

INTERNET USAGE DURING COVID-19 AMONG MEDICAL AND DENTAL STUDENTS, PESHAWAR

¹SOFIA SHEHZAD, ²SAMIR KHAN KABIR, ³ZAINAB WAHEED, ⁴HAMID HUSSAIN, ⁵AFAQ FAROOQ, ⁶SOFIA HAIDER DURRANI

ABSTRACT

The purpose of this study was to assess the usage of the internet among medical and dental students at Gandhara University during COVID-19. It was a cross-sectional study, carried out from December 2020- February 2021. The sample size was 430 students from Sardar Begum Dental College and Kabir Medical College. 2nd, 3rd and final-year students were selected. The questionnaire was designed with closed-ended questions regarding internet usage. An ethical report was obtained from Gandhara University. Data was collected and analysed through SPSS version 26.0. A total of 430 students, 247 Medical and 183 dental students participated in this study. During COVID-19 searching the internet for fun on an hourly basis, searching the internet for health information and the use of the internet on an hourly basis were significant according to our study. During COVID-19 the use of the internet has increased drastically. It was concluded that the use of the internet was in access in all the respected areas.

Keywords: Internet Usage, Dental, Medical, Students, COVID-19, Health,

This article may be cited as: Shehzad S, Kabir SK, Waheed Z, Hussain H, Farooq A, Durrani SH. Internet Usage During Covid-19 among Medical and Dental Students, Peshawar. Pak Oral Dent J 2022; 42(3):159-162.

INTRODUCTION

The Internet provides an opportunity for everyone to interact globally. To search for quantitative topics people, explore the world while sitting in the comfort of their own home or moving around on either desktop, laptop, or smartphone.¹ Students, teachers, and administrators use the Internet frequently for many reasons. They use it to access knowledge, disseminate information, keep in contact with their friends and family, spare leisure time, and do online shopping.²

World Federation for Medical Education (WFME), 1998 recognizes the potential of computers and the Internet in medical education. WFME noted that internet usage for managing information and linking is the most powerful tool for processing medical knowledge and sharing that links local institutions to collaborate

worldwide. It provides new opportunities for teaching and learning tasks.³ Everything in this world can have positive and negative aspects. The situation changed after World Health Organization (WHO) declared coronavirus disease-19 (COVID-19) as a pandemic in March 2020. During the lockdown, social media and internet use were a blessing in disguise. There is skimpy literature on the use of the internet and its effects during the lockdown regarding medical students.⁴

Furthermore, after COVID-19 the internet has become the world's biggest library around the world.⁵ In this pandemic internet is making important inroads in the dissemination of healthcare data, patient care, research, education, and its expansion during the pandemic is a vehicle for global communication, it is an exciting mechanism for the access of the medical data. Important information provided to medical/dental students globally is through the internet.⁶ Students of medicine/dentistry spend most of their time on the internet to get medical information or to socialise. These students have limited time free to relax as they endure a lot of pressure during their education.⁷

After COVID-19 internet-based training/studying has become an important element of medical education. Furthermore, the number of internet users within the universities is increasing in the form of interactive discussions, webinars, and online programs.⁸ Due to

¹ Professor, Department of Community and Preventive Dentistry, Sardar Begum Dental College, Peshawar Email: sofia.kabir@gandhara.edu.pk, +92-345-9222232

² Assistant Professor, Hayatabad Medical Complex, Peshawar

³ Senior Lecturer, Department of Psychiatry, Kabir Medical College, Peshawar

⁴ Professor, Department of community medicine, Kabir Medical College, Peshawar

⁵ Assistant Professor, Department of Periodontology, Sardar Begum Dental College, Peshawar

⁶ Associate professor, Sardar Begum Dental College, Peshawar

Received for Publication: Dec 30, 2021

Revised: Sept 13, 2022

Approved: Sept 14, 2022

lockdown, the educational institutions' closure, limited social movement, and Isolation resulted in a significant variation in the psychological well-being of the students and has further increased their anxiety and depression as they are addicted to smartphones and computers. According to Mamun et al., excessive internet usage increases depressive and anxious symptoms. Moreover, compulsive internet usage was strongly associated with worries of COVID-19 and symptoms of depression.⁹ The purpose of this study was to find the effect and use of internet usage during the lockdown due to the COVID-19 pandemic. The objective of our study is to assess the internet usage after COVID-19 in the medical and dental students of Gandhara University, Peshawar.

METHODOLOGY

It was a cross-sectional study. A total of 430 students were selected, 247 medical and 183 dental students from Kabir Medical College (KMC) and Sardar Begum Dental College (SBDC) were selected. The students were selected from 2nd year, 3rd year and final years of

KMC/SBDC. A structured questionnaire was developed to assess the internet usage of these students during COVID-19 with written consent. A pilot study was done on 15% of the selected population. The data was collected in 2021 January. The ethical report was taken from the ethical committee of Gandhara University, Peshawar. All the students from the 1st and 4th years along with the house officers were excluded from the study. The chi-square test was performed on the data. Data analysis was done on SPSS version 26.0.

RESULTS

Out of 430, 247 medical and 183 dental students participated in the study. The mean age of the students was 21 ± 2 . Table 1 shows that most of the students were spending time on the internet and the rate was high among MBBS students. 1-4 hours students were consuming on the internet for fun/play and similar they reported for studies as depicted in tables 2 and 3. MBBS students were concerned about health-related issues therefore they were using the internet to concern medical/health-related problems (table 4).

TABLE 1: INTERNET USAGE DURING COVID-19

	On average, how many hours do you spend on the internet			Chi-square value	p-value
	1 hour	1-2 hour	more than 4 hours		
MBBS	11 (4.5)	55 (22.3)	181 (73.3)	21.41	0.001
BDS	11 (6.0)	77 (42.1)	95 (51.9)		

TABLE 2: INTERNET USAGE FOR ENTERTAINMENT

	How many hours per day do you use the internet for fun/play?				Chi-Square value	p-value
	less than 1 hour	1-4 hour	5-10 hour	more than 10 hours		
MBBS	62 (25.1)	170 (68.8)	6 (2.4)	9 (3.6)	70.29	0.001
BDS	24 (13.1)	100 (54.6)	56 (30.6)	3 (1.6)		

TABLE 3: INTERNET USAGE FOR STUDIES

	How many hours per day do you use the internet for studies				Chi-Square value	P-value
	less than 1 hour	1-4 hour	5-10 hour	more than 10 hours		
MBBS	27 (10.9)	162 (65.6)	23 (9.3)	35 (14.2)	21.52	0.001
BDS	45 (24.6)	91 (49.7)	29 (15.8)	18 (9.8)		

TABLE 4: INTERNET USAGE FOR HEALTH CONCERNS

	Use to access health/medical information					Chi-square value	p-value
	Daily	weekly	Monthly	less than once a month	Never		
MBBS	65 (26.3)	85 (34.4)	34 (13.8)	48 (19.4)	15 (6.1)	41.28	0.001
BDS	6 (3.3)	89 (48.6)	32 (17.5)	45 (24.6)	11 (6.0)		

DISCUSSION

Availability of computers and the accessibility to the internet in medical education were there but due to Covid-19, there was an acceleration in internet usage globally to a new level.¹⁰ Transfer of teaching and learning to an online system has been promoted.¹¹ The innovative educational projects were initiated to improve and enhance medical education.¹² According to our study the use of the internet was significant, browsing for fun and entertainment, the length of hours used for browsing, for getting information regarding health and medical/dental education. The p-value for hours/day used was 0.001, Browsing for medical information with a p-value of 0.001, and per hour usage regarding fun was 0.001 p-value. According to table-1, Medical/dental students spent their time on the internet daily per hour for more than 4 hours, (Table-2 and 3) the use of internet was more in medical, and dental participation for fun/play and studying was 1-5 hours, and the last variable (table-4) was to assess their internet usage weekly regarding health/medical information was more. Similarly, Maroof et al. assessment, medical students were using the Internet for communication (58.5%) and entertainment, that is, downloading movies and games (46.3%).¹³ The study by Aldebasi had 75% of females preferred the internet (14%), 84% of males used internet textbooks (35%) and (36%) used journals/libraries. Furthermore, in a study by Inamdar, 61% of the students used internet for watching movies and playing games. Whereas, a study conducted by Challa, 60.55% used the internet before joining medical college, 29.45% for social networking, 56.1% used it for entertainment and 14.45% for academic purpose. medical students for highly for their accessibility, understandability, and usefulness Google and Wikipedia was more frequently cited. In another study 92.8% students were searching the internet for latest knowledge. Whereas internet usage in most of the medical students was regarding entertainment and social media. In these students acquiring medical knowledge was low.¹⁴ A study by Byrne-Davis et al. and Guraya et al showed, the main utilization of internet by medical students is on social media mainly in social communication and entertainment, only 20% of participants used social media for learning purposes.¹⁴ in a study maximum number of the students used Internet for watching and downloading movies, songs and communicating with family and friends. In the same study the participants mentioned the use of internet for fun/play was due to feeling lonely. To reduce their stress level these learners were spending more time on internet. While few students were mentioning the internet for learning purposes that were their main aim.¹⁵ In Pakistan, information and communication technology (ICT), should overcome the current limita-

tions of internet as internet use in COVID-19 became a medium of educational courses for medical /dental students and Major educational benefits utilization is from this technology.¹⁶ The potential of the internet and evidence-based medicine together in providing useful information to the physicians and patients cannot be denied. Appropriate use of internet is important for medical/dental students in the academic field as it is a learning tool for medical education.^{17,18}

CONCLUSION

It was concluded that most students use the Internet for entertainment and communication with their family and friends. It was also evident; students spent more time on Internet for leisure rather than for study. Students should be encouraged to use some other mode of recreational activity to help them to reduce the mental stress and take their mind off from being lonely. To enhance e-learning skills and easy assimilation in medical education it would be helpful to guide the medical/dental students to overcome the problems.

REFERENCES

- 1 Singh B, Gupta R, Garg R. Study of medical students and internet usage. *International Journal of Scientific and Research Publications*. 2013;3(5):1-5.
- 2 .Upadhayay N, Guragain S. Internet use and its addiction level in medical students. *Advances in medical education and practice*. 2017;8:641.
- 3 Anyaoku EN, Nwafor-Orizu OE, Oguaka CN. Internet information seeking and use by Medical Students of Nnamdi Azikiwe University, Nigeria. *International Journal of Library and Information Science*. 2015 Oct 31;7(8):148-54.
- 4 Gupta A, Jagzape A, Kumar M. Social media effects among freshman medical students during COVID-19 lock-down: An online mixed research. *Journal of Education and Health Promotion*. 2021;10.
- 5 Kumar S, Tadakamadla J, Tibdewal H, Duraiswamy P, Kulkarni S. Internet usage among undergraduate dental students in India. *Revista odonto ciencia*. 2010;25:261-5.
- 6 Saadeh RA, Saadeh NA, Magda A. Determining the usage of social media for medical information by the medical and dental students in northern Jordan. *Journal of Taibah University Medical Sciences*. 2020 Apr 1;15(2):110-5.
- 7 Kadam SS, Bagle TR, Baviskar PA. Utilization of internet by undergraduate medical students. *National Journal of Physiology, Pharmacy and Pharmacology*. 2018;8(1):1-6.
- 8 Fernandes B, Biswas UN, Mansukhani RT, Casarín AV, Essau CA. The impact of COVID-19 lockdown on internet use and escapism in adolescents. *Revista de psicología clínica con niños y adolescentes*. 2020;7(3):59-65.
- 9 Kadam SS, Bagle TR, Baviskar PA. Utilization of internet by undergraduate medical students. *National Journal of Physiology, Pharmacy and Pharmacology*. 2018;8(1):1-6.
- 10 [Alabdulwahhab KM, Kazmi SY, Sami W, Almujeel KN, Alanazi MH, Alanazi KF, Moyana AM, Ahmad MS, Alasbali TA, Al Alwadani F. Use of online resources by undergraduate medical students at College of Medicine, Majmaah University, Kingdom of Saudi Arabia. *PloS one*. 2021 Aug 4;16(8):e0255635.

- 11 Dost S, Hossain A, Shehab M, Abdelwahed A, Al-Nusair L. Perceptions of medical students towards online teaching during the COVID-19 pandemic: a national cross-sectional survey of 2721 UK medical students. *BMJ open*. 2020 Nov 1;10(11):e042378.
- 12 Anyaoku EN, Nwafor-Orizu OE, Oguaka CN. Internet information seeking and use by Medical Students of Nnamdi Azikiwe University, Nigeria. *International Journal of Library and Information Science*. 2015 Oct 31;7(8):148-54.
- 13 Kadam SS, Bagle TR, Baviskar PA. Utilization of internet by undergraduate medical students. *National Journal of Physiology, Pharmacy and Pharmacology*. 2018;8(1):1-6.
- 14 Saadeh RA, Saadeh NA, Magda A. Determining the usage of social media for medical information by the medical and dental students in northern Jordan. *Journal of Taibah University Medical Sciences*. 2020 Apr 1;15(2):110-5.
- 15 Upadhayay N, Guragain S. Internet use and its addiction level in medical students. *Advances in medical education and practice*. 2017;8:641.
- 16 Aslam S, Akram H, Saleem A, Zhang B. Experiences of international medical students enrolled in Chinese medical institutions towards online teaching during the COVID-19 pandemic. *PeerJ*. 2021 Aug 25;9:e12061.
- 17 Kadam SS, Bagle TR, Baviskar PA. Utilization of internet by undergraduate medical students. *National Journal of Physiology, Pharmacy and Pharmacology*. 2018;8(1):1-6.
- 18 Omar H, Baqai S, Qamar S, Jaffery HO, Zafar O, Chaudhry MA. Perception & utilization of internet & medical applications by students at combined military hospital lahore medical college. *PAFMJ*. 2020 Oct 30;70(5):1256-60.

CONTRIBUTIONS BY AUTHORS

- | | |
|--------------------------------|--|
| 1 Sofia Shehzad: | Concept & design, data acquisition, data analysis, drafting manuscript, critical revision, supervision, and final approval |
| 2 Samir khan Kabir: | Drafting manuscript, critical revision, supervision, and final approval |
| 3 Zainab Waheed: | Data acquisition, data analysis, drafting manuscript, critical revision, and final approval |
| 4 Hamid Hussain: | Drafting manuscript, critical revision, supervision, and final approval |
| 5 Afaq Farooq: | Drafting manuscript, critical revision, and final approval |
| 6 Sofia Haider Durrani: | Drafting manuscript, critical revision, and final approval |