

Use of Social Networking Site and prevalence of Depression among Medical Students in Vikarabad, Telengana

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Abstract

Background: Humans are social creatures that require the company of others in order to thrive in life. As a result, although being socially connected with other people might help to reduce stress, anxiety, and melancholy, a lack of social connection can put one's mental health at danger.

Objective: To study and establish correlation between the use of Social Networking sites and depression among medical students in a single center study.

Methods: A cross-sectional research was done among 200 medical college undergraduate students. A systematic questionnaire was used to obtain data about medical students' individual characteristics and use of social media sites. The Zung Self-Rating Depression Scale were used to assess anxiety and depression. The prevalence was calculated as a percentage, and the association was assessed using the Mann-Whitney U-test.

Results: Association between frequency of use of SNS and Depression is more in students who use 1-3 times in a day 20% and in the students who used atleast 1hr it is 19.23% ,in students who use 4-7 times is 15.38% whereas in students who use 8-23 times it is 17.54%. The students who were awake early morning and used SNSs often was more 25% than those who were awake sometimes (15%) and never (18%) similarly the students who spent late nights in using SNSs was more among who were often awake late night (25%) than those who were awake late night Sometimes (14.6%) and never (19%).

Conclusion: The current study found that SNS use was nearly ubiquitous among study participants, with the majority of them being heavy SNS users. A large percentage of medical students show a strong preference for SNSs. Intense usage of social media sites, especially use at unusual hours, was shown to be strongly (although not statistically significant) linked to depression. Despite the fact that the problem is still relatively new, it is significant enough to warrant attention. To solve the complicated relationship between social media use and mental health concerns, further study is needed.

Keywords: Addiction, Depression, Social Networking Sites , Zung Self-Rating Depression Scale

Introduction

Social networking sites (SNS) are a collection of web-based apps that allow users to create and share user-generated content. The last decade has seen a significant shift in the area of communication, thanks to the rapid growth of social networking, which has had a big impact on how people engage with one another, and is sometimes the only means of contact.^[1] According to a 2015 study, teenagers are heavy users

of social media sites, with 71 % of them accessing several sites, with Facebook being the most popular (41 %).^[2] With over one billion active Facebook users, it's easy to see how significant these sites are in our everyday lives.^[3]

SNS is a double-edged sword. They're utilised to help students achieve academic success. Excessive usage of online social networking sites, on the other hand, can lead to addiction and dependency, as well

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as sleep disturbances and depression.^[4] A correlation between online social networking and mental health has been highlighted in recent studies. Because social networking sites are becoming increasingly popular among today's youth, any postulated mental illnesses linked to them might constitute a severe public health hazard, possibly resulting in a global cyber-epidemic. The most worrying aspect is that most users are already addicted to social media and are unaware of its detrimental effects.^[5]

According to a recent meta-analysis, 75% of medical students use social media on a daily basis, including compulsive/compensatory use, and India is no exception.^[6] It is generally known that medical students experience much higher levels of stress, which has an impact on their academics, physical wellbeing, and psychological wellbeing. As a result, medical students are not impervious to depression and anxiety.

In India, evidence on the extent of SNS usage and its relationship to medical students' mental health is limited. The current study was undertaken to analyze the pattern of SNS usage, the prevalence of depression, and their association among undergraduate medical students in a Medical College in Vikarabad, Telengana, based on the data available.

Material and Methods

Study design, setting and duration:

A cross-sectional study was conducted among the undergraduate medical students who were enrolled in college during 2016 and 2019 academic years in a Medical College in Vikarabad, Telengana enrolling 150 students per year between June and August 2020.

Sample size and technique:

The available literature showed that the proportion of medical students using SNS ranged from 67% to 75%.^[6] Considering the proportion of students using one or more accounts of SNSs as 67%, observing the confidence level of 95%, the relative precision of 10%, the final sample size was 189 which was rounded off to 200. The number of enrolled students was same in each batch (year-group), 100 students from each batch were selected through simple random sampling as per Attendance Register of the College. As per the diagnosis of psychiatric diseases and/or psychotropic drugs may alter the use of social networking sites, students with clinically diagnosed psychiatric illness

and/or Students using medication for any psychiatric illness were excluded from the study.

Study tools:

1. Structured Questionnaire for assessment of the use of SNSs.
2. Zung Self-Rating Depression Scale.

The section of a questionnaire for assessing the use of SNS and its effect on daily life was pretested in a similar population and validated with the help of psychiatrists, public health specialists, and sociologists. For assessing the use of SNSs, the participants were asked whether they have any account in any of the SNS and instant messaging application. If yes, they were asked to state how many times in a day, on average, they visited the site (s) in the last 7 days. They were also asked to state the average duration they spent on each visit in the last 7 days. They were also asked whether they wake up early or went to bed late to spend time in SNSs. Their perceived ability to spend a day without SNSs was also enquired. Effect of spending time in SNS on their self-confidence and their satisfaction with use were assessed. Zung self-rating depression scale was used for assessing depression.

Method of data collection:

The study was approved by the Institutional Ethics Committee of the Medical College. After taking informed consent, the structured questionnaire in English was given to the selected students to gather information regarding their sociodemographic characteristics such as age and gender. The pattern of use of SNS and its effect on their daily lives was assessed along with screening of depression.

Statistical analysis: SPSS 22 software was used for statistical analysis and the data was presented in the form of tables and graphs.

Observation and Results

Characteristics of study subjects

The final analysis was performed with a filled-in questionnaire of 200 medical students enrolled in Mahavir Institute of Medical Sciences, Vikarabad, Telengana. More than half of the students aged 21–23 years while the mean age (\pm standard deviation) of the sample was 21.6 (\pm 1.8) years. Female students (54.7) outnumbered the male students (45.3)

Use of Social Networking Sites

100% of the students used Social Networking Site. More than half of the students used less than three Social networking sites (54.7) and two fifths used more than three Social networking sites (45.3). "WhatsApp" is the most commonly used SNS (95.9%) followed by "Facebook" (89.4%) and "Instagram" (30.5%). Communication with the friends and families was the most common (59.0%) reason for using SNSs which was followed by entertainment (43.1%) ,education and professional activities (31.4%).

Table 1 : Distribution of study participants according to Use of Social Networking Sites

Variables	Categories	n (%)
Frequency of use per day	Atleast hourly	26(17.3%)
	8 -23 times in a day	57 (38.0%)
	4-7 times in a day	52 (34.6%)
Duration of use per day	1-3 times in a day	15 (10.0%)
	Always open	13 (8.7%)
	4-23 hrs	33 (22.0%)
Used early morning	2-4 hrs	71 (47.3%)
	< 2hrs	33 (22.0%)
	Often	4 (2.7%)
Used late night	Sometimes	40(26.6%)
	Never	106(70.7%)
	Often	24 (16.0%)
Stated ability to spend a day without accessing SNSs	Sometimes	89 (59.3%)
	Unable	24 (16.0%)
	Not sure	17 (11.3%)
	Sometimes	54 (36.0%)
	Certainly	55 (36.6%)

Less than one third (17.3%)of the students, had accessed SNSs at least once in an hour, while most of them (38.0%) accessed at least 8 - 23 times in a day. Around one-tenth students (10.0%) accessed SNSs 1-3 times in a day, rest were an occasional user. Around 47.3% of the students accessed SNSs for at least 2 - 4 hours in a day and 8.7% students remained active on SNSs through out the day. One-fifth of the students(26.6%) in this were sometimes waking up early and less than half of students (16.0%) often went to bed late night to spend time on SNSs and another 59.3% were active for sometime during night.

One-fourth (11.3%) students were either not sure or expressed their inability to spend a day without SNSs. Around 36.6% reported that they could spend a day without SNSs at particular times. Only 63.3% felt satisfied with the use of SNSs and another 36.3% were not satisfied.

Table 2 : Association between Use of SNS and Depression

Variable	Category	n	With depression	p
Depression severity	Normal	124		0.1640
	Mild depression	26		
No of SNS use	<3	82	11 (13.4%)	0.9669
	>3	68	15 (22.05%)	
	Duration of SNS use (hrs)			
Duration of SNS use (hrs)	<2 hrs	33	5 (15.15%)	0.9639
	2-4 hrs	71	13(18.30%)	
	4-23 hrs	33	5 (15.15%)	
	Always active	13	2 (15.38%)	
Frequency of SNS use	Atleast 1 hr	26	5 (19.23%)	0.8429
	1-3 times in a day	15	3 (20%)	
	4-7 times in a day	52	8 (15.38%)	
	8-23 times in a day	57	10 (17.54%)	
Used early morning	Never	106	19 (18%)	0.4697
	Often	4	1 (25%)	
	Sometimes	40	6 (15%)	
Used late nights	Never	37	7 (19%)	0.8774
	Often	24	6 (25%)	
	Sometimes	89	13 (14.6%)	
Able to spend a day without accessing SNS				0.8774
	Not sure	17	3 (17.64%)	

Variable	Category	n	With depression	p
	Certainly	55	9 (16.66%)	
	Sometimes	54	11 (20%)	
	Unable	24	3 (12.5%)	

Prevalence Of Depression

As per Zung Self Rating Depression scale 17.3% students had Mild Depression.

Association between Use of Social Networking Site and Depression

Association between use of social networking site and depression was more in the students who accessed more than three SNS 22.05%, than who accessed less than three SNS 13.41%. Similarly, students who accessed SNS for 2 - 4hrs scored more on Zungs Self Rating depression scale 18.3%, students who were always active scored 15.38% and students who were less than 2hrs active scored 15.15%.

Association between frequency of use of SNS and Depression is more in students who use 1-3 times in a day 20% and in the students who used atleast 1hr it is 19.23% ,in students who use 4-7 times is 15.38% whereas in students who use 8-23 times it is 17.54%. The students who were awake early morning and used SNSs often was more 25% than those who were awake sometimes (15%) and never (18%) similarly the students who spent late nights in using SNSs was more among who were often awake late night (25%) than those who were awake late night Sometimes (14.6%) and never (19%).

The Zung self-rating depression scale score was greater among students who used more than three SNSs than among students who used less than three SNSs, although the difference was not statistically significant ($p = 0.1640$). Similarly, students who used SNSs for 2-4 hours scored better than those who used them for 2 hours, 4 hours, or 23 hours, although the difference was not statistically significant ($p=0.9669$). Similarly, students who used 1-3 times per day scored better than those who used at least an hour, 4-7 times per day, although the difference was not statistically significant ($p=0.9639$). Students who spent time in SNS early in the morning or late at night were more likely to have a higher Zung self-rating depression scale score, although the difference was not statistically significant. (Early morning $p=0.8429$),(Late night $p= 0.4697$).

Students who were sure that they could spend a day without SNS were likely to score less on Zung self rating depression scale,the difference was not statistically significant ($p=0.8774$).

Discussion

While social media's communication capabilities have positively impacted the lives of young adults all over the world, it also has the potential to negatively impact young people's development and wellness. The debate is on whether social media and instant messaging apps are the reasons that cause mental illnesses, or if increased case detection and societal concern are the variables that contribute to an increase in the number of cases of mental disorders among adolescents and teenagers.

Use of social networking sites:

Face-to-screen interaction is considerably more than face-to-face interaction, attributable to the growing popularity of social networking sites. Which can contribute to despair, loneliness, and anxiety when individuals around you are performing better jobs, or it can assist depressed people who are socially isolated connect, take suggestions, and join online support groups.

In the current study, the use of SNS was ubiquitous among undergraduate medical students, with more than two-fifths of them utilizing three or more SNSs. WhatsApp was the most popular platform, followed by Facebook, with >90.0 % of study participants using both, corroborating previous research in India. Although the percentages of respondents who use Facebook and WhatsApp were greater than in prior studies,^[7] rates similar to those identified in our survey have been recorded among adolescents. In India^[8], US,^[9] medical students in Australia,^[10] and UK.^[11]

In terms of SNS use, the medical students in this research were heavy users, with almost one-third of the students using SNSs at least once per hour and nearly 60.0 percent using SNSs at least once every day. This points to substantial and regular usage among the participants, which is consistent with Goel et al. and Hall et al.'s research.^[12]

The usage of social networking sites and the probability of depression:

Affective disorders like depression have been shown to have a bidirectional relationship with the

individual's social environment, which influences the development and persistence of disease. The social qualities of people with mental illnesses have a direct impact on their sense of well-being. According to current mental health theories, contentment is not synonymous with mental disease; a full model of mental health necessitates not just the absence of psychopathology, but also an emphasis on positive indicators of functioning such as subjective well-being.^[13] Depression has a high rate of comorbidity, which can affect the size and structure of a person's social network. Individuals with depression have a poor social network, and poor social networks, on the other hand, are typically a risk factor for depression because they limit access to "buffering" social support and increase feelings of isolation.

Even though the number of SNSs utilised had no effect on depression in the current study, depression scores were shown to be greater in students who used SNS more often and for a longer period of time. This outcome is consistent with a substantial number of previous studies.^[14] Neira et al. also observed a correlation between social network use and depression in their study.^[15] Kross et al. observed that increased usage of social media exposed young people to negative affect and decreased their feeling of well-being. Participants who reported being depressed were also more likely to utilise social media to convey their feelings.^[16] Face-to-face communication is less common among young people with emotional problems; thus, they prefer to connect with virtual pals.^[17]

Frequent social comparison, perceived negative interaction, addictive/problematic usage, and rumination were the most notable social media risk factors for depression.^[18] In addition, students who reported using SNSs at odd hours, such as staying up late at night or waking up early, or both, were more likely to have higher depression scale scores than those who did not. Students who said they could go a day without accessing any social media sites were less likely to be depressed than those who said it was difficult. These showed a social media addiction and might be the first signs of problematic SNS use. Students' circadian rhythms may be disrupted as a result of working at strange hours, making them prone to mood problems. In conclusion, the current study finds a statistically insignificant link between high social media usage and depression among medical students given Vikarabad, Telengana, in the current socio-cultural environment.

Strength and Limitations

This study aimed to gather empirical evidence on the correlation between SNS use and depression among medical students in an Indian socio-cultural environment, where data on the topic is limited. Instead of a full clinical interview, which can lead to an overestimation of the workload, the screener tool was employed to evaluate depression in this study. This cross-sectional study may be prone to reverse-causality bias because SNS usage and depression were examined at the same time.

Conclusion

The current study found that SNS use was practically ubiquitous among study participants, with the majority of them being active SNS users. A large percentage of medical students show a strong preference for SNSs. Intense usage of social media sites, especially use at unusual hours, was shown to be strongly (although not statistically significant) linked to depression. Despite the fact that the problem is still relatively new, it is significant enough to warrant attention. To solve the complex relationship between social media use and mental health complications, further research is needed.

Ethical Clearance: The ethical clearance was obtained from Mahavir Institute of Medical Sciences Institutional ethics committee prior to the commencement of the study.

Source of funding: Self

Conflict of interest: Nil

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