ORIGINAL ARTICLE

Problematic Internet Use Among Patients Taking Opioid Substitution Therapy at Pokhara Academy of Health Sciences

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Abstract

Introduction: Problematic internet use among patient who are diagnosed as Opioid dependence syndrome and under treatment with opioid substitution therapy is increasing in general population. The aim of this study is to identify the prevalence of problematic internet use among patient taking opioid substitution therapy and its association with various socio-demographic variables.

Methods: A hospital based cross-sectional study was carried out among patient taking opioid substitution therapy at Pokhara Academy of Health Sciences. Total 79 patients who consented for the study were enrolled. Youngs Internet addiction test questionnaire and semi-structured proforma were applied during the study period.

Results: The mean age was 29.4 years (SD ± 6.03). We found problematic internet use among 59.5% of patients out of which 39.2 % had mild and 20.3% had moderate addiction. Majority (75.9%) of the participants followed hindu religion, Nearly half (48.1%) of participants had studied up to school level, 58.2% were unmarried and more than half (51.9%) were unskilled. Problematic internet use was higher among patients with higher formal education, semiskilled and unskilled manpower and unmarried but were not statistically significant.

Conclusion: Problematic internet use was high in patients taking opioid substitution therapy. Problematic internet use was high with patients with higher level of educational achievement, unskilled and semiskilled manpower and unmarried.

Keywords: problematic internet use, opioid substitution therapy, opioid dependence

Introduction

Opioid use disorder (OUD) is the largest contributor to disability-adjusted life years caused by drug use worldwide.[1] Opioids use was found to be the second most commonly used substance, according to the Drug Users survey-2020 in Nepal.[2] With the advancement in smartphone ownership, the rate of internet use has rapidly increased in recent years. As studies show internet access has steadily grown among U.S. adults from 52% in 2000 to nearly 90% in 2018[3] and smartphone ownership has more than doubled recently, from a rate of 35% in 2011 to 77% in 2016.[4] Problematic Internet Use (PIU), the most general term applied to these cases, was first described in the scientific literature in the 1990's.[5] Problematic Internet use has become a high-profile issue and is framed as public health issue nowadays and are linked to various psychiatric disorders.[6]

Problematic internet use[7] is defined as, Compulsive use of the Internet: defined as staying online for very long periods of time while neglecting social responsibilities, Tolerance: defined as increasing intensity of engagement with online activities and Withdrawal: defined by symptoms of distress or acute changes in functioning that occur when a person is unable to go online. As internet use has increased among various population, people previously addicted to drugs may present with comorbid problematic internet use (PIU) with both the problematic internet use and drug addiction being the results of the maladaptive coping allowing the person to escape from physical and emotional stress. However, most of the studies have focused on either the prevalence of the opioid use or the prevalence of problematic internet use, very less has been studied regarding the overall impact of one to another. Hence by this study, we wanted to see the prevalence of problematic internet use among patients who are enrolled for Opioid substitution therapy and to study its association with various socio-demographic variables.

Methods

This study was conducted in the Department of Psychiatry who were under opioid substitution therapy (OST) at Pokhara Academy of Health Sciecnes, Pokhara, Nepal. Ethical approval

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was obtained from the Institutional Review Committee (IRC) of Pokhara Academy of Health Sciences (Approval No: 119/081). Participants were recruited among the patients who were taking opioid substitution therapy. Inclusion criteria required all patients presenting to OST center, giving consent for the study. Exclusion Criteria were the patients: I) Patients with primary psychiatric conditions which hamper the assessment and application of tools and ii) Patients with significant intellectual disability. Census sampling method was used and total number of 79 participants were enrolled after verbal or written consent was taken. The participants were then divided into two categories; (as per age i.e. adults < 35 years and ≥ 35 years. The Young's Internet Addiction Scale (YIAS) was used to assess the problematic internet use among the OST patients.[5] The YIAS is a self-report questionnaire consisting of 20 questions with a 5-point Likert scale ranging from 1 (rarely) to 5 (always) and the problematic internet use is categorized as no addiction, mild, moderate and severe addiction based on cutoff score; <30, 31-49,50-79 and >80 respectively.

Collected data were entered in Microsoft excel and analyzed using SPSS 20.0 version for statistical analysis. For descriptive analysis; percentage, mean and standard deviation were calculated and chi square test was used for the association between the problematic internet use and opioid use. Statistical variables were calculated to find out the significant difference between dependent and independent variables at 95% of confidence interval where p value <0.05.

Results

Among 79 participants included in the study, 47 (59.5%) of participants had some form of problematic internet use. More than one third 31 (39.2%) had mild addiction, 16 (20.3%) had moderate addiction and 32 (40.5%) had no internet addiction.

Table 1: Problematic internet use of the participants (N=79)

Problematic Internet use	No	32	40.5
	Mild	31	39.2
	Moderate	16	20.3

Table 2: Age distribution of participants (N=79)

	Minimum	Maximum	Mean	Standard Deviation
Age	18 years	53 years	29.40 years	6.03

Table 2 shows that the age of participants ranged from 18 years to 53 years.

The mean age of the participants was 29.4 years with standard deviation of 6.03

Table 3 illustrates the socio-demographic profile of the participants in the study. Most of the participants (82.28%) belonged to age less than 35 years remaining 17.72 % belonged to age group more than 35 years. Cent percent (100%) of participants were male. Majority (75.9%) of the participants followed Hinduism which was followed by Buddhism followed by 22.8 % of population. Also, most (88.6%) of participants were educated and almost half (48.1%) had school level education. More than half (51.9%) of participants were unskilled and more than half (58.2%) of participants were unmarried.

Table 3: Sociodemographic characteristics of the participants (N=79)

Variable	Category	Frequency (N=79)	Percentage (%)
Age	<35 years	65	82.28
	>35 years	14	17.72
Sex	Male	79	100
	Female	0	0
Religion	Hindu	60	75.9
	Buddhist	18	22.8
	Other	1	1.3
Education	No formal education	9	11.4
	School level	38	48.1
	Higher secondary	21	26.6
	Bachelors	11	13.9
Occupation	Unskilled	41	51.9
	Semi-skilled	36	45.6
	Skilled	2	2.5
Marital	Unmarried	46	58.2
	Married	31	39.2
	Divorced	2	2.5

Table 4: Prevalence of problematic internet use as per different socio-demographic profiles of the participants.

Characteristics	Categories	Problematic Internet use		Total
		Mild	Moderate	
Age	< 35 years	23	14	37 (53.62%)
	> 35 years	8	2	10 (71.42%)
Sex				
Education level	No formal education	5	2	7 (77.78%)
	School level	14	6	20 (52.63%)
	Higher secondary	8	5	13 (61.9%)
	Bachelors	4	3	7 (63.63%)
Occupation	Unskilled	13	9	22 (53.65%)
	Semi-skilled	17	7	24 (66.67%)
	Skilled	1	0	1 (50%)
Religion	Hindu	26	11	37 (61.67%)
	Buddhist	4	5	9 (50%)
	Other	1	0	1 (100%)
Marital status	Unmarried	18	10	28 (60.87%)
	Married	12	6	18 (58.64%)
	Divorced	1	0	1 (50%)

Table 4 illustrates the prevalence of problematic internet use as per different socio demographic profiles in which as per age distribution more than half (53.62%) of participants belonging to age group of <35 had some form of problematic internet use and majority (71.42%) of participants of age group >35 had

some form of problematic internet use.

Also, majority (77.78%) of participants with no formal education had some form of internet addiction and more than half (52.63%) of participants with primary level education had problematic internet use. Also, majority (61.9%) of participants who studied up to higher secondary level had problematic internet use and majority (63.63%) of participants with bachelor level of education had problematic internet use.

The table also shows that more than half (53.65%) of the unskilled participants had problematic internet use and majority (66.67%) of semi-skilled participants addiction and half (50%) of skilled participants had problematic internet use.

Also, majority (61.67%) of participants following Hindu religion, half (50%) of participants following Buddhism and cent percent (100%) of participants who followed other religion had some degree of problematic internet use.

Also, majority (60.87%) of unmarried participants, more than half (58.64%) of married participants and half (50%) of the participants who were divorced had problematic internet use.

Table 5: Association between sociodemographic profiles and internet addiction.

Characteristics	Categories	Problematic Internet use			Total	P- value
		No	Mild	Moderate		
Age groups	<35 years	28 (43%)	23 (35.3%)	14(21.5%)	65	0.319
	> 35 years	4(28.6%)	8 (57.14%)	2 (14.28%)	14	
Education	No formal	2 (22.22%)	5 (55.56%)	2 (22.22%)	9	0.840
	School level	18 (47.37%)	14(36.84%)	6 (15.8%)	38	
	Higher secondary	8(38.1%)	8 (38.1%)	5 (23.8%)	21	
	Bachelors	4(36.36%)	4 (36.36%)	3(27.28%)	11	
Occupation	Unskilled	19(46.34%)	13 (31.7%)	9 (21.95%)	41	0.634
	Semi-skilled	12(33.33%)	17(47.22%)	7(19.44%)	36	
	Skilled	1(50%)	1(50%)	0	2	
Religion	Hindu	23(38.33%)	26(43.34%)	11(18.33%)	60	0.378
	Buddhist	9 (50%)	4 (22.3%)	5 (27.7%)	18	
	Other	0	1(100%)	0	1	
Marital state	Unmarried	18((39.13%)	18(39.13%)	10(21.74%)	46	0.962
	Married	13(41.94 %)	12(38.7%)	6(19.36%)	31	
	Divorced	1(50%)	1(50%)	0	2	

Table 5 shows that 28 (43%) of the participants in the age group less or equal to 35 years had no problematic internet use, and only 4 (28.6%) of participants with age more than 35 had no problematic internet use. In the age less or equal to 35 years, 23 (35.3%) participants had mild and 14 (21.5%) had moderate problematic internet use. Also, 8 (57.14%) of the participants above the age of 35 had mild and 2 (14.28%) had moderate level of problematic internet use. However, the findings were not found to be statistically significant.

Also, it shows that problematic internet use was more common in participants with no formal education. Majority of population who had no formal education had problematic internet use. Also, after the no formal education, problematic internet use was found more common in participants with bachelor level of education which was followed by participants with higher secondary level of education. However, the findings were not found to be statistically significant.

On comparison of problematic internet use with occupation, we found that majority of participants having semi-skilled occupation had some form of problematic internet use which was followed by participants who were unskilled. However, the findings were not found to be statistically significant.

We found that among the participants who were participants following Hinduism, 37 (61.67%) had some form of problematic internet use. The severity of problematic internet use was more in Buddhist with 5 (27.7%) having moderate problematic internet use which was followed by Hinduism 11 (18.33%). All participants following other religion had some form of problematic internet use. However, these findings were not found to be statistically significant.

Problematic Internet use was more common in unmarried participants with 28 (60.87%) of unmarried participants. The unmarried participants also had more severe form of problematic internet use with 10 (21.74%) having moderate level of problematic internet use. However, the findings were not found to be statistically significant.

Discussion

The study was conducted in Pokhara academy of health sciences. It is situated in the Pokhara metropolitan city, Gandaki province. This is a cross-sectional hospital-based study conducted in patients with Opioid dependence seeking psychiatric services of this institute. The aim was to explore the prevalence of problematic internet use in patients with Opioid dependence and its association with socio-demographic profile.

Total of 79 patients in Opioid substitution therapy were enrolled in our study. A semi-structured proforma was used to collect the socio-demographic and clinical data of patients with Opioid dependence. The diagnosis of problematic internet use was

made by using Young's internet addiction scale.

In our study, the prevalence of problematic internet use was 59.5%. The findings from study by Kumar et al showed prevalence of 40.3%, however this study was conducted among students and professionals.[9] Our study with patients taking opioid substitution therapy might have showed higher level of problematic internet use due to comorbid addiction and more leisure time to use internet then compared to professionals. Similarly opioid dependent patients share neurobiological and psychological vulnerabilities such as impaired reward system and impulsivity leading to higher chances to have problematic internet use. Internet serves as a readily accessible, powerful tool to escape emotional distress, manage cravings, and cope with the social isolation commonly experienced in opioid use disorder which might have resulted in higher prevalence.

The findings of the study are discussed in following sections. Also, our study found that the prevalence of the internet addiction was more common in age group more than 35 with internet addiction being more common in individuals with no formal education. Our study also found that prevalence of internet addiction was more common in semiskilled individuals who were following Hinduism as primary religion and were unmarried.

In our study we found that problematic internet use was more common in adult more than 35 years with 71.42% of older adult participants having problematic internet use which was in contrast with a study by Kumar et.al, internet addiction was more common in young adult hood usually between 20's to early 30's.[9] One of the reasons for the findings in our study may be due to the fact that older adults have an unstructured leisure time, lack of social support and loneliness.[10]

In our study cent 100% of participants were male. Our findings are in line with a study conducted by Shan X et.al which resulted in male individuals with more prevalence of problematic internet use in comparison to females.[11] A cross-sectional study conducted by Gedam et.al showed similar findings to our study suggesting the prevalence of internet addiction being more common among male gender.[12]

In our study 60 (75.9%) participants were Hindu and 18 (22.8%) of participants belonged to Buddhist and remaining 1 (1.3%) belonged to other religion. The greater number of participants following Hinduism may be attributed to the data from national census in which over 80% of Nepal's population identifies as Hindu.[13]

In our study, problematic internet use was found to be more common in unmarried participants with 28 (60.87%) of unmarried participants having some degree of problematic internet use. Hannan A et in their study also reported the findings similar to our study where problematic internet use was found to be more among unmarried participants than that of married individuals.[14] Loneliness, social isolation and availability of free time and less responsibility has been linked with increased prevalence of problematic internet use among unmarried individuals.[14]

In our study, problematic internet use was found to be more common in participants who were semi-skilled with 24 (66.7%) of semi-skilled participants having some degree of problematic internet use. Similar findings were found in a study conducted by Lee et.al in which a large-scale Korean survey reported that semi-skilled or lower skilled groups had higher odds of problematic internet use in comparison to high skilled individual.[15]

In our study, problematic internet use was found to be more in participants with no formal education with 7 (77.78%) of participants with no formal education having some level of problematic internet use. Similar findings were found in a study by Umeta et.al which showed that individuals with low or no education are more likely to have less digital literacy and more problematic internet behavior resulting in problematic internet use.[16] Lower education and illiteracy often coincide with poorer digital skills, reduced access to structured guidance, and adoption of excessive or unregulated online behaviors.[16]

Conclusion

This study shows that 59.5% of participants had some degree of problematic internet addiction with adults with age more than 35 years. Hinduism was the most followed religion among the participants with severity of addiction being more in individual with no formal education and with semi-skilled occupation. Majority of individuals with problematic internet use were unmarried.

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