

Use of Social Media and its Effect on Health of Secondary Level Students of Kathmandu Metropolitan City

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ABSTRACT

Introduction: Social media is a trending fashion among teenagers and youths. Globally, among 7.426 billion population (2017), 3.773 billion were internet users, out of which 2.789 billion were active social users. Its utilization can be a boon or revile to people based on its use. The objective of this study was to determine use of social media and its effect on the health of secondary level students in Kathmandu Metropolitan City.

Methods: This study was a school based cross-sectional study conducted among 422 students aged 14-16 years of Kathmandu Metropolitan, Bagmati. Government and private schools were selected randomly and students were recruited conveniently. Using a structured questionnaire, a face to face interview was conducted. We collected the data after obtaining ethical clearance from Nepal Health Research Council, Ref no. 105. Collected data were then entered and analyzed using SPSS version 16.

Results: In overall, 91% of the secondary level students used one or more types of social media. Fear of Missing Out (FOMO) was present in about 60% of the respondents and 20% of the respondents were at the risk of FOMO. Three-fifth of the respondents reported one or more physical problems due to social media use.

Conclusions: Use of social media was found increasing comparatively than previous year. Either its use was for good or bad purpose, during this process, more than half of the students suffered from various health problems. So, use of social media should be limited in early age students preventing lifelong health hazards.

Keywords: *Health effects; Nepal; Prevalence; Social media; Students.*

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INTRODUCTION

The words “Internet”, “Social Media” are familiar terms to everyone in this 21st century. With the evolution of SM sites, the way of interacting and communicating has taken a new pathway. People are socializing, connecting more and more in different pattern from that of traditional ones.^{1,2} Most popular social media sites and applications used worldwide include Facebook, Instagram, Twitter, YouTube, Messenger, Viber, WhatsApp, Snapchat, WeChat etc.³

Health is another area where social media strikes. Excessive use of SM has a shattering effect on physical, mental and social health of individuals. Sitting over a place using these media lessens the physical activity making them vulnerable to non-communicable disease; also, staring at the screen for long may overstress the eye, causing eye problem, headache etc.^{4,5,6}

In this context, the main aim of this study was to find out the prevalence of social media use pattern and its health effect on teenagers (14-16 yrs.) residing in Kathmandu Metropolitan City, Bagmati.

METHODS

A descriptive cross-sectional study was conducted among 422 school students aged 14-16 years of Kathmandu Metropolitan city, Bagmati, Nepal. Data was collected from May to April 2018. Ethical approval letter from the Institutional Review Board (Ref no. 105, 2018) was obtained. Permission letter was obtained from the Kathmandu Metropolitan office to carry out the study.

The study area was Kathmandu Metropolitan, Bagmati district, which is located in Province no. 3 of Nepal. Study population was school students/teenagers aged 14- 16 years residing in Kathmandu Metropolitan. Participants who were absent , who refused to participate were excluded.

The sample size was determined using the formula,

$$(n) = Z^2 pq/d^2$$

where,

n=required sample size

d = margin of error (5%)

p= 50% = 0.5

q=0.50

z= 1.96 at 95% level of confidence.

$$n = (1.96)^2 * 0.50 * 0.50 / (0.05)^2 = 384.$$

Including 5% non-response rate , calculated sample size was 403. However, 413 students were recruited in the study.

Sampling frame for the study was the school list of Kathmandu district, which was obtained from the District Education Office, Kathmandu. Four schools were selected randomly. Students of Grade 8, 9, 10 were recruited conveniently. Teachers were first called and an orientation was given on the questionnaire, the study's aim, the importance of privacy, and protecting the anonymity of the responders. Second, the parents of the kids were contacted and invited to an orientation event. After that, the parents were told about the study and gave their consent for their children to participate.

Semi-structured questionnaire was developed as a means to collect all the necessary information for the completion of the research study. The variables included in our study were: socio-demographic characteristic, pattern of social media utilization, reason for social media use and effects of social media on health and other factors. Effect on physical health, mental health and social health were assessed. Mental health was measured using “Fear of missing out scales”. Other effects like body dissatisfaction, jealousy and cyber bullying were also assessed through questionnaire. Body dissatisfaction was measured using “Body Dissatisfaction Scale”

Collected data were entered in EPI-DATA version 3.2. The data from EPI-DATA were exported to SPSS version 16 for further analysis. Categorical variables were described using frequencies and percentages. Descriptive statistics was calculated for most variables using frequencies and summary statistics and percentage to describe the study population.

RESULTS

More than four-fifths of secondary level students used one or more social media sites among which the maximum users were- Facebook (93%), followed by messenger (69.5%), Instagram (37.7%)and others (viber, snapchat, twitter, wechat). The first time they got to use social media was mostly at 11-13 years (49.7%). About half of the students preferred to use social media at night time (48.1%) which may result in a sleeping disorder at an early age.

Table 1. Pattern of Social media use by the respondents (n = 374)

Characteristics	n(%)
Use of Social Media	374(91.0)

Types of Social Media used*	
Facebook	348(93.0)
Instagram	141(37.7)
Twitter	29(7.8)
Snapchat	68(18.2)
Messenger	260(69.5)
WeChat	15(4.0)
Viber	76(20.3)
Others	26(7.0)
Age at 1st use of social media	
5-7 years	1(0.3)
8-10 years	52(13.9)
11-13 years	186(49.7)
14-16 years	134(35.8)
17-19 years	1(0.3)
Device used for using social media	
Smartphone/Mobile phones	319(35.3)
Laptop/Desktop	81(21.7)
Tablet	43(11.5)
Mode of internet mostly used for accessing social media	
Wifi	281(75.1)
Mobile data	87(23.3)
Cable internet	6(1.6)
Frequency of use of social media	
Once in a day	135(36.1)
More than once in a day	96(25.7)
Once in a week	107(28.6)
More than once in a week	36(9.6)
Use of social media more in comparison to previous year	
Yes	160(42.8)
No	152(40.6)
Decreased use	62(16.6)
Use of social media to be friends with stranger	
Mostly	15(4.0)
Sometimes	203(54.3)
Not at all	156(41.7)
Time spend by the respondents being online on social media site	
On weekend or holidays	
One hour or less	129(34.5)
1-2 hour	139(37.2)
2-4 hour	70(18.7)
4-6 hour	22(5.9)

More than 6 hour	14(3.7)
Outside of school on a particular day	
One hour or less	167(44.7)
1-2 hour	74(19.8)
2-4 hour	13(3.5)
4-6 hour	3(0.8)
Not at all	117(31.3)
Preferred time for social media use	
Morning	22(5.9)
Day	36(9.6)
Evening	102(27.3)
Night	180(48.1)
All time	34(9.1)

* Indicate multiple response question

Total 413 samples were collected from four schools of Kathmandu Metropolitan city where three fourth of the respondents were of age group 14-16 years. More than half of the respondents were from government schools(59%) and nuclear families(62%) with mostly 20,000-30,000 monthly income. Total female participants (56%) were more as compared to male participants (44%).

Table 2. Demographic characteristics of the respondents (n=413)

Demographic information	n(%)
School Type	
Government School	244(59.0)
Private School	169(41.0)
Gender	
Male	182(44.0)
Female	231(56.0)
Age (year)	
11-13	40(9.7)
14-16	324(78.5)
17-19	49(11.9)
Family Type	
Nuclear family	256(62)
Joint family	139(33.7)
Broken family	18(4.4)
Ethnicity	
Brahmin/Chettri	168(40.7)
Newars	36(8.7)
Janajati	201(48.7)
Others	8(1.9)

Income (per month)	
Less than 10,000	54(13.1)
10,000-20,000	95(23.0)
20,000-30,000	106(25.7)
30,000-40,000	67(16.2)
40,000-50,000	49(11.9)
More than 50,000	42(10.2)

Curiosity (61.5%), followed by peer influence(29.7%) was found to be major reasons for starting social media . More than half of the students had used social media with the sole purpose of finding information (65.5%).

Table 3. Reasons for Social media use (n=374)

Reason for using social media	
Reason for using social media for the 1st time*	
Friends/Peer influence	111(29.7)
Curiosity	230(61.5)
To be popular	14(3.7)
To be social	74(19.8)
Others	13(3.5)
Purpose for using social media*	
Play online games	126(33.7)
Chat online	205(54.8)
Participation in social networks(Commenting, viewing post, writing post etc)	104(27.8)
To find information	245(65.5)
To keep in touch with friends and family	227(60.7)
To make new friends	97(25.9)
To get opinion	83(22.2)
To share experience	103(27.5)
Group discussion for homework and group projects	172(46.0)
Other	3(0.8)

* Indicate multiple response question

Table 4 reveals that almost 60% of the respondents suffered from physical health problems like eye problems (36.1%), headache (31.8%), disrupted sleep(18.2%), neck pain (16.3%), back pain(15%) and reduced appetite,weight gain(4%). Along with physical effects, mental effects like Severe FOMO (Fear Of Missing Out, 31%) was also experienced by respondents. More than half of the respondents preferred to spend time with friends and family along with social media use(59.6%) as their social life.

Table 4. Physical,Mental and Social problems faced by the respondents (n=374)

Problems faced by the respondents	n(%)
A. Effects on physical health	
Physical problem faced by the respondents	222(59.4)
Types of health problems faced by the respondents (n=222)*	
Eye problem	135(36.1)
Headache	119(31.8)
Neck pain	61(16.3)
Back pain	56(15.0)
Disrupted sleep	68(18.2)
Reduced appetite/ Not feeling like eating	15(4.0)
Weight gain	15(4.0)
B. Effect on Mental Health- Fear of Missing Out (FOMO) among the respondents (n=374)	
Severe FOMO	116(31.0)
Moderate FOMO	107(28.6)
At the risk of FOMO	72(19.3)
No FOMO	79(21.1)
C. Effect on Social Life	
Effect of Social Media on communication pattern of respondents (n=374)	
Preference of the respondent	
Using social media	66(17.6)
Spending time with friends and family	85(22.7)
Both	223(59.6)
Type of communication preferred by the respondent	
Face to face communication	69(18.4)
Communication through social media	114(30.5)
Comfortable with both	191(51.1)
Impact of social media on face to face communication	
Yes	154(41.2)
No	181(48.4)
Somewhat	39(10.4)

* Indicate multiple response question

Many other effects like body dissatisfaction, feeling of jealousy and cyberbullying were faced by the respondents. 28.9% of the respondents had felt severe body dissatisfaction with very less percent of feelings of jealousy by comparing themselves with others on social media(10%). About one-fourth of the respondents had been a victim of online bullying among which only 45.8% had shared/reported about cyber bullying. Receiving disturbing messages

(47.9%) along with one's profile being hacked for damaging reputation (30.2%) were the major types of cyber bullying experienced by the respondents.

Table 5. Other effects faced by respondents (n= 374)

Others effects	n(%)
Body dissatisfaction among the respondents	
Severe Body dissatisfaction	108(28.9)
Moderate Body dissatisfaction	86(23.0)
Risk for Body dissatisfaction	94(25.1)
No Body dissatisfaction	86(23.0)
Feeling of jealousy among the respondents	
Yes	40(10.7)
No	284(75.9)
Somewhat	50(13.4)
Cyber bullying faced by the respondents	
Victim of online bullying (n=374)	96(25.7)
Sharing/reporting about cyber bullying (n=96)	44(45.8)
Type of cyber bullying experienced by the respondent (n=96)*	
Sending or posting threatening messages	20(20.8)
Sharing/posting embarrassing photos or videos	13(13.5)
Hacking online profiles or creating a fake profile to damage another's reputation	29(30.2)
Sharing secrets about someone online without their consent	10(10.4)
Intentionally leaving someone out of an online activity or friendship group	16(16.7)
Sending disturbing messages	46(47.9)
Cyber stalking: use of the Internet to contact someone or find out information about them in a way that is annoying or frightening	11(11.5)
Others	4(4.2)

* Indicate multiple response question

DISCUSSION

As technology advances, social media is increasingly utilized to communicate, exchange information, and connect people around the globe. Websites for social networking have a negative impact on students' life, and students use social networking sites and learn sophisticated material before their age.⁷

The primary purpose of this research was to determine the pattern of use of social media by the secondary level students and how their uses have an impact on health. Study revealed 91% used one or more types of social media in secondary level students. It was found that three-fifths of the respondents reported one or more physical problems due to social media use. Eye problems, headache, disrupted sleep were found to be major physical problems seen among respondents. Such an effect had also been observed in studies carried out in private medical colleges in Nepal.⁸ In this study it was observed that FOMO was present in about 60% of the respondents. A survey conducted in the US reported 56% of the people had FOMO in 2013 in the age group above 18.⁹ This research study found that the prevalence was comparatively higher than other research, which also gives indication that age can be a variable for increasing risk of FOMO.

Similarly, about two-fourth of the respondents had body dissatisfaction. It has also been identified in various other researches carried out in different places, with varying prevalence and percentage.^{10,11} Likewise, more than half of the respondents felt use of social media had an impact on face to face communication. Such results had also been identified in research conducted in 2017 among teenagers.¹² It was found that 26% of the participants were the victims of cyber bullying. A survey carried out in South Africa in 2011 also showed similar result.¹³

CONCLUSIONS

Study finding showed use of social media among secondary level students was high. Physical health problems like headache, eye problem, stiff neck, obesity etc were seen. Likewise, more participants had severe and moderate fear of missing out and more students had the problem of body dissatisfaction affecting their mental health. More number of participants preferred using social media to communicate rather than having face-face communication, one-fourth of the participants were the victim of cyberbullying but less than fifty percent of the victim shared about it to their parents, friends, police etc.

ACKNOWLEDGEMENT

Not Applicable

CONFLICT OF INTEREST

None

FUNDING

This study was funded with the authors' own contributions.

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