MEDDOCS Open Access Publisher

Journal of Psychiatry and Behavioral Sciences

Open Access | Research Article

Magnitude and Associated Factor of Internet Addiction among Regular under Graduate Students in Haramaya University, College of Health and Medical Sciences, Harar, Ethiopia

Abdulkerim Hule Hussen[2]; Behre Dari Mosa[1]*; Mandras Tariku[2]; Shimelis Tilahun[2]

[1]Worabe Comprehensive Specialized Hospital, Worabe, Ethiopia.

[2]Department of Psychiatry, Haramaya University College of Health and Medical Science, Harar, Ethiopia.

***Corresponding Author(s): Behre Dari Mosa**

Worabe Comprehensive Specialized Hospital, Worabe, Ethiopia.

Email: behredari345@gmail.com

Received: Mar 19, 2022

Accepted: Apr 04, 2022

Published Online: Apr 08, 2022

Journal: Journal of Psychiatry and Behavioral Sciences

Publisher: MedDocs Publishers LLC

Online edition: http://meddocsonline.org/

Keywords: Prevalence; Internet addiction; Health science students; Ethiopia.

Abbreviations: IAT: Internet Addiction Test; IA: Internet Addiction; YIAT: Young's Internet Addiction Test; IAD: Internet Addiction Disorder; PIU: Pathological Internet Use.

Abstract

Introduction: Internet addiction is one of the addictive behaviors and typically described as a state where an individual has lost control of the internet use and keeps using internet excessively to the point where he/she experiences problematic outcomes that negatively affects life.

Objective: The aim of this study was to assess the magnitude and associated factor of internet addiction among regular under graduate students at Haramaya University, College of Health and Medical Science, from July1, 2021 to December 1, 2021.

Method: Institutional based cross-sectional study was conducted in Haramaya University College of Health and Medical Sciences. The total of 216 under graduate students was enrolled in this study. The simple random sampling methods were employed to collect the representative samples. Internet Addiction was measured by Young's Internet Addiction Test (YIAT). Logistic regression model were used to evaluate the association between IA and associated factors. P-value and adjusted odds ratio within 95 % level of Confidence (CI) was used to interpret the results.

Result: From total of 216 study participants the overall magnitude of internet addiction among under graduate Haramaya University College of Health and Medical Sciences students was 57.9%. Factors such as current Khat use [AOR =1.94, 95% CI (1.05, 3.56)] and having psychological distress [AOR =1.15, 95% CI (1.032, 3.407)] were found to be significantly associated with magnitude of internet addiction.

Cite this article: Hussen AH, Mosa BD, Tariku M, Tilahun S. Magnitude and Associated Factor of Internet Addiction among Regular under Graduate Students in Haramaya University, College of Health and Medical Sciences, Harar, Ethiopia. J Psychiatry Behav Sci. 2022; 5(1): 1072.

Conclusion: The current study shows that fifty-seven percent of undergraduate students in Haramaya University were addicted to the internet. So internet addiction was associated with using current Khat user and having psychological. Therefore, we recommended students need to be educated about safe, valuable, and healthy practice of internet use and better to counsel on substance use and its consequences to overcome the anticipated increase in internet addiction.

Introduction

The Internet is a global system of interconnected computer networks that use the standard Internet protocol suite to serve billions of users worldwide by linking broad array of electronic, wireless and optical networking technologies [1].

In recent years, the term addiction has been expanded beyond substance dependence to include non-substance-related addictive behaviors that cause problems and impairment, as a result both of them proven to have similar effect on behavioral patterns, emotions and physiology [2]. Kimberly Young was the first to introduce the concept of Internet Addiction Disorder (IAD) in 1996 [2,3].

The clinical features of behavioral problems that are related to Internet have been described in various terms, including Internet addiction disorder, Pathological Internet Use (PIU), problematic Internet use, excessive Internet use, Internet dependence, compulsive computer use and virtual addiction [3].

Internet addiction, which is one of the behavioral addictions, is generally defined as an uncontrollable desire for excessive use of the internet, devaluation of time spent without connecting to the internet, intense nervousness and aggression in the case of deprivation and progressive deterioration of social and family life [4]. It is also typically described as a state where an individual has lost control of the internet use and keeps using internet excessively to the point where he/she experiences problematic outcomes that negatively affects life [3,4].

Behavioral or process addiction which includes IA comprises a series of potentially pathological behaviors that expose individuals to mood alternating events by which they achieve pleasure and become dependent [2,5]. That leads to symptoms traditionally associated with substance related addictions, like mood modification, salience, tolerance, withdrawal, conflict, and relapse [5]. Also this IA is characterized by a maladaptive pattern of internet use leading to clinically significant impairment or distress [3,5].

Materials and methods

Study setting

The study was conducted at Haramaya University College of Health and Medical sciences, which is found in Kebele 16, Jinela Woreda Harar city, Harari Regional State, Eastern Ethiopia. It is 526Km far from the capital city Addis Ababa. Currently Haramaya University College of Health and Medical science has nine department, which are Environmental health science, Laboratory, Medicine, Midwifery, Nursing, Pediatrics and Child health nursing, Pharmacy, Psychiatry and Public health. And this college currently has 1455 regular undergraduate health science and medical students.

Study design and period

Institution based cross sectional study was conducted from July1, 2021 to December 1, 2021.

Source population

All students in Haramaya University College of Health and Medical sciences.

Study population

All regular undergraduate College of Health and Medical Sciences students, included in the sample and who were available in the campus during the data collection period.

Eligibility criteria

Inclusion criteria

All regular undergraduate adult students who were present during the time of data collection and study participant who gave consent and who were in the campus and at least have either smart phone or computer which is portable for using an internet.

Exclusion criteria

The study participants who have sever medical or psychiatric illness and who are blind excluded from the study.

Variables of the study

Dependent variables: Prevalence of internet addiction.

Independent variables: Socio-demographic characteristics and Psychosocial and Substance related factors associated with internet addiction such as Age ,Sex ,Marital status ,Residency , Need for relationship ,Social support ,Psychological distress, Tobacco, Khat, Alcohol ,Cannabis.

Operational definition

Internet addiction: is defined as those persons having score 30 and above on IAT and Non internet addicted will be defined as those persons having score of below 30 on Internet Addiction [6].

Social support: will be measured by using Oslo social support scale (oslo-3). Score (3-8) is poor social support, (9 -11) moderate social support and (12-14) is strong social support [7].

Psychological distress: will be measured by Kessler psychological distress scale (k10). Score K10: likelihood to developed psychological distress measured as, 10-19 likely to be well, 20-24 likely to have a mild disorder, 25-29 likely to have moderate disorder and 30-50 likely to have sever disorder [8].

Substance related factors: is defined as those persons who use (non-medical use only) at least one substance for the last 3 months and Substance ever uses; those who never use (non-medical use only) substance in their life.

Sample size determination and sampling technique

The sample size was determined using a single population proportion formula with the following assumptions: prevalence of internet addiction 85% reported from Wollo University, Ethiopia [9], 95% confidence level, and 5% degree of precision. After considering 10% for the non-response rate, the final sample size was 216. To recruit study participants probability simple random sampling technique was used.

Data collection tools and procedures

Socio-demographic and other related factors were collected using a pre-structured questionnaire by the trained medical students through a face-to-face interview. The purpose of the study and related risk and benefits of the study was explained to the study participants.

Internet addiction: Was assessed by using Young's Internet Addiction Test (IAT). It consists of 20 statements with 5 points response scale (0 = Not Applicable, 1 = rarely, 2 = Occasionally, 3 = Frequently, 4 = Often and 5 = Always) with sum of score that range from 0 to 30 points are considered to have a no Internet addiction and scores of 31 to 49 indicate the presence of a mild level of Internet addiction; 50 to 79 reflect the presence of a moderate level and scores of 80 to 100 indicate a severe dependence upon the Internet [10].

Psychological distress: Was measured by using the Kessler Psychological Distress Scale (K10). The K10 scale involves 10 questions about emotional states, each with a five-level response scale.10 - 19 Likely to be well, 20 - 24 likely to have a mild disorder, 25 - 29 likely to have a moderate disorder and 30 - 50 likely to have a severe disorder [8].

Social support: Was collected by Oslo-3 item of social support scale, it is 3 item questionnaires, commonly used to assess social support and it had been used in several studies, the sum score scale ranging from 3-14, which had 3 categories: poor support 3- 8, moderate support 9-11 and strong support 12-14 [7].

Quality control

To ensure the quality of data, training was given before data collection. The questionnaire was pre-tested among undergraduate students representing 5% of the sample size, at 11 Harar Health Science College to check for its appropriateness and completeness.

Data processing and analysis

Data were coded and entered using Epi Data version 4.6 and exported to Statistical Package for Social Science (SPSS) version 23 for analysis. Logistic regression models were used to evaluate the association between internet addiction and associated factors. A p-value and adjusted odds ratio with a 95 % confidence interval was used to interpret the results. All independent variables were initially tested for association with dependent variable by using the binary logistic regression model; variables with a p-value < 0.25 were further tested using multivariable analysis to control potential confounders and to identify factors associated with outcome variables. A p-value less than 0.05 at 95% confidence interval was considered as statistically significant. Data were organized, summarized and presented in text, tables, and figures.

Results

Socio-demographic characteristics of the study participants

A total of 216 students were involved in this study, from which response rate was 100 % (216 students). And majority of study participants were single (86.6%), more than half study participants were males (64.8%), and lives in dormitory (94.9%).with mean age of 22.4 and with a standard deviation of (± 1.503) (**Table 1**).

Variables	Category	Frequency	Percent
Age in year	Median = 25	-	-
	IQR= 2	-	-
Marital status	Single	187	86.6
	Married	10	4.6
	In relationship	19	8.8
Sex	Male	140	64.8
	Female	76	35.2
Residence	Dormitory	205	94.9
	Non dormitory	11	5.1

Table 1: Socio demographic characteristics of students in Haramaya University college of health and medical science students, July 1, 2021, December 1,2021,Harar, Ethiopia, (N = 216).

Prevalence of Internet addiction

The overall prevalence of internet addiction was 125 (57.9%), CI= (22, 30.2) of them score above 30 which considered they have internet addiction from those who have IA 103 (82.4%) are mild and the rest 22 (17.6%) are moderate which means they scored 30 to 49 and 50 to 79 respectively from 10 standard questionnaire which score 0-5 each and 100 from total (**Figure 1**).

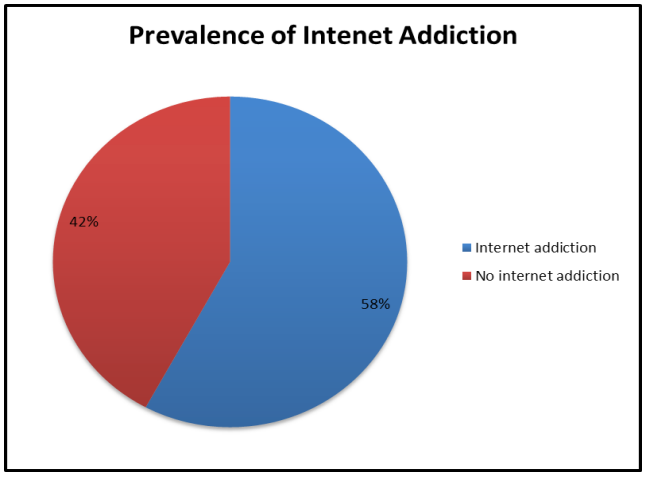

Figure 1: Prevalence of internet addiction among health and medical science students of Haramaya University July 1, 2021, December 1, 2021, Harar, Ethiopia, (N = 216).

Factor associated with internet addiction

Bivariate analysis was done to show the association between independent variables and IA. Variables with p-value of less than 0.25 in bivariate analysis were used as candidate for multivariate logistic regression. It was shown that in bivariate logistic regression psychological distress, current khat use and poor social support were associated with internet addiction.

Multivariate logistic regression was done to analyze associations between independent variables and internet addiction, which have p-value of < 0.25 in bivariate logistic regression, and adjusting for confounding factors. After adjusting for possible covariates, psychological distress and current khat use were significant predictors of internet addiction with p-value < 0.05.

Statistically, our study found higher relationship between current khat use and internet addiction that odds of being internet addicted was 1.9 times common in current khat users than non-users [AOR =1.94,95% CI:(1.05, 3.56)],being internet addiction was 1.15 times more common in those who have psy-

chological distress than those who have no psychological distress [AOR =1.15, 95% CI:(1.032, 3.407)].

Discussion

In this study, 216 undergraduate students were surveyed to ascertain the prevalence of internet addiction and associated factors among Haramaya university undergraduate students. The current study revealed that the prevalence of problematic internet use was 57.9% with 95% CI (51.4, 63.9).

Regarding magnitude this study was in line with studies conducted in Saudi Arabia 51.4% [11,15]. South India 61.4% [12,16]. This consistency may be due to sharing of the same study population and used the same tool (IAT) to assess internet addiction.

The finding of this study was higher than the study done in English 3.2% [5,12,17]., Dilla19.4%[13,18].Bangladesh 27.1% [3,131,19].,India 42.7 [14,19,20].This might be due to sampling method and the tool used for assessing IA differs in England and on the others sociocultural difference of the study population, variation in sample size may be the reason.

However the finding of current study was lower than studies done in Mangalore India 70% [15,21].and Wollo Ethiopia 85%[9,22]..This variation may be due to the study design used in Wollo was multi stage and community based. And the other differences may be because of sample size difference (90) by the study done in Mangalore India.

Regarding associated factors in this study, the odds of developing problematic internet use was 1.9 times higher among current khat users when compared to non-users [AOR =1.94, 95% CI: (1.05,3.56)] and this finding is in agreement with a study conducted in Dilla university[13,23,24,].among substance users, current use of khat or caffeinated drinks was significantly associated with internet addiction which is 1.86 times more likely to develop internet addiction as compared to those who didn't use these substances, Also a study which was conducted in Wollo university [9,25,26].shows that those who chewed khat currently were five times more likely for having internet addiction than those who were not (OR = 5.33; 95% CI: 1.90-14.91). This may be due to the fact that the biological effect of the khat (Amphetamine like substances) on the brain acts as stimulant on central nervous system that has the ability to enhance alertness and concentration, boost mood, motivation to work, and the craving or compulsive effect of it which is also associated with symptoms of problematic internet use. So, many students might be easily motivated or urged to use the internet.

The study also shown that internet addiction was 1.15 times more common in those who have psychological distress than those who have no psychological distress [AOR =1.15, 95% CI: (0.032, 0.347)]. This is also supported by a study conducted in Wollo university[9,27,28].which shows Study participants who had mental distress were four times more likely to develop internet addiction than those who didn't have mental distress (OR = 4.26; 95% CI: 1.68-10.81). This might be because of using internet may be used as a cooping strategy for them.

Conclusion

This study showed that a high prevalence of internet addiction among Haramaya University College of Health and Medical Sciences, undergraduate students compared with the general population. In this study, current use of khat and having psychological distress were significantly associated with internet addiction. The findings suggest that it's better to educate and focus on such identified high risk groups in order to give a special emphasis like provide psychological counseling and furthermore students need to be educated about safe, valuable, and healthy practice of internet use and better to counsel on substance use and its consequences to overcome the anticipated increase in internet addiction.

Acknowledgment

We would like to thank Haramaya University College of Health and Medical Sciences Department of Psychiatry for facilitating the study and We also acknowledge all study participants for their willingness to included in the study.

Authors' contributions

AHH Conceived and designed the protocol, data collection, data analysis, writing the original draft, BDM Conceived and designed the protocol, Supervision, writing the original draft,Data analysis, Manuscript preparation and review, MT and ST Conceived and designed the protocol, data collection, data analysis, writing the original draft.

Data availability

All relevant data are available within the paper.

Ethics approval and consent to participate

Ethical approval was obtained from the Haramaya University College of Health and Medical Sciences and Institutional Review Board (HUCHMS-IRB). Written informed consent was obtained from all study participants before starting the interview.

References

1. Stewart and Bill. 'Introduction to internet. 2014; 3: 52-69.
2. Poli R. 'Internet addiction update: Diagnostic criteria, assessment and prevalence', Neuropsychiatry. 2017; 07: 48.
3. Hassan T, Alam MM, Wahab A, Hawlader MD. 'Prevalence and associated factors of internet addiction among young adults in Bangladesh. 2020.
4. Orsal O, Orsal O, Unsal A, Ozalp SS. 'Evaluation of Internet Addiction and Depression Among University Students', Procedia - Social and Behavioral Sciences. 2013;82: 445-454
5. J Kuss D, D Griffiths M, Karila L, Billieux J. 'Internet Addiction : A Systematic Review of Epidemiological Research for the Last Decade. 2014.
6. Young, KS. 'The IAT total score is the sum of the ratings given by the examinee for the 20 item responses . Each item is rated on a 5-point scale ranging from 0 to 5 . The maximum score is 100 points . The higher the score is , the higher is the severity of your prob. 1996.
7. Kocalevent RD, Berg L, Beutel ME, Hinz A, Zenger M, et al. 'Social support in the general population : Standardization of the Oslo Social Support Scale (OSSS-3)', 2018: 1-9.
8. Kessler R. 'Kessler Psychological Distress Scale (K10) Source: Kessler R. Professor of Health Care Policy , Harvard Medical This is a 10-item questionnaire intended to yield a global measure of distress based on questions about anxiety and depressive symptoms. 2001.
9. Zenebe Y, Kunno K, Mekonnen M, Bewuket A, Birkie M, et al. 'Prevalence and associated factors of internet addiction among undergraduate university students in Ethiopia : A community university - based cross - sectional study', BMC Psychology. 2021

10. Young KS. 'Internet Addiction'. 2004; 48: 402-415.

11. Abdel-Salam DM, Alrowaili HI, Albedaiwi HK, Alessa AI, Alfayyadh HA. 'Prevalence of Internet addiction and its associated factors among female students at Jouf University , Saudi Arabia'. 2019: 6.

12. Asokan A, Varghese A. 'Internet Addiction among Medical Students and Its Impact on Academic Performance : An Indian Study JMSCR. 2019; 07: 670-676.

13. Mengistu N, Tarekegn D, Molla W. 'Internet Addiction and its Associated Factors Among Dilla University Undergraduate Students'. 2019: 1-17.

14. Noida G, Pradesh U. 'Level of Internet Addiction Among Nursing Students : A Cross Sectional Survey'. 2017: 466-470.

15. Chathoth V, Kodavanji B, Arunkumar N, Pai SR. Internet behaviour pattern in undergraduate medical students in Mangalore. International Journal of Innovative Research in Science. Engineering and Technology. 2013; 2: 2133-2136.

16. Weinstain A. Internet Addiction Disorder: Overview and controversies In: Rosenberg, KP and Feder, L. eds. Behavioral Addictions: Criteria, Evidence, and Treatement. 2014: 99-117.

17. Ching SM, Hamidin A, Vasudevan R, Sazlyna MS, Wan Aliaa WS, et al. Prevalence and factors associated with internet addiction among medical students-A cross-sectional study in Malaysia. Med J Malaysia. 2017; 72: 7.

18. Durkee T, Kaess M, Carli V, Parzer P, Wasserman C, et al. Utbredelse av patologisk internettbruk blant ungdom i Europa: Demografiske og sosiale faktorer. Avhengighet. 2012; 107: 2210-2222.

19. Ghamari F, Mohammadbeigi A, Mohammadsalehi N. Hashiani AAJIjopm. Internet addiction and modeling its risk factors in medical students, Iran. 2011; 33: 158.

20. Ghosh S, Chatterjee S. 'Assessment of Internet Addiction among Undergraduate Medical Students : A Cross-Sectional Study in a Medical College of Kolkata'. 2018: 5-9.

21. Jeanine R, Akre C, Suris J. 'Problematic Internet use is associated with substance use in young adolescents'. 2015: 504-507.

22. Fu KW, Chan WS, Wong PW, Yip PS. Internett-avhengighet: Utbredelse, diskriminerende gyldighet og korrelasjoner blant ungdom i Hong Kong. Br J Psykiatri. 2010; 196: 486-492.

23. Christos C, Constantinos C, Apostolos P. 'Drug Abuse Screening Test , DAST-10'. 1982, 2010; 1: 1982.

24. Azher M, Salim M. 'The Relationship between Internet Addiction and Anxiety among students of University of Sargodha'. 2014; 4: 288-293.

25. Tasmin N, Saha T, Mohammed A. 'Relationship between Internet Addiction and Depression among Medical Students : A Cross Sec- tional Study in a Private Medical College of Dhaka'. 2020; 3: 1-4.

26. Meyer C. 'Occurence of Internet Addiction in a General Population Sample : A Latent Class Analysis'. 2014: 159-166. 27. Shaw MC, Black D. 'Internet Addiction : Definition , Assessment , Epidemiology and ??. Clinical Management'. 2008.

27. Smita G, Azhar FA. 'SM Gr up SM Journal of Case Reports Prevalence and Characteristics of Internet Addiction among University Students in Mauritius'. 2018: 4: 3-7.