

Online social networking usage and frequency of Depression in Undergraduate University students

Muhammad Ali Balouch^a, Rukhsana Kausar^b, Muhammad Ali Abbassi^c, Saifullah Soomro^d,
Shahida Khan^e, Muhammad Ibrahim Ansari^f

^a Senior Medical Officer, Health Department, Government of Sindh.

^b Head Nurse, Health Department, Government of Punjab.

^c Commissioned Staff/ Lecturer Health Department, Govt of Sindh.

^d Lecturer Benazir College of Nursing@ SMBB Medical University Larkana.

^e Assistant Professor/ Principal Nursing Health Department, Govt of Sindh.

^f Assistant Professor/ Research fellow Shaheed Mohtarma Benazir Bhutto Medical University Larkana- Sindh.

*Corresponding author: cadetcccl@yahoo.com

ABSTRACT

BACKGROUND & OBJECTIVE: Mental health is playing an important role in our daily life. Now a days depression is the second most common illness in the world. Online social networking is one of the risk factors to mental illness, and objective is to determine the usage of social networking sites (SNS) and level of depression among undergraduate students.

METHODOLOGY: This cross-sectional study was conducted at Sindh Agriculture University Tandojam- Sindh with simple random sampling through self-administrated questionnaires. Sample size was calculated on a prevalence rate of 50%, students ranging from 17-28 years, using SNS were included while those having any chronic illness were excluded. Ethical approval was obtained from Health Services Academy Islamabad, anonymity confidentiality, and privacy was assured. SPSS version 20.0 was used, and chi-square was applied to find the association.

RESULTS: Out of 212 students, the respondents consisted mainly of male students n=165 (77.8%), among them, 52 (24.5%) students were of age 19 years and 76 (35.8%) were in first-year class. Results reveal that the frequently used SNS was Facebook 169 (79.7%). The students using these sites for more than 4 years were 28 (13.2%). Among the SNS users, 142(67%) were having moderate depression, while 9 (4.2%) had severe depression. Male students have more online friends ($p < 0.001$) and tend to login more times on SNS as compared to female students ($p = 0.023$).

CONCLUSION: The usage of social networking sites is more among undergraduate university students, especially males. Most of the students suffered from moderate depression. There may be a link between SNS usage and depression among undergraduate university students.

KEYWORDS: Social media, Online networking, Internet, Mental health, Depression.

INTRODUCTION

In recent years, the smartphone has increased the way of communication as a basic device [1]. Now a days online health disciplines are allowing their clients/ patients to share their problems and issues [2]. The internet and social media are used for social interaction [3]. Worldwide internet users are 3.2 billion [4]. Gender is also playing a vital role in mental health [5]. Internet addiction behavior is also referred to as excessively problematic and pathological internet behavior [6]. Social communication through internet surfing is varying

from day-to-day. Prioritization it depends upon one's interests i.e. companions, siblings, interest, colleagues, and their common interests [7]. In Pakistan, the users of social media are increasing day by day and now it has crossed 9 million. Pakistan is 27th most popular Facebook user [8]. The youth is addicted to internet surfing, they are spending a lot of time on it. The hobby of youth is gambling which can now be done through social media [9].

In a study, conducted online in Australia, showed that Facebook users have extravert and narcissistic personality characteristics and family loneliness feelings on strong side [10].

Balouch MA, Kausar R, Abbassi MA, Soomro S, Khan S, Ansari MI. Online social networking usage and frequency of Depression in Undergraduate University students. *Journal of University Medical & Dental College*. 2022; 13(2):382-386.



Attribution 4.0 International (CC BY 4.0)

A survey conducted on students of schools of Canada to find out the relation between social media usage and risky behavioral eating, they found that the adolescents who use social networking had increased odds of breakfast skipping and using energy drinks ^[11]. A study conducted on American young adults to find out relation between social networking and depression found that the quality, not the frequency, was related to depression among young adults ^[12]. Facebook usage among university students is the commonest ^[13]. Another study conducted among 600 university students in Islamabad found that about half of the students had internet access, and 43 % of those students used the internet to get online information about health ^[14]. The internet has been regarded as an academic and recreational tool amongst adolescents and adults, which is the source of providing information and social interaction. Globally this area has grasped the attention of the researchers, and in Pakistan it is still unattended, or only little research has been conducted on this topic. This study aims at improving the knowledge of adolescents and students about social networking site (SNS) usage, and its psychological effects and objective is to determine the social networking sites (SNS) usage frequency, usage timing, types of SNS, the pattern of SNS usage and level of depression among the undergraduate University students.

METHODOLOGY

Cross sectional quantitative study was conducted over a duration of six months i.e. October 2016- March 2017, at Sindh Agriculture University Tandojam- Sindh, among undergraduate students. The sample size was calculated through a formula of sampling with a prevalence rate of 50% ^[15], n=385, by adding 10% refusal rate, the sample size was n=212. A systematic random sampling technique was used for data collection. Inclusion criteria were those students ranges from 17-28 years and using social networking sites like Facebook, Twitter, Instagram, MySpace, WhatsApp, YouTube etc. and students having any chronic illness were excluded. Data collection tool was a standardized questionnaire that was translated into the local language i.e. Sindhi. The questions were asked in English as well as Sindhi language simultaneously. The tool was based on the Patient Health Questionnaire-9 (PHQ-9), which was already used in the previous studies ^[16], and Facebook intensity scale developed by Ellison, NB ^[17]. Tool comprised of socio demographic section, items related to the usage of social media, and depression-related items. Ethical approval was obtained from Health Services Academy Islamabad, anonymity confidentiality, and privacy was assured. Consent was obtained from the students or their guardians. SPSS version 20.0 was used in which frequency and percentages were calculated, and for inferential analysis, the chi-square test was performed.

RESULTS

Out of 212 students, Gender was classified as 165 (77.8%) males, and 47 (22.2%) females. The age, year of study, type, duration and pattern of SNS usage is presented in table-I.

Student's level of depression measured according to patient health questionnaire-9 (PHQ-9) is presented in table-II. Most of the students suffered from moderate depression 142(67%).

Table-I: Demographics and scale statistics of social networking site users (n=212).

Variables	n (%)
Gender	
Male	165 (77.8)
Female	47 (22.2)
Age	
19 Years	52 (24.5)
20 Years	33 (15.6)
21 Years	41 (19.3)
22 Years	23 (10.8)
23 Years	26 (12.3)
24 Years	25 (11.8)
25 Years	12 (5.7)
Study Year	
First Year	76 (35.8)
Second Year	41 (19.3)
Third Year	65 (30.7)
Fourth Year	30 (14.2)
Type of SNS Used	
Facebook	169 (79.7)
WhatsApp	37 (17.5)
Twitter	5 (2.4)
Instagram	1 (.5)
Another	0
Usage Duration of social media	
< 1 Year	39 (18.4)
1-2 Years	85 (40.1)
3-4 Years	60 (28.3)
> 4 Years	28 (13.2)
Usage pattern	
Yes, on daily basis	146 (68.9)
Not on daily basis	66 (31.1)
Login of SNS	
1-2 Times	88 (41.5)
3-5 Times	71 (33.5)
6-8 Times	18 (8.5)
> 8 Times	35 (16.5)
Usage Time of SNS Per Day	
1-30 Minutes	70 (33)
31-60 Minutes	81 (38.2)
61-240 Minutes	55 (25.9)
> 4 Hours	6 (2.8)
Online Friends	
1-20	52 (24.5)
21-50	47 (22.2)
51-100	31 (14.6)
>100	82 (38.7)

Table-II: Student's level of depression according to patient health questionnaire-9 (PHQ-9) score.

Depression Categories	Depression Scores (Range)	Obtained Score n(%)
None	0-4	0(0)
Mild Depression	5-9	39(18.4)
Moderate Depression	10-14	142(67)
Moderately Severe Depression	15-19	22(10.4)
Severe Depression	20-27	9(4.2)

Table-III: Association of SNS parameters between male and female students.

Variable	Category	Gender		p-value
		Male	Female	
Type of SNS	Facebook	56(38.4)	33(50)	0.032
	WhatsApp	76(52.1)	21(31.8)	
	Twitter	12(8.2)	9(13.6)	
	Instagram	2(1.4)	3(4.5)	
Usage duration	< 1 Year	26(17.3)	13(21)	0.026
	1-2 Years	52(34.7)	33(53.2)	
	3-4 Years	49(32.7)	11(17.7)	
	> 4 Years	23(15.3)	5(8.1)	
Usage Pattern	Yes	116(70.3)	30(63.8)	0.397
	No	49(29.7)	17(36.2)	
Login of SNS	1-2 Times	70(42.4)	18(38.3)	0.023
	3-5 Times	56(33.9)	15(31.9)	
	6-8 Times	9(5.5)	9(19.1)	
	> 8 Times	30(18.2)	5(10.6)	
Usage Time of SNS Per Day	1-30 Minutes	52(30.8)	18(41.9)	0.571
	31-60 Minutes	66(39.1)	15(34.9)	
	61-240 Minutes	46(27.2)	9(20.9)	
	> 4 Hours	5(3)	1(2.3)	
Online Friends	1 to 20	34(19.4)	18(48.6)	<0.001
	21- 50	36(20.6)	11(29.7)	
	51- 100	26(14.9)	5(13.5)	
	>100	79(45.1)	3(8.1)	

Significance level < 0.05

N= 212

DISCUSSION

Online social networking is one of the favorite mediums of entertainment, interaction, communication and information now a days. The use of social media has its pros and cons on adolescent's mental health. The study was conducted among undergraduate university students of Sindh Agriculture University Tando Jam. The descriptive statistics were performed to determine the above-mentioned objectives of the study. The male's population was in the majority than the female population. The mean age of the population was 21.3 years.

Facebook is considered the most entertaining tool for the youth, and WhatsApp was the second most favorite site used by the study population. Studies conducted at Canada in which it has been reported that facebook is an abundant source of online networking and 82% of university students

have logged in at face book in 24 hours ^[18] and the result of this study is compatible to conducted study. One study conducted in Oman has shown that YouTube was the favorite social media site among others in the students, and facebook was the next to follow ^[19]. The same results are contrary to conducted study. In one study conducted in Karachi, Pakistan, in a public sector medical university with 1000 participants, it was reported that the mean age of the population was 20.08 years, 64 % of the respondents were using facebook on a daily basis and approximately 1-2 hours on a daily basis. The study reported that 71 % of the population had depressed feelings. The study results are compatible with the results of this study which concluded the mean age as 21.31 years, most of the population (72 %) were using facebook on a daily basis, and total time spent on social media was reported 1-3 hours in a day. The percentages for the depression of this study were concluded as almost the same ^[20]. In the modern time of science and

technology, there is a huge need for youth to interact via social media, which cannot be neglected. In our study, most of the students had moderate depression 142 (67%), another study conducted among medical undergraduate students of LUMHS Jamshoro- Sindh using the same tool, supported the results of our study, in which 44.6% students were in moderate depression ^[21]. In our study, gender wise comparison of most of the SNS usage parameters revealed no significant association. A study was conducted on social media's impact on mental health where association between usage of social media and quantity of internet surfing sites were found with a significant p-value ^[22]. In our study, gender vs. login of SNS were analyzed in which associations were found, similarly, a study, conducted in China regarding old and new cases of net gaming and its association with personality traits among Chinese youth gamers showed significant associations ^[23].

CONCLUSION

The usage of social networking sites is more among undergraduate university students, especially males. Most of the students suffered from moderate depression. There may be a link between SNS usage and depression among undergraduate university students.

RECOMMENDATION: Government should introduce a policy for college students regarding the usage of social networking as well as Pakistan Telecommunication Authority must abide and awareness seminars should be arranged regarding mental health issues related to online networking with the collaboration of the Federal Investigation Agency and the Cybercrime branch of Police Services.

ACKNOWLEDGEMENT: None.

CONFLICT OF INTEREST: All authors disclose no conflict of interest.

GRANT SUPPORT & FINANCIAL DISCLOSURE: None.

REFERENCES

1. Lozano Blasco R, Latorre Cosculluela C, Quílez Robres A. Social network addiction and its impact on anxiety level among university students. *Sustainability*. 2020;12(13):5397. Doi:10.3390/su12135397
2. Park KA, Eum SY, Oh H, Cho MH, Chang HS, Lee YS, et al. Factors affecting online health community participation behavior in patients with thyroid cancer. *Plos one*. 2020;15(6):e0235056.
3. Hatfield E, Rapson RL. From pen pals to chat rooms: the impact of social media on Middle Eastern Society. *SpringerPlus*. 2015;4(1):1-7. Doi:10.1186/s40064-015-1033-4
4. Albert E, John KP. Impact of online networking on students. *Springer Plus*. 2017; 2(3):390:290-293
5. Knibbe TJ, Luchies LB. Motivations to use Facebook for new relationships predicts poorer well-being among extraverts but better well-being among introverts. *Journal of Interpersonal Relations, Intergroup Relations and Identity*. 2013;6:16-27.
6. Tsitsihar A, Manikin M, Shoemakers TM, Zavala EC, Larsson K, Wick S, et al. Internet addictive behavior in adolescence: a cross-sectional study in seven European countries. *Cyber psychology, Behavior, and Social Networking*. 2016; 17(8):528-535. Doi:10.1089/cyber.2013.0382
7. Al-Dwaikat TN, Aldalaykeh M, Rababa M. The relationship between social networking sites usage and psychological distress among undergraduate students during COVID-19 lockdown. *Heliyon*. 2020;6(12):e05695. Doi:10.1016/j.heliyon.2020.e05695
8. Ahmed I, Qazi TF. A look out for academic impacts of Social networking sites (SNSs): A student based perspective. *African Journal of Business Management*. 2011;5(12):5022-5031. Doi: 10.5897/AJBM11.595
9. Savolainen I, Kaakinen M, Sirola A, Koivula A, Hagfors H, Zych I, et al. Online relationships and social media interaction in youth problem gambling: A four-country study. *International Journal of Environmental Research and Public Health*. 2020;17(21):8133. Doi:10.3390/ijerph17218133
10. Tando EC, Ferrucci P, Duffy M. Facebook use, envy, and depression among college students: Is face booking depressing? *Computers in Human Behavior*. 2019; 43:139-146. Doi:10.1016/j.chb.2014.10.053
11. Sampasa-Kanyinga H, Chaput JP, Hamilton HA. Associations between the use of social networking sites and unhealthy eating behaviours and excess body weight in adolescents. *British Journal of Nutrition*. 2013; 114(11):1941-1947. Doi:10.1017/S0007114515003566
12. Davila J, Heisenberg R, Feinstein BA, Gorman K, Bhatia V, Starr LR, et al. Frequency and quality of social networking among young adults: Associations with depressive symptoms, rumination, and combination. *Psychology of Popular Media Culture*. 2019; 1(2):72-86. Doi: 10.1037/a0027512
13. Jawaid M, Khan MH, Bhutto SN. Social network utilization (Facebook) & e-Professionalism among medical students. *Pakistan Journal of Medical Sciences* 2015; 31(1):209-213. Doi:10.12669/pjms.311.5643
14. Shaikh IA, Shaikh MA, Kamal A, Masood S. Internet access and utilization for health information among university students in Islamabad. *Journal of Ayub Medical College, Abbottabad*. 2007; 20:153-156.
15. Holloway IW, Dunlap S, Del Pino HE, Hermanstynne K, Pulsipher C, Landovitz RJ. Online social networking, sexual risk and protective behaviors: considerations for clinicians and researchers. *Current Addiction Reports*. 2014; 1(3):220-228. Doi:10.1007/s40429-014-0029-4

16. Adewuya AO, Ola BA, Afolabi OO. Validity of the patient health questionnaire (PHQ-9) as a screening tool for depression amongst Nigerian university students. *Journal of Affective Disorders*. 2006;96(1-2):89-93.
17. Ellison NB, Steinfield C, Lampe C. The benefits of Facebook “friends:” Social capital and college students’ use of online social network sites. *Journal of Computer-Mediated Communication*. 2007;12(4):1143-1168.
18. Quan-Haase A, Young AL. Uses and gratifications of social media: A comparison of Facebook and instant messaging. *Bulletin of science, Technology and Society*. 2010;30(5):350-361. Doi:10.1177/0270467610380009
19. Masters K. Social networking addiction among health sciences students in Oman. *Sultan Qaboos University Medical Journal*. 2015;15(3):e357–e363. Doi: 10.18295/squmj.2015.15.03.009
20. Farooqi H, Patel H, Aslam HM, Ansari IQ, Khan M, Iqbal N, et al. Effect of Facebook on the life of Medical University students. *International Archives of Medicine*. 2013;6(1):1-8.
21. Balouch MA, Anwar S, Ansari MI, Rasheed T, Ansari MS, Balouch N. Impact of online social networking on mental health among medical students of LUMHS Jamshoro, Sindh, Pakistan. *Rawal Medical Journal*. 2019;44(3):613-617.
22. Deepa M, Priya K. Impact of Social Media on Mental Health of Students. *International Journal of Scientific & Technology Research*. 2020;9(03).
23. Liao Z, Huang Q, Huang S, Tan L, Shao T, Fang T, et al. Prevalence of internet gaming disorder and its association with personality traits and gaming characteristics among Chinese adolescent gamers. *Frontiers in Psychiatry*. 2020:1266. Doi:10.3389/fpsyt.2020.598585.

Author’s Contribution:

Muhammad Ali Balouch: Final approval of the version to be published.

Rukhsana Kausar: Collection and assembly of data, statistical expertise

Muhammad Ali Abbassi: Critical revision of the article for important intellectual.

Saifullah Soomro: Critical revision of the article for important intellectual content.

Shahida Khan: Interpretation of data for the work.

Submitted for publication: 29-01-2021

Accepted after revision: 09-05-2022