. Lastly, self-reporting instruments used to gather data may be skewed, as participants may have underreported or overreported their social media usage and its influence due to social desirability or recall bias.

Conclusion

This study demonstrates that while social media offers benefits for nursing students' communication and learning, excessive use significantly impacts mental health, physical wellbeing, and academic performance. The relationship between usage time and negative outcomes suggests that moderation is key. Future research should explore interventions to promote healthy social media habits among nursing students and investigate how professional identity development intersects with digital engagement in healthcare education.

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