Research Article

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RECOGNIZING THE CONSEQUENCES OF PROBLEMATIC INTERNET USES ON PSYCHOLOGICAL WELL-BEING AND ITS RELATIONSHIP WITH PHYSICAL INACTIVITY: A PILOT STUDY

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ABSTRACT

Over the past ten years, internet usage has increased dramatically both in India and globally. Students are particularly vulnerable to internet addiction as faster and less expensive internet becomes more widely available. It is crucial to assess problematic internet usage (PIU) and its correlation with undergraduate students' mental health and physical inactivity because it can impede vital activities like pursuing formal education, amusement, and commerce. Aim and Objectives: To assess the prevalence of PIU and to examine its relationship with psychological well-being and physical inactivity among college students in Bhopal city. Materials and Methods: This study was a pilot study among 50 college students and used prestabilized modified structured questionnaires to collect data on sociodemographics, problematic internet uses, psychological distress, and physical activity. Data were collected using the short version of Young's Internet Addiction Test (YIAT), GHQ12, and International Physical Activity Questionnaire (IPAQ). Results: The mean age of the students was 21.5 years. The prevalence of PIU was 32% (Cronbach's Alpha=.861)and 72% of students were minimal to mildly distressed, and 28% were moderately distressed (Cronbach's alpha = .701). majority of students (86%) were physically inactive, PIU was positively associated with psychological distress (r = 0.336, p = 0.017), and a negative significant correlation was found between internet addiction and physical activity (r = -0.016, p-value = 0.911). Conclusions: PIU was widespread among college students, and a high percentage of students reported minimal to mild psychological distress and physical activity, emphasizing the need to raise awareness about its harmful impacts on psychological well-being and physical activity.

Keywords Internet addiction, mental health, physical inactivity.

INTRODUCTION

There has been a rapid growth of internet use not only in India but also worldwide in the last decade. India holds the second-largest position in the global online market with approximately 700 million internet users.[1] The country has witnessed a remarkable surge in internet penetration, rising from just 4% in 2007 to nearly 47% in recent years.[2] Some people use the internet for research, accessing information, communicating with others, and conducting business transactions. The internet is used by some to facilitate research, to seek information, for interpersonal communication, and for business transactions. On the other hand, it can be used by some to overindulge in pornography, excessive gaming, prolonged chatting, and even gambling. Growing concerns worldwide have led to this phenomenon being labeled as internet addiction.[3]

In India, use of the internet is enormous, particularly in the young population. Hence, it was found necessary to study the pattern of internet usage in young adults in an Indian setting and its impact on their mental and physical well-being. With this background, we undertook the present study to take a close look at this issue.

MATERIALS AND METHODS

This cross-sectional observational pilot study was conducted among college students aged 18–30 years in Bhopal. A total of 50 participants were enrolled using simple random sampling and interviewed face-to-face. Ethical approval was received prior to data collection. A pretested, modified questionnaire was used for data collection from eligible and willing participants.

Questionnaire

A prestabilized modified structured questionnaire is used containing questions about sociodemographics, academics, lifestyle behaviors, and internet uses related to variables. The Young Internet Addiction Test—Short Version (YIAT) and questions regarding mental health General Health Questionnaire (GHQ-12), and physical activity International Physical Activity Questionnaire (IPAQ), were used.

Inclusion criteria and exclusion criteria

College students of either gender, aged between 18 and 30 years, who have been using the internet for more than one year and voluntarily participate in the survey were included in this study.

Excluded are college students who are pregnant or lactating mothers and college students who suffer from any severe systemic or mental illness or physical disabilities.

Anthropometric measurement

Height, weight, body mass indexx (BMI), and waist-to-hip ratio (WHR) Weight was recorded in kilograms. Height and WHR were measured in centimeters. (in subjects those will come under face-to-face interview)

Criteria for assessment

A prestabilized modified structured questionnaire containing questions about sociodemographics(Modified Kuppuswamy socioeconomic scale for the year 2024 was used for SES).[4.] Academics, lifestyle behaviors, and internet use-related variables: YOUNG IAT for problematic internet use and GHQ-12 for psychological distress.[5] and IPAQ for physical activity were used.[6] The objective internet usage time was measured by the Digital Wellbeing tools available under the Digital Wellbeing and Parental Controls settings of the smartphone.

PIU was assessed using the YIAT short version, which is an internationally validated internet addiction scale. The YIAT includes twelve questions, each scoring from 1 (never) to 5 (always) on a Likert scale. [7] An overall Young's IAT score ranges from 0 to 100; normal internet use comes under the range of 0 to 30,mild internet addiction score is 31 to 49,and 50 to 79 indicates moderate internet addiction. Scores between 80 and 100 indicate severe addiction.

Psychological distress was assessed using the GHQ-12. The GHQ-12 is scored using a 4-point Likert scale, with each item scoring from 0 to 3. The total score ranges from 0 to 36, where higher scores indicate greater psychological distress. [8]

Data management and analysis

Data were manually entered into Microsoft Excel and analyzed using EPI Info version 7.2.5 (CDC, Atlanta, GA). Descriptive statistics included frequency, mean, median, standard deviation, cross-tabulations, and linear regression. Results were presented in tables. PIU prevalence and related physical and mental health outcomes were expressed as percentages with 95% confidence intervals. Variables were coded appropriately, and all data were kept confidential. Variables were coded as required, and the prevalence of PIU along with associated physical and mental health outcomes was analyzed.

RESULTS

In this pilot study, students were interviewed (face-to-face), and their health status was analyzed using the prestabilized modified structured questionnaire.

The sociodemographic details showed the mean age of students was 21.5 years. A maximum of 94% of participants were within the age group of 18–24 years, and 6% were in the age group of 25–30 years. Males were slightly more represented at 56% compared to females at 44%. Regarding education, 20% were postgraduate students, while 80% were undergraduate students. 64% were in the upper middle class, 24% were in the lower middle class, and 12% were in the upper lower class, and a maximum of 98% of students were unmarried. Based on BMI, 62% of students were found to be normalt, 30% were found to be underweight, 6% werend to be overweight, 2% were found to be obese, and 34% of subjects had WHR above the normal range [Table 1].

Internet usage patterns revealed that 26% used the internet for over 6 h daily, 42% for 4–6 h, and 30% for 2–4 h. The majority of participants (48%) had owned smartphones for over 5 years, 98% were found common mode of internet access through mobile data, and money spent on internet per month averaged 324.56 Up to 74% of participants accessed the internet using a cellphone, while 58% reported attempts to reduce their internet overuse, and 32% of participants often go to bed late due to internet or social media use. Due to internet usage, 42% of participants were absent sometimes from work at some point, and 14% were absent often. [Table 2]

The majority of students reported using the internet for various activities, includingocial media (Instagram, YouTube, Telegram, Facebook, WhatsApp, Snapchat, and Twitter), emailing, gaming, watching online videos, and other activities (educational apps, shopping apps, and Google Chrome), with a significant proportion (38%) engaging in these activities [Table 3].

32% were mild pathological internet users according to YIAT. According to the GHQ12 score, 72% of students were in minimal to mild distress, and 28% were in moderate distress. According to IPAQ scores, 86% of the students were physically inactive, 8% were engaged in moderate PA, and only 6% of participants were following high physical activity.

A significant positive correlation (Spearman's rank-order correlation) was found between internet addiction and psychological distresstress ($r=0.336$, $p=0.017$). And a negative significant correlation was found between internet addiction and physical activity ($r = -0.016$, p-value = 0.911). due to random variance or small sample size. [Table 4]

DISCUSSION

The present study was conducted as a pilot study, and we found the prevalence of PIU was around 32%, which is the same as compared to the study performed by Rani Shreya *et al.* 2024 in which about 31.2% of students had internet addiction.[2] Another study conducted in 2018 by Langarizadeh M. *et al.* among university students found that 31.2% of students had internet addiction. [9]

We found that there is the Significant positive correlation(A Spearman's rank-order correlation) between internet addiction and psychological distresstress ($r=0.336$, $p=0.017$). A similar study was conducted by Praksh S *et al*. 2019: A significant positive correlation was found between PIU and psychological distress. [10]

In this study, findings show that a negative significant correlation was found between PIU and physical activity ($r = -0.016$, p-value = 0.911), which was the same as found by Zhihao *et al.* (2024) [11]. Similarly, a study conducted by Genc E. *et al.* (2023) found mean scores for the YIAT and the IPAQ to be 30.9 ± 18.9 and 1697.7 ± 1847.0, respectively. A significant negative correlation was also observed between students' PA and PIU levels ($p < 0.01$).[12]

A pilot study by Hada Rachna et al. found 66% prevalence of smartphone addiction among college students in Bhopal, aligning with results from an earlier study by the same institute in the city.[13]

The findings from Young's IAT indicate that certain behavioral indicators of internet overuse are more prevalent among students. The highest mean score was observed for the item "Do you feel that you access the Internet more often than you expect?" (M = 2.78, SD = 1.234), suggesting that students frequently underestimate their internet usage. Similarly, the item "Find yourself saying 'just a few more minutes' when online" also showed a relatively high mean (M = 2.74, SD = 1.549), reflecting difficulty in disengaging from online activities. In contrast, lower scores were noted for items related to social withdrawal and emotional dependency, such as "Depressed, moody, or nervous when offline, which goes away once you are back online" (M = 1.46, SD = 1.232) and "Feel preoccupied with the Internet when offline" (M = 1.86, SD = 1.471), suggesting that while usage may be excessive, it may not always be linked to severe psychological distress. [Table 5-6]

Table 1: Distribution of sociodemographic characteristics with waist–hip ratio, body mass index, physical activity among students (n=50) Age (mean age 21.5) (years)

Variables	Frequency (%)
18–24	47 (94%)
25-30	3 (6%)
Gender	
Male	28 (56%)
Female	22 (44%)
Education	
Undergraduate	40 (80)
Postgraduate	10 (20)
Socioeconomic status	
Upper	00
Upper middle	32 (64)
Lower middle	12 (24)
Upper lower	6 (12)
Lower	00
Marital status	
Married	1 (2)
Unmarried	49 (98)
Religion	
Hindu	45 (90)
Muslim	2 (4)
Other	3 (6)
Faculty/Course	
Biology	25 (50)
Art	13 (26)
Maths	6 (12)
Commerce	6 (12)
Years of degree	
UG1st	18 (36)
2nd	9 (18)
3rd	13 (26)
Intern	
PG1st	3 (6)
2nd	7 (14)
Waist-hip ratio	
0.85 or less for women	14 (28)
0.9 or less for men	23 (46)
>0.85 for women	4 (8)
>0.9 for men	9 (18)
BMI	
<18.5: Underweight	15 (30)
18.5-24.9: Normal weight	31 (62)
≥25.0: Overweight	3 (6)
≥30.0: Obesity	1 (2)
Physical activity	
Low	43 (86)
Moderate	4 (8)
Strenous	3 (6)
Sedentary (sitting hours)	
<1	
1-3	
3-6	9 (18)
>6	41 (82)

Table 2: Distribution of Internet uses-related variables among students (n=50)

Daily internet usage timing (in hours)	Frequency, n(%)
1-2	0
2-4	15 (30)
4-6	21 (42)
>6	13 (26)
Duration of owning smartphone (years)	
1-2	8 (16)
3-5	18 (36)
>5	24 (48)
Common mode of internet access through mobile data	49 (98)
Try to reduce internet overuse	
Yes	29 (58)
No	21 (42)
Becomes restless when there is no way to log in	
Yes	24 (48)
No	26 (52)
Delayed sleep due to internet or social media use	
Never	10 (20)
Sometime	21 (42)
Often	16 (32)
Always	3 (6)
Money spent on the internet per month averages	324.56 rupees

Table 3: Purpose of internet use in day (n=50)

Applications name	n (%)
Social media, emailing, gaming, online video, and others (educational apps, shopping apps, Google Chrome)	2 (4.00)
Social media, gaming, online video	8 (16.00)
Social media, online video, and others (educational apps, shopping apps, Google Chrome)	19 (38.00)
Social media, gaming, online video, and others (educational apps, shopping apps, Google Chrome)	7 (14.00)
Social media, emailing, online video	1 (2.00)
Social media, gaming	2 (4.00)
Social media, online video	8 (16.00)
Social media, others (educational app, shopping app, Google Chrome)	1 (2.00)
Social media	1 (2.00)
Online video	1 (2.00)

Table 4: Correlations between YIAT and GHQ12 and IPAQ

	Yiat	ipaq	ghq 12
Pearson Correlation	1	-.016	.336*
Sig. (2-tailed)		.911	.017
N	50	50	50
Pearson Correlation	-.016	1	.017
Sig. (2-tail Correlation is significant at the 0.05 level (2-tailed).ed)	.911		.908
N	50	50	50
Pearson Correlation	.336*	.017	1
Sig. (2-tailed)	.017	.908	
N	50	50	50

*. Correlation is significant at the 0.05 level (2-tailed)

Table 5: Item question wise mean,standard deviation among the students (n=50)

Questions	Mean	Std. Deviation
Do you feel that you access to the Internet more often than you expect	2.78	1.234
Find yourself saying "just a few more minutes" when online	2.74	1.549
Neglect household chores to spend more time on-line	2.00	1.325
Try to cut down the amount of time you spend on-line and fail	2.58	1.214
Grades or school work suffers because of the amount of time you spend on-line	2.08	1.353
Lose sleep due to late-night log-ins	2.28	1.429
Choose to spend more time on-line over going out with others	1.90	1.446
Try to hide how long you've been on-line	2.30	1.594
Snap, yell, or act annoyed if someone bothers you while you are on-line	1.96	1.470
Depressed, moody, or nervous when you are offline, which goes away once you are back online	1.46	1.232
Feel preoccupied with the Internet when off-line, or fantasize about being on-line	1.86	1.471
Become defensive or secretive when anyone asks you what you do on-line	1.94	1.634

Table 6: Summary Item Statistics of young's internet addiction test

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance
Item Means	2.157	1.460	2.780	1.320	1.904	.154
Item Variances	2.014	1.473	2.670	1.197	1.812	.163
Inter-Item Correlations	.344	-.079	.678	.757	-8.615	.026

CONCLUSION

The study revealed an overall internet addiction prevalence of 32%. Significant associations were found between internet addiction, psychological distress, and physical inactivity.

Recommendations

Awareness regarding cell phone etiquette, including the length of time spent on internet usage per day, should be spread among college students. The concept of daily "net-free hours" should be introduced in the daily routines of the students.

Limitation of the study

This study showed the magnitude of PIU in college students. The present study is a pilot study on 50 students. Future research with a larger sample size, including students from various colleges across Bhopal, can be done to assess their duration and purpose of internet use.

REFERENCES

1. Joseph J, Varghese A, Vijay VR, *et al***.** Prevalence of internet addiction among college students in the Indian setting: A systematic review and meta-analysis. General Psychiatry. 2021;34:e100496. DOI:10.1136/gpsych-2020-100496.
2. Rani S, Sinha N, Kumar R. Prevalence of internet addiction and its relationship with insomnia, depression, anxiety, and stress among medical students of a tertiary care medical institute of Eastern India. Indian Psychiatry Journal. 2024;33(1):94–100. DOI:10.4103/ipj.ipj_134_23.
3. Goel D, Subramanyam A, Kamath R. A study on the prevalence of internet addiction and its association with psychopathology in Indian adolescents. Indian J Psychiatry. 2013;55(2):140–143. DOI:10.4103/0019-5545.111451. Available from: https://www.researchgate.net/publication/245030039_A_study_on_the_prevalence_of_Internet_addiction_and_its_association_with_psychopathology_in_Indian_adolescents
4. Javalkar SR, Shalini H, Davalagi SB, Vidya GS. Socio-economic status assessment in India: history and updates for 2024. International Journal of Community Medicine and Public Health. 2024;11(3):1369–1377. DOI:10.18203/2394-6040.ijcmph20240648.
5. Comotti A, Fattori A, Gatti P, *et al*. Psychometric evaluation of GHQ-12 as a screening tool for psychological impairment of healthcare workers facing COVID-19 pandemic. La Medicina del Lavoro. 2023;114(1):e2023009. DOI:10.23749/mdl.v114i1.13918. PMID: 36790406; PMCID: PMC9987474.
6. World Health Organization. Physical activity [Internet]. Geneva: World Health Organization; 2024 Jun 26 [cited 2025 Mar 13]. Available from: https://www.who.int/news-room/fact-sheets/detail/physical-activity
7. Pawlikowski M, Altstötter-Gleich C, Brand M. Validation and psychometric properties of a short version of Young's Internet Addiction Test. Computers in Human Behavior. 2013;29(3):1212–1223. DOI:10.1016/j.chb.2012.10.014.
8. Mumenin N, Debnath PP, Hossain MS, *et al.* Screening depression among university students utilizing GHQ-12 and machine learning. Heliyon. 2024;10(17):e37182. DOI: 10.1016/j.heliyon.2024.e37182.
9. Langarizadeh M, Naghipour M, Tabatabaei SM,*et al.* Prediction of internet addiction based on information literacy among students of Iran University of Medical Sciences. Electron Physician. 2018;10(2):6333–6340. DOI:10.19082/6333. PMID: 29629056; PMCID: PMC5878027.
10. Prakash S, Yadav J. Prevalence of Internet addiction and psychiatric distress among young adults: A gender-based cross-sectional comparative study. Industrial Psychiatry Journal. 2019;28(2):226–30.
11. Zhihao D, Tao W, Yingjie S, *et al.* The influence of physical activity on internet addiction among Chinese college students: the mediating role of self-esteem and the moderating role of gender. BMC Public Health. 2024;24:935. DOI:10.1186/s12889-024-18474-1.
12. Genc E, Pirincci E. The relationship between internet addiction and physical activity levels of university students in a province in eastern Turkey. Work: A Journal of Prevention, Assessment & Rehabilitation. 2023;77(1):243–252. DOI: 10.3233/WOR-210105.
13. Hada R, Zainab S, Shukla U, et al. Prevalence of Problematic Smartphone Usage and Associated Physical and Mental Health Outcomes among College Students: A Pilot Study. Indian Journal of Ayurveda and Integrative Medicine. 2024;5(1):19-24

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