

Original Research Article

A descriptive study on the use of social networking websites and physical health profile of their users among college students in Thrissur district, Kerala

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ABSTRACT

Background: The internet has become much more personal since social network sites (SNS) were introduced and embraced by the masses. Since their introduction, social networking websites have attracted millions of users, many of whom use these sites daily. Its excessive usage can influence physical health of their users.

Methods: A descriptive study was conducted among students of selected colleges in Thrissur district. The subjects included 400 SNS users selected using systematic random sampling. Data was collected using a pre tested structured questionnaire.

Results: The mean age of the study population was 19.13 ± 1.09 years. Most of the subjects used Facebook along with (78%) or without (33.5%) the usage of other social networking websites. Among the subjects, 64% were daily users with 39.5% reporting 1-2 hours use per day and 29.5% reporting 2-4 hours use per day. 74% subjects reported mobile phone as method of access to SNS. The prevalence of visual problems, eyestrain, headache, appetite problems and postural pain were significantly high in daily SNS users.

Conclusions: The study shows how virtual online world is interfering with their physical health. Daily SNS use had negative effects on physical health of the college students in this study.

Keywords: Adverse physical health effects, College students, Social network sites, Usage

INTRODUCTION

In the early years since 2000, the internet became personal as social networking websites were introduced and embraced by the masses. Boyd and Ellison define Social Networking Sites (SNS) as: "web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection and view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site".¹ Facebook, Twitter, LinkedIn, Friendster, MySpace, Classmate, Yahoo 360 are the main such sites.

What makes SNS unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and make visible their social networks. While SNS have implemented a wide variety of technical features, their backbone consists of visible profiles that display an articulated list of Friends who are also users of the system. Profiles are unique pages where one can "type oneself into being".²

Since their introduction, social networking websites have attracted millions of users, many of whom integrated their sites as a daily practice. Today, Facebook is the largest social network in the world, followed by Twitter. One out of every seven people on earth is on Facebook

and has more than 1.18 billion active users as of August 2015. The number of monthly active users of Facebook in India has increased by 5% to 88 million as of September 2013. The major number of users belong to age group 18 to 24 comprising of 48%.³

The excessive use of these sites affects the mental as well as physical health. Students do not take their meals on time and take proper rest. They take an excessive amount of coffee or tea to remain active and focused, which affects negatively on their health. Moreover, chronic users complain of back pain, eye problems, headache and gastrointestinal problems.⁴

Studies on SNS are in the nascent stage in India. Social networking websites are becoming more and more popular and have become part of daily life among youngsters. Its excessive usage can influence their physical and mental wellbeing. Hence the current study was conducted to study the pattern of usage of social networking websites and effects of SNS on physical health status among college students in Thrissur district.

METHODS

A descriptive study was conducted among students of selected colleges in Thrissur district, Kerala from November 2015 to October 2017.

The prevalence of mild to moderate anxiety among users of social networking website in the age group 18 to 24 in India was 21% according to study by Akriti et al.⁴ Based on this the sample size was calculated to be 376 (with relative error of 20%); which was then rounded up to 400. A list of all the arts, science and commerce colleges from Thrissur district were prepared, and from the 49 colleges, eight colleges were picked up for the purpose of study using simple random sampling. From eight selected colleges, 400 SNS users among students between the age group of 18 to 24 years were identified and selected by systematic random sampling from the student registers available at the colleges. Students who used any SNS in the past 6 months belonging to selected colleges were included into the study; those who have gave history of any diagnosed psychiatric morbidity were excluded.

Data was collected from selected participants using a pre-tested structured questionnaire, which were self-administered by the participants after giving written informed consent. The questionnaire included the following parts: demographic profile, pattern of use of SNS and physical health status.

The demographic profile included age, gender, religion, marital status, field of education, year of study and stay of participants. Pattern of SNS use included question like types of SNS used, frequency of usage, time spent on daily and so on. Physical health status questionnaire include visual problems, eye strain, headache, appetite problems, change in weight and postural pain (back, neck, shoulder, arms, and wrist pain).

Ethical clearance was obtained from Institutional Ethics Committee of Amala Institute of Medical Sciences, Thrissur prior to commencement. Data were entered and analysed using the statistical software SPSS version 23. Statistical analysis included descriptive statistics, and Pearson's Chi-square test and Fisher exact test was used to compare categorical variables. A p value of <0.05 was considered significant.

RESULTS

Demographic characteristics

The age of the study subjects ranged from 18 to 23 years. The mean age (SD) of the study population was 19.13 (1.09) years, the median age being 19.0 years. Majority (64.4%) fell in the age group of 18-19 years. The participants belonged to different fields of education; a third of the participants were from Bachelor of Commerce [B.Com] (30.3%), followed by Bachelor of Science [B.Sc.] (23.8%), Bachelor of Arts [B.A] (22.8%), Bachelor of Business Administration [BBA] (15.8%) and Bachelors in Computer Application [BCA] (7.5%) respectively. Further details have been given in Table 1.

Table 1: Socio-demographic profile of participants.

	Frequency	Percentage (%)
Age		
18-19	258	64.4
20-21	133	33.3
22-23	9	2.3
Sex		
Male	200	50
Female	200	50
Religion		
Hindu	169	42.3
Christian	139	34.8
Muslim	92	23.0
Field of education		
B.Sc.	95	23.7
B.A	91	22.8
B.Com	121	30.3
BCA	30	7.5
BBA	63	15.7
Year of study		
1 st -year	175	43.8
2 nd -year	105	26.2
3 rd -year	120	30.0
Place of stay		
Hostel	42	10.5
Days scholar	325	81.2
Paying guest	33	8.3
Total	400	100.0

Pattern of SNS usage

Facebook was the most widely accessed SNS, being used by 78.3% of the participants, with 134 (33.5%) using

Facebook alone for social networking. Just over one-fourth (27.8%) used Twitter, with 18 (4.5%) using Twitter as their only Social Networking platform. There were 170 (42.6%) participants using LinkedIn (Table 2).

Table 2: SNS used by participants.

	Frequency	Percentage (%)
Facebook	134	33.5
Twitter	18	4.5
LinkedIn	69	17.3
Facebook & Twitter	78	19.5
Facebook & LinkedIn	86	21.5
Facebook, Twitter and LinkedIn	15	3.8
Total	400	100.0

Nearly three fourths (73.6%) accessed SNS at their home, of whom 187 accessed it almost exclusively at their home. There were five students (1.3%) who accessed SNS through private café. Mobile phone was the most commonly used gadget (88.3%) to access SNS, with 297 (74.3%) accessing SNS only through their mobile phones. There were 57 (14.3%), 24 (6%) and 22 (5.5%) respectively who used Laptops, Desktops and Tablets (either exclusively or in addition to Mobile Phones) (Figure 1).

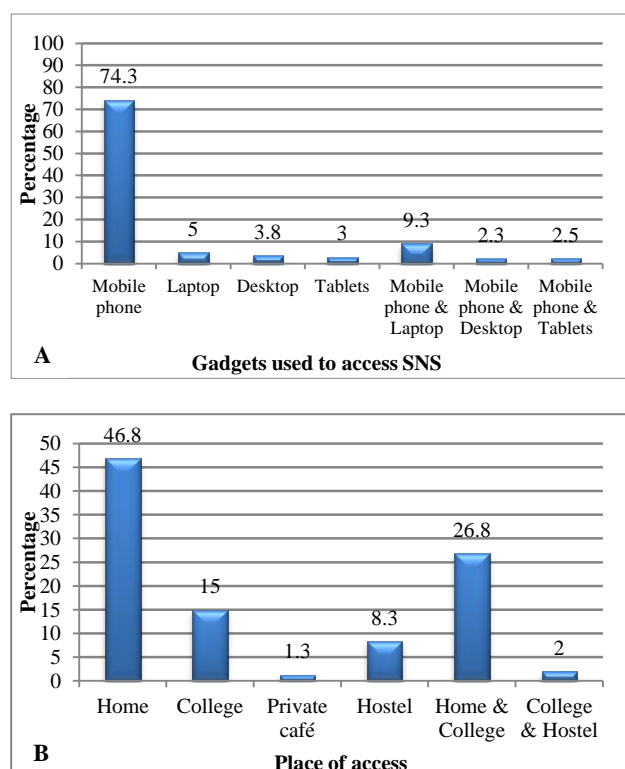


Figure 1: (A and B) Distribution of study participants based on place and mode of access.

A majority of students (64%) accessed SNS on a daily basis while 36% of them used weekly or monthly.

Among the daily users, 29% logged in 2-5 times in a day, while almost an equal number (28.5%) 5-10 times; there were 16 (6.5%) who accessed SNS more than 10 times a day. Similarly, 39.5% said they used SNS for 1-2 hour, while 4% used it for more than 4 hours a day (Table 3).

Table 3: Pattern of use of SNS among daily users (n=256).

	Frequency	Percentage (%)
Frequency of use every day		
At least once	52	20
2-5 times	115	45
5-10 times	73	28.5
>10 times	16	6.5
Average amount of time spent on SNS		
20 min or less	69	27
1-2 hours	101	39.5
2-4 hours	76	29.6
>4 hours	10	3.9
Total	256	100

The students were found to be using social network sites mainly to remain in contact with their friends and relatives (51%), remaining for knowledge and educational purpose (16.8%), just for fun (12.8%), to spend spare time when bored (11%), for networking and social purpose (7.8%) and chatting (0.8%) respectively.

SNS usage and health problems

The common health problems experienced by the participants were Headache (46.5%), postural pain (44.5%), eye strain (43.8%), mood swings (37.5%), appetite change (33.3%), eye sight problems (27.8%), feel more lethargic (21.8%), weight gain (12.3%) and weight loss (7.2%).

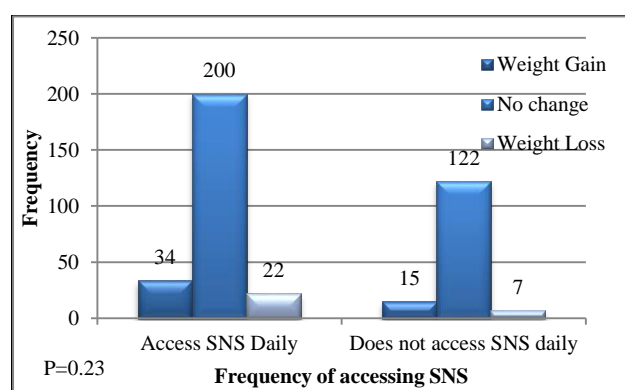


Figure 2: Association of daily usage of SNS and change in weight.

Daily use of SNS was found to be significantly associated with diminished eyesight (34.4% v/s 15.9%, $p<0.001$), eye strain (50% v/s 32.6%, $p<0.001$) and headache (56.2% v/s 29.2%, $p<0.001$). Problems with appetite were

also significantly higher among daily users of SNS as compared to non-daily users (39.4% 22.2%, $p<0.001$). A greater proportion of daily users had weight gain (13.3% v/s 10.4%) as well weight loss (8.6% v/s 4.8%). However, change in weight was not significantly higher

in the daily users as compared to the non-daily users ($p=0.236$) (Figure 2) Postural pain like back or neck or wrist pain was seen in 50.4% of daily users as compared to 34% on non-daily users ($p=0.002$) (Table 4).

Table 4: Association of daily usage of SNS and health problems.

	Daily usage of SNS		Total	P value
	Yes	No		
Affected eyesight	88 (34.4)	23 (15.9)	111 (27.8)	<0.001
Eye strain	128 (50.0)	47 (32.6)	175 (43.7)	<0.001
Headache	144 (56.2)	42 (29.2)	186 (46.5)	0.002
Affected appetite	101 (39.4)	32 (22.2)	133 (33.6)	<0.001
Postural pain	129 (50.4)	49 (34.0)	178 (44.5)	0.002

DISCUSSION

The present study was conducted among college students aged between 18 to 23 years studying in various colleges of Thrissur district. The most commonly used SNS was Facebook (78%), similar to the study by Sponcil & Gitimu et al, in a USA, where 88.5% recognized Facebook as their preferred social media site.⁵ A majority of students (64%) accessed SNS on a daily basis while 36% of them used weekly or monthly in the present study. A similar study conducted in Nepal has been shown that majority (84.1%) of the students accessed Facebook on daily basis. Similar pattern of SNS use has been demonstrated by Gray et al and Masthi et al.^{6,7} Twenty nine percent of the participants logged in to SNS 2-5 times in a day, and most of daily users used for 1-2 hour (39.5%). This study was comparable with Rajesh Kumar Jha et al study, in their study most of the students spent time on Facebook on average 1–2 h daily.⁸ Another study conducted by Ellison et al and Kalpidou et al findings found to have consistent with this study.^{9,10}

Nearly half the participants (46.8%) usually accessed SNS while at their home alone and 26.8% of students accessed SNS from both homes and colleges. According to Bicen et al, in their study, 29% of the participants use Facebook at home, 20% of them use Facebook at café/restaurants, 17% of them use the Facebook at University, 7% of them use Facebook at Internet Café, 5% of them use the Facebook at working place.¹¹ Mobile phone was the most commonly used device to access SNS; this was comparable to findings of previous studies.^{12,7} This particular method of accessing SNS could be due to increased availability of internet access and newer versions of operating systems on mobile devices that support SNS use.

Reasons for using Facebook

In this study majority of students were found to be using social network sites mainly to remain in contact with their friends and relatives (51%), only 16.8% were found to be using for knowledge and educational purpose.

Another study conducted in USA by Pempek et al shows that 85% of college students used Facebook to communicate with friends, both on campus and from their former high schools.¹³ According to Hew, Facebook has very little educational value and the participants mainly used Facebook to keep in contact with the known individuals which were found to be concurring with this study.¹⁴ Jha et al, in their study demonstrated that only 5% of participants used Facebook for academic purpose⁸, while other studies conducted by Raacke et al and Gray et al reported academic use to be higher (10.9 and 25.5% respectively).^{6,8,15} This difference could be due to academic culture and varied institutional policies on the use of internet in these institutions.

Effects of SNS on physical health

Every invention has both negative and positive effects. The same was the case with SNS. The adverse health effects experienced by the participants were headache (46.5%), followed by postural pain, eye strain, mood swings and so on. A study conducted by Akriti et al, showed similar findings and in their study adverse health effects experienced by the participants were headache (38%), followed by postural pain (22%), eye strain (28%), mood swings (39%) and weight gain (18%). Another study conducted by Jha et al elicited adverse health effects such as burning eyes (21.0%), disturbed sleep (19.0%), headache (16.2%), postural pain (12%) and reduced appetite 4 (0.9%).^{4,8}

In the present study prevalence of adverse health problems were significantly associated with daily usage of SNS. Visual problems, eye strain, appetite problems, postural pain and headache were significantly higher ($p<0.001$) in the SNS daily users. Daily usage of SNS was not found to be significant with a change in weight ($p=0.236$).

This study has a few limitations. For practical reasons, data such as change in weight and visual acuity were collected based on the responses to the questionnaire rather than by direct assessment. As the study was

conducted within the premises of the institutions, the probability of social desirability bias in the responses given by the participants cannot be ruled out. Also, being a cross-sectional study, it cannot establish a temporal relationship or causality; we can only comment on the association between SNS use and various health factors.

CONCLUSION

Humans are social animals and Social Networking Sites like Facebook, Twitter and LinkedIn now provide a great resource for fulfilling their needs by allowing them to connect immediately. In this study, the pattern of usage of SNS and impact of excessive online social networking on participants' physical health was evaluated. The study shows how virtual online world is interfering with their health. Visual problems, eyestrain, headache, appetite problems and postural pain were found to be significantly higher in excessive SNS users.

It is important to involve the parents of students, educational institutions, and the SNS authority, to collaborate on how to encourage students to limit social media usage and bring awareness to the consequences of excessive use, especially among the student population.

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