Journal of Chitwan Medical College 2024;14(48):74-79
Available online at: www.jcmc.com.np

ORIGINAL RESEARCH ARTICLE

UNRAVELING THE IMPACT OF INTERNET ADDICTION ON QUALITY OF LIFE AMONG NEPALESE UNDERGRADUATES

Ashok Kumar Paudel[1,*], Muni Raj Chhetri[1], Nishchal Devkota[1], Murari Prasad Ghimire[2], Trijya Shrestha[2], Maheshor Kaphle[3]
[1]Research and Development Department, NOC, Pokhara University, Nepal
[2]Public Health Department, NOC, Pokhara University, Nepal
[3]Department of Public Health, CIST College, PU, Nepal

Received: 3 Mar, 2024
Accepted: 2 Jun, 2024
Published: 17 Jun, 2024

Key words: Internet addiction; Nepal; Quality of life; Under graduate students.

***Correspondence to:** Ashok Kumar Paudel, Research and Development Department, NOC, Pokhara University, Nepal.*
Email: ashokkpaudel@gmail.com

*DOI:*https://doi.org/10.54530/jcmc.1490

Citation

Paudel AK, Chhetri MR, Devkota N, Ghimire MP, Shrestha T, Kaphle M. Unraveling the impact of internet addiction on quality of life among Nepalese undergraduates. Journal of Chitwan Medical College.2024;14(48):74-9.

Peer Reviewed

ABSTRACT

Background: The use of the internet has become an integral aspect of our daily lives. Excessive internet usage and internet addiction can significantly impact various dimensions of individuals' well-being, including social, leisure, economic, and community aspects. This phenomenon is not limited to a particular demographic, as Nepalese youths are also grappling with the repercussions of internet addiction. To explore this issue further, we conducted this study to assess the extent of internet addiction and its impact on the quality of life among undergraduate students in the Kathmandu district of Nepal.

Methods: This cross-sectional analytical study involved a randomly selected sample of 307 undergraduate students from four colleges affiliated with Pokhara University in the Kathmandu district of Nepal. Data were gathered through a self-administered structured questionnaire. The Young's Internet Addiction Test (IAT) and the World Health Organization Quality of Life Brief Version (WHOQOL-BREF) were employed to evaluate internet addiction and quality of life, respectively.

Results: The findings revealed that 50% of the students exhibited a mild level of internet addiction, 31.6% demonstrated a moderate level, and 0.7% displayed severe dependence on the internet. The mean quality of life score among respondents was 63.89±11.03.

Conclusions: The study highlighted a significant association between internet addiction and the psychological and environmental domains of quality of life. A substantial prevalence of internet addiction was observed among the students, with discernible impacts on their psychological and environmental well-being.

INTRODUCTION

The internet is a global system of interconnected computer networks that has revolutionized the information age by allowing people to gain access to unlimited amount of information and a system architecture that has revolutionized communications.[1,2] As of April 2024, there were 5.44 billion active internet users globally, accounting for 67.1% of the world's population. Out of these, 5.07 billion people, or 62.6% of the global population, were social media users.[3] Although internet provides numerous benefits, its use has been associated with potential side-effects causing academic failure, decreased concentration ability, and a negative affective state.[4,5] In January 2021, Nepal had 10.78 million internet users, reflecting a growth of 567 thousand (+5.5%) from the previous year. At that time, internet penetration in Nepal was 36.7%.[6] Excessive use of internet leads to neglect of usual life habits; increasing amounts of time spent online have consequences for one's health.[7] Internet Addiction (IA) is understood as an individual's inability to control his or her own use of internet causing disturbances and impairment in fulfillment of work, social, and personal commitments.[8] IA may include internet gaming and other forms of addictive internet usage which include excessive downloading, use of social networking sites and online shopping. While internet is an integral part of our lifestyle, IA is increasingly more common among young people and has become a pandemic worldwide.[9] IA may also affect academic performance and engagement in hazardous activities, anxiety to stress and finally to quality of life.[10] So, this study was conducted to determine the level of internet addiction and its effects on quality of life among Bachelor of Business Administration (BBA) students in Kathmandu district of Nepal.

METHODS

This cross-sectional college-based study was conducted among undergraduate students of Bachelor of Business Administration (BBA) colleges affiliated with Pokhara University (PU) within Kathmandu district of Nepal from 7th to 15th March, 2022. Out of the 21 BBA colleges affiliated with PU, four colleges in the Kathmandu district were selected for this study: Central College of Business Management, Nobel College, Imperial Business College, and Shubhashree Academic International College. This selection was based on the permission granted by the respective

college authorities for the study. All undergraduate BBA students of these 4 colleges affiliated with Pokhara University of Kathmandu district were the study population.

For the selection of students from each college, the attendance register was utilized. Students enrolled in the BBA program, expressing a willingness to participate and adhere to the study schedule, were included. Others who did not meet these criteria were excluded from the study. The sample size was determined by using statistical formula; $n=Z^2 * (p) * (1-p)/e^2$ (where, n = desired sample size, Z = 1.96, e = 0.05, p = 0.7574).[11] Taking into account a 10 percent non-response rate, the initial sample size was set at 310 students. However, three respondents did not complete the questionnaire, resulting in a final sample size of 307. The desired number of students from each college was determined using the Probability Proportional to Size (PPS) technique. Ultimately, a simple random sampling technique was employed to select students for data collection from the four sampled colleges.

Internet Addiction Test (IAT) scale[12] and World Health Organization Quality of Life Brief Version (WHOQOL-BREF)[13] were two sets of tools used for data collection. IAT includes 20-item questionnaire and each item is rated on a five-point Likert scale ranging from 0 to 5 (0 = less extreme behavior to 5 = most extreme behavior). The sum of the ratings given by the respondents for the 20 item responses is the total IAT score. The maximum IAT score is 100 points. The total scores of the test indicates presence of normal level of Internet usage (0 to 30) points; presence of a mild level of Internet addiction (31 to 49) points; presence of a moderate level of Internet addiction (50 to 79) points and presence of a severe dependence upon the Internet (80 to 100) points. Similarly, WHOQOL-BREF contains 26 items of which 2 items measure overall quality of life & general health and remaining 24 items addresses the following 4 Quality of Life (QoL) domain; Physical health (7 items); Psychological health (6 items); Social relationships (3 items) and Environment (8 items). Each item is rated on a likert scale that ranges from 1 to 5. Higher the score of each domain, higher is the quality of life since the domain scores are scaled in a positive direction. For this study, scores ≥50% indicates high quality of life; while score <50% indicates low quality of life.

Both IAT and WHOQOL-BREF tools were self-administered by the students of BBA Colleges. IAT and WHOQOL-BREF were pretested, edited, and finalized before data collection. The purpose of the study was explained to the respondents before data collection; informed consent was obtained from the respondents and ethical clearance was approved by IRC-CIST (March 6th, 2022; Ref. No. IRC/91/078/079). Respondents were instructed to return the questionnaire after completion. For completeness, the collected data were edited, reviewed, and checked.

To assure anonymity, code numbers were given on completed questionnaires after they were returned to the investigator. Statistical Package for Social Sciences (SPSS) version 20 was used to analyze the data. The obtained data were analyzed according to the research objective and the results are displayed in various tables. Fisher's exact test was used to analyze the association between dependent and independent variables.

RESULTS

Table 1 shows that majority (58.0%) of the respondents were 21 years and below with mean age of 21.26 ± 1.426. Out of the total respondents, 55% were female and 45% were male. Only 2.3% of the total respondents were married, whereas 97.7% of them were unmarried. Majority of the respondents were Hindu (88.3%) and rest of them were Buddhist (8.5%), Christian (1.3%), Islam (1.0%) and Kirat religion (1.0%).

Table 1: Background characteristics of respondents (N=307)

Variables	Category	n (%)
Age (in years)	≤21	178 (58.0)
	>21	129 (42.0)
	Mean ± SD=21.26 ± 1.426 Minimum = 18; Maximum = 26	
Sex	Male	138 (45.0)
	Female	169 (55.0)
Marital status	Married	7 (2.3)
	Unmarried	300 (97.7)
BBA study year	First year	67 (21.8)
	Second year	59 (19.2)
	Third year	131 (42.7)
	Fourth year	50 (16.3)
Religion	Hindu	271 (88.3)
	Buddhist	26 (8.5)
	Christian	4 (1.3)
	Islam	3 (1.0)
	Kirat	3 (1.0)
Ethnicity/ Caste	Brahmin	73 (23.8)
	Chhetri	103 (33.6)
	Janajati	109 (35.5)
	Dalit	6 (2.0)
	Madhesi	12 (3.9)
	Others	4 (1.3)

Table 2 pertains to the level of internet use and addiction among the respondents. Exactly half of the total respondents (50.2%) exhibited a mild level of internet addiction. Nearly one-third (31.6%) displayed a moderate level of internet addiction, while 0.7% reported a severe level of addiction. However, 17.6% of respondents maintained a normal level of internet usage.

Table 3 reveals that approximately one-third (32.9%) of the respondents often exceed their intended online duration, with 24.8% reporting rare occurrences and 9.8% indicating it happens always. About 26.1% of the respondents frequently divert themselves from disturbing thoughts about their life by engaging in soothing thoughts related to the internet. Meanwhile, 30.0% of them rarely experience preoccupation with the internet when offline or fantasize about being online. Less than a quarter (22.1%) of the respondents admitted to always finding themselves saying "just a few more minutes" when online.

Table 2: Distribution of internet addiction test score (N=307)

Variable	Category	n (%)
Internet addiction test score	Normal level of internet usage	54 (17.6)
	Mild level of internet addiction	154 (50.2)
	Moderate level of internet addiction	97 (31.6)
	Severe dependence upon internet	2 (0.7)

Table 3: Distribution of internet addiction test related responses (N=307)

Statement	Not applicable (%)	Rarely (%)	Occasionally (%)	Frequently (%)	Often (%)	Always (%)
How often do you find that you stay online longer than you intended?	0.7	11.1	11.7	32.9	28.7	15.0
How often do you neglect household chores to spend more time online?	7.8	38.4	27.7	16.0	8.1	2.0
How often do you prefer the excitement of the Internet to intimacy with your partner?	42.0	17.3	15.3	11.4	6.8	7.2
How often do you form new relationships with fellow online users?	30.6	41.7	14.7	5.2	5.2	2.6
How often do others in your life complain to you about the amount of time you spend online?	13.0	28.0	18.9	18.6	11.1	10.4
How often do your grades or school work suffers because of the amount of time you spend online?	13.0	24.8	21.5	18.9	12.1	9.8
How often do you check your email before something else that you need to do?	6.5	28.3	17.3	19.5	12.7	15.6
How often does your job performance or productivity suffer because of the Internet?	31.9	25.1	18.2	14.0	6.2	4.6
How often do you become defensive or secretive when anyone asks you what you do online?	22.8	29.6	17.9	11.1	9.8	8.8
How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?	8.8	17.9	22.8	26.1	12.1	12.4
How often do you find yourself anticipating when you will go online again?	7.8	28.0	24.4	27.0	8.1	4.6
How often do you fear that life without the Internet would be boring, empty, and joyless?	6.5	14.7	9.4	16.9	17.3	35.2
How often do you snap, yell, or act annoyed if someone bothers you while you are online?	9.8	29.3	22.8	17.9	12.1	8.1
How often do you lose sleep due to being online?	13.0	25.4	21.5	17.3	12.1	10.7
How often do you feel preoccupied with the Internet when off-line, or fantasize about being online?	14.3	30.0	21.8	19.9	8.8	5.2
How often do you find yourself saying "just a few more minutes" when online?	3.3	18.2	16.3	20.5	19.5	22.1
How often do you try to cut down the amount of time you spend online and fail?	9.1	16.0	18.9	22.1	21.8	12.1
How often do you try to hide how long you've been online?	15.3	33.6	15.0	16.0	7.2	13.0
How often do you choose to spend more time online over going out with others?	18.9	31.9	18.9	14.7	11.7	3.9
How often do you feel depressed, moody, or nervous when you are off-line, which goes away once you are back online?	28.0	28.7	18.9	10.1	7.5	6.8

Table 4 is about the quality-of-life status of the respondents in different 4 domains. Psychological domain had the highest score among the four domains with mean score of 65.40±15.57, while environmental domain had the lowest score with mean score of 60.23±13.04. The mean quality of life score of the respondent was found to be 63.89±11.03. Large majority of the respondents (91.9%) had high score in physical health and 87.6% of the respondents had high score in psychological domain. Similarly, 88.3% had high score in social relationships and 82.1% of the total respondents had high score in environmental domain.

Table 4: Distribution of scoring on quality of life (QOL) domains (N=307)

Domains	Overall score (Mean ± SD)	<50% (Low QOL) Frequency (%)	≥50% (High QOL) Frequency (%)
Physical health	65.04±12.74	25 (8.1)	282 (91.9)
Psychological	65.40±15.57	38 (12.4)	269 (87.6)
Social relationships	64.90±17.25	36 (11.7)	271 (88.3)
Environment	60.23±13.04	55 (17.9)	252 (82.1)
Total QOL	63.89±11.03	30 (9.8)	277 (90.2)

Table 5: Association between internet addiction and quality of life (N=307)

QOL domains	Internet addiction		Fisher Exact Value	df	p-value	Unadjusted Odds Ratio (U.O.R)
	Not addicted n (%)	Addicted n (%)				
Physical health						
High QOL	51 (94.4%)	231 (91.3%)	0.587	1	0.589	
Low QOL	3 (5.6%)	22 (8.7%)				
Psychological health						
High QOL	52 (96.3%)	217 (85.8%)	4.546	1	0.038*	4.313
Low QOL	2 (3.7%)	36 (14.2%)				
Social relationships						
High QOL	52 (96.3%)	219 (86.6%)	4.074	1	0.059	
Low QOL	2 (3.7%)	34 (13.4%)				
Environment						
High QOL	50 (92.6%)	202 (79.8%)	4.920	1	0.030*	3.156
Low QOL	4 (7.4%)	51(20.2%)				
Overall Total QOL						
High QOL	51 (94.4%)	226 (89.3%)	1.321	1	0.319	
Low QOL	3 (5.6%)	27 (10.7%)				

*statistically significant

The association between internet addiction and quality of life was determined using the Fisher exact test, and a p-value of less than 0.05 was considered statistically significant. Table 5 reveals a significant association between the psychological domain of quality of life and internet addiction (p-value = 0.038 and U.O.R. = 4.313). Out of the total 307 respondents, 253 (82.4%) had internet addiction. Among the internet-addicted respondents, 85.8% had high scores, while 14.2% had low scores in the psychological domain of quality of life. Among the 307 respondents, 54 (17.6%) were not addicted to the internet, of which 96.3% had high scores and 3.7% had low scores in the psychological domain of quality of life.

This study revealed a significant association between the environmental domain of quality of life and internet addiction (p-value = 0.030 and U.O.R. = 3.156). Out of the 253 internet-addicted respondents, 79.8% had high scores, while 20.2% had low scores in the environmental domain of quality of life. Among the 54 non-addicts, 92.6% had high scores, and 7.4% had low scores in the environmental domain of quality of life.

DISCUSSION

The use of the internet has impacted people's lives both positively and negatively, with excessive use being potentially harmful and linked to various psychological problems.[14] The current study aims to assess the level of internet addiction and its effects on the quality of life among undergraduate students pursuing a Bachelor of Business Administration (BBA) degree in the Kathmandu district of Nepal.

The findings of the current study suggest that approximately half of the respondents exhibited a mild level of internet addiction, while 0.7% displayed severe dependence on the internet. It is noteworthy that a study conducted in Nepal reported a lower prevalence of internet addiction at 35.4%[15] compared to the current study. Another study among dental students in Bhairahawa/Nepal indicated that 69.23% of participants perceived their internet use as problematic, with 6.51% considering it significantly problematic, which is somewhat higher than the prevalence of internet addiction found in this study.[11] However, a different study in Nepal disclosed that the prevalence of mild and severe internet addiction was 50.8% and 1.3%, respectively[16], aligning more closely with the results of the current study. Additionally, a meta-analysis conducted on Southeast Asian countries revealed that the prevalence of internet addiction varied from 0% to 47.4% across different studies.[17] Furthermore, studies conducted in India[18], Japan[14], and Mexico[19] have reported varying prevalence rates of internet addiction, ranging from 0.2% to 21.51%.

In this context, the current study also revealed that a majority of the respondents scored high in all domains of quality of life. The results demonstrated a significant association between internet addiction and the psychological domain (p=0.038) as well as the environmental domain (p=0.030) of quality of life. Similar findings regarding the association of internet addiction with the psychological and environmental domains of quality of life have been reported in previous studies conducted in various countries worldwide.[20-23] Contrary to the findings of this study, some of these previous studies have indicated an association of internet addiction with the physical and social domains of quality of life. It's important to note that the current study did not find such associations.[20-23] However, studies from India[24] and Saudi Arabia[25] have reported no significant association between internet addiction and the different domains of quality of life.

We conducted a cross-sectional, college-based study in undergraduate colleges of the Kathmandu district in Nepal, and the findings are based on Young's Internet Addiction Test and WHOQOL-BREF tools. It is important to note that this study design does not allow for the establishment of causality regarding risk factors. Future research may consider employing different study designs to identify additional contributing factors. The variations in findings compared to previous studies can be attributed to differences in study design, respondents, sampling procedures, sample size, and data collection tools. Furthermore, it should be acknowledged that when respondents completed the Internet Addiction Test and WHOQOL-BREF tools, their conception of internet use may have differed from the intended understanding of the tools' developers. This potential discrepancy could influence the interpretation of the results and should be taken into consideration when analyzing the findings of this study.

CONCLUSION

The prevalence of internet addiction among undergraduate students of Bachelor of Business Administration (BBA) colleges in Kathmandu was found to be very high which suggests that the undergraduate students use internet in a substantial amount. Most of the students were found to have mild level of internet addiction. Internet addiction was found to affect the psychological domain and environmental domain of quality of life significantly. Internet addiction is the contributing risk factor for the possibility of low quality of life, suggesting the urgent need to develop policies and programs to mitigate the negative psychological domain and environmental domain of quality of life due to internet addition. Besides, policymakers, parents, colleges, and health workers must make college students aware of the link between the excessive use of internet and its negative effects in life.

CONFLICT OF INTEREST: None

FINANCIAL DISCLOSURE: None

REFERENCES:

1. Othman Z, Lee CW. Internet Addiction and Depression among College Students in Malaysia. Int Med J. 2017;24(6):447-50. [DOI]
2. Warden R. The Internet and science communication: blurring the boundaries. Ecancermedicalscience. 2010;4:203. [DOI]
3. Statista. Number of worldwide digital population as of April 2024 [Internet]. Available from: https://www.statista.com/statistics/617136/digital-population-worldwide/
4. Kawabe K, Horiuchi F, Ochi M, Oka Y, Ueno S. Internet addiction: Prevalence and relation with mental states in adolescents. Psychiatry Clin Neurosci. 2016;70(9):405-12. [DOI]
5. Umeta GT, Regasa SD, Taye GM, Ayeno HD, Tefera GM. Prevalence of Internet Addiction and its Correlates Among Regular Undergraduate Medicine and Health Science Students at Ambo University. Cross-Sectional Study. Subst Abuse. Res Treat. January 2022. [DOI]
6. Datareportal. Digital 2021: Nepal [Internet]. Available from: https://datareportal.com/reports/digital-2021-nepal
7. Karacic S, Oreskovic S. Internet Addiction and Mental Health Status of Adolescents in Croatia and Germany. Psychiatr Danub. 2017;29(3):313-21. https://doi.org/10.24869/psyd.2017.313. PMID: 28949312
8. Anand N, Jain PA, Prabhu S, Thomas C, Bhat A, Prathyusha PV, et al. Internet Use Patterns, Internet Addiction, and Psychological Distress Among Engineering University Students: A Study from India. Indian J Psychol Med. 2018;40(5):458-67. [DOI]
9. Tran BX, Huong LT, Hinh ND, Nguyen LH, Le BN, Nong VM, et al. A study on the influence of internet addiction and online interpersonal influences on health-related quality of life in young Vietnamese. BMC Public Health. 2017;17(138). [DOI]
10. Zenebe Y, Kunno K, Mekonnen M, Bewuket A, Birkie M, Necho M, et al. Prevalence and associated factors of internet addiction among undergraduate university students in Ethiopia: a community university-based cross-sectional study. BMC Psychol. 2021;9(4). [DOI]
11. Gautam V, Singh VR, Halwai HK, Dayma A, Rastogi V. Prevalence of Internet Addiction Among BDS Students in UCMS, Bhairahawa, Nepal. Ann Int Med Den Res. 2020;6(1). [DOI]
12. Young KS. Internet Addiction Test (IAT). Available from: http://www.iitk.ac.in/counsel/resources/IATManual.pdf
13. WHOQOL-BREF. Introduction, administration, scoring and generic version of the assessment. Program on mental health. WHO, 1996. Available from: https://www.who.int/mental_health/media/en/76.pdf
14. Gupta S, Maurya VP, Singh AP, Patel AK. Internet Addiction and Quality of Life among Young Adults: An Exploratory Study. Int J Indian Psychol. 2018;6(3):65-72.t[LINK]
15. Bhandari PM, Neupane D, Rijal S, Thapa K, Mishra SR, Poudyal AK. Sleep quality, internet addiction and depressive symptoms among undergraduate students in Nepal. BMC Psychiatry. 2017;17(106). [DOI]
16. Marahatta SB, Adhikari B, Aryal N, Regmi R. Internet Addiction and Associated Factors among Health Sciences Students in Nepal. J Community Med Health Educ. 2015;5(4). [DOI]
17. Balhara YPS, Mahapatra A, Sharma P, Bhargava R. Problematic internet use among students in South-East Asia: Current state of evidence. Indian J Public Health. 2018;62(3):197-210. [DOI]
18. Jain A, Sharma R, Gaur K, Yadav N, Sharma P, Sharma N, et al. Study of internet addiction and its association with depression and insomnia in university students. J Family Med Prim Care. 2020;9(3):1700-1706. [DOI]
19. Capetillo-Ventura N, Juárez-Treviño M. Internet addiction in university medical students. Med Univ. 2015;17(67):88-93. [DOI]

20. Fatehi F, Monajemi A, Sadeghi A, Mojtahedzadeh R, Mirzazade A. Quality of Life in Medical Students With Internet Addiction. Acta Med Iran. 2016;54(10):662-66.[LINK]

21. Nagori N, Vala A, Panchal B, Ratnani I, Vasava K. Association Of Anxiety And Quality Of Life With Internet Addiction Among Medical Students: Association Of Anxiety And Quality Of Life With Internet Addiction Among Medical Students. Natl J Integr Res Med. 2018;7(5):9-13. Available from: [LINK]

22. Solati K, Ghasemi M, Mohammadi D. The relationship of internet addiction with quality of life and alexithymia in students in Iran. J Clin Diagn Res. 2018;12(12) Available from: [LINK]

23. Xu DD, Lok KI, Liu HZ, Cao XL, An FR, Hall BJ, et al. Internet addiction among adolescents in Macau and mainland China: prevalence, demographics and quality of life. Sci Rep. 2020;10(1):16222. [DOI]

24. Gupta S, Maurya VP, Singh AP, Patel A. Internet Addiction and Quality of Life among Young Adults: An Exploratory Study. Int J Indian Psychol. 2018;6(3):65-72. [DOI]

25. Almukhtar NM, Alsaad SM. Quality of life in medical students with internet addiction. J Family Med Prim Care. 2020;9(11):5736-5740. [DOI]