PREVALENCE OF INTERNET ADDICTION AND PATTERN OF SOCIAL MEDIA USE AMONG ENGINEERING COLLEGE STUDENTS

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ABSTRACT

Internet addiction commonly refers to an individual's inability to control his or her use of the Internet which eventually causes one's marked distress and functional impairment in daily life. The Internet is a widely used tool known to foster addictive behaviour, and Internet addiction threatens to develop into a major public health issue in the near future in a rapidly developing country like India. College students are especially vulnerable to developing dependence on the Internet, more than most other segments of the society. **Aim:** To study the prevalence of internet addiction, social media use and its impact among students of an engineering college. **Method:** A Cross sectional prevalence study was conducted among engineering students by asking them to fill the self administered Young's internet addiction diagnostic questionnaire. **Result:** In our study population (n=110), 56% are male students and remaining (44%) are female students. The mean age of the study sample is 20.6 years. The most frequently used social media is Whatsapp followed by facebook. Among the study population 28.18% (n=31) of students have internet addiction. Majority students with internet addiction are male 18.8% (n=20), remaining are female 10% (n=11). Co-morbid substance abuse is seen in 9 students with internet addiction. **Conclusion:** Prevalence of internet addiction is significantly high among engineering college students. Educational activities should be included for school and college students to provide awareness regarding judicious use of internet.

KEYWORDS: Internet addiction disorder, Young's internet addiction diagnostic questionnaire, social media use, substance abuse.

INTRODUCTION

The population of India is around 1.2 billion as of 2012, of which the number of Internet users is around 205 million. Now India is the second-leading country after China which currently has the highest Internet user base of more than 300 million.[1] The Internet itself is a neutral device originally designed to facilitate research among academic and military agencies. In spite of the widely perceived merits of this tool, psychiatrists and educators have been aware of the negative impacts of its use, especially the over or misuse and the related physical and psychological problems.[2] Addictive use of the Internet is a new and rapidly growing phenomenon and lives become increasingly unmanageable because of the Internet.

The term 'internet addiction' was first coined by Ivan Goldberg. Internet addiction was first documented by Kimberly Young who termed it as pathological internet use. Various other names were given to addiction related to internet are Internet addiction disorder, Online addiction, Compulsive internet use and Cyber addiction. These terms sparked a controversial debate among both clinicians and academicians since its introduction. They argued that unlike chemical dependency, the Internet offers several direct benefits as a technological advancement in our society and is not a device to be criticized as "addictive".[3] However, defining addiction has moved beyond this to include a number of behaviours that do not involve an intoxicant, such as compulsive gambling, video game playing, overeating. DSM also included gambling disorders and gaming disorders in its defining criteria.

Internet related problem is a raising phenomenon affecting people with varying frequency around the world and has produced negative impacts on the academic, relationship, financial, and occupational aspects of many lives. Internet addiction is typically characterized by psychomotor agitation, anxiety, craving, depression, hostility, substance experience preoccupation, loss of control, withdrawal, impairment

of function, reduced decision-making ability and constant online surfing despite negative effects on social and psychological welfare.[4] Some of the most interesting research on Internet addiction has been published in South Korea. The Internet has been touted as a premiere educational tool driving schools and colleges to integrate Internet services among their classroom environments. Young[5] found 58% of students suffered from poor study habits, poor grades, or failed school due to excessive Internet use.

The factors that contribute to student Internet abuse are: 1) Free and unlimited Internet access, 2) Huge blocks of unstructured time, 3) Newly experienced freedom from parental control, 4) No monitoring or censoring of what they say or do online, 5) Full encouragement from faculty and administrators, 6) Social intimidation and alienation. It is vital to assess the burden of internet addiction among students for early intervention and prevention of fatal consequences.

MATERIALS AND METHOD
Aim
The aim of the study is to assess the prevalence of internet addiction and pattern of social media use among third year engineering college students of Tirunelveli, Tamilnadu, India.

Objective
To study the prevalence of internet addiction, by using Kimberly S Young internet addiction diagnostic questionnaire.

To assess the co-morbid substance abuse of students with internet addiction.

To identify the pattern of use of social media among students.

Inclusion criteria
Third year engineering college students of a private engineering college who are willing to participate this study included. Students have Smartphone with internet connection only included in study sample.
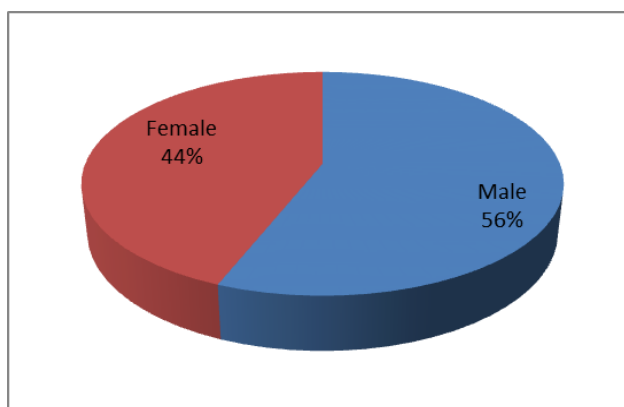
METHODOLOGY
The study was a cross-sectional and self administered study conducted among students of a private engineering college, tirunelveli, Tamilnadu. After obtaining an informed oral consent, the students are asked to fill the semi-structured proforma which contains their socio-demographic data, substance abuse and pattern of internet use. Then they were asked to fill the Kimberly S Young's internet addiction Diagnostic Questionnaire after giving adequate information regarding the method of scoring. This 8-item screening instrument was based on the DSM-IV diagnostic criteria for pathological gambling. The eight questions incorporated the following aspects of addiction: Preoccupation with the Internet; tolerance (needing to spend increasing amounts of time

on the Internet to achieve satisfaction); inability to cut back or stop Internet use; spending more time online than intended; adverse consequences in interpersonal, educational or vocational spheres of life; lying to conceal the true extent of Internet use; and use of the Internet as an attempt to escape from problems. Only nonessential Internet usage (i.e., non-business or academic related use) should be evaluated, and addiction is present when clients answer yes to five (or more) of the questions during a 6-month period. After obtaining the individual scoring sheet, statistical analysis was done to assess the prevalence of internet addiction and its impact.

RESULTS
In our study 133 students have participated. The students who have completed the proforma (n=110) are included as study sample. Among them 56% are male students and remaining (44%) are female students. The mean age of the study sample is 20.61 years. The mean time spent for internet usage for various purposes excluding non-academic usage is 3.6 hours. In our study population all students are using any one of the social media. The most frequently used social media in study population are Whatsapp 74.5% (n=82) followed by facebook 57.2% (n=63). Hike (21.8%), searching or surfing the internet (20%) are the other patterns of internet use among students. In our study, twitter is the least used (5.4%) social media among students. Although the most common social media in female students is whatsapp (30%), the usage of facebook is significantly lower (16.3%) in girls when compare with male students (40.9%).
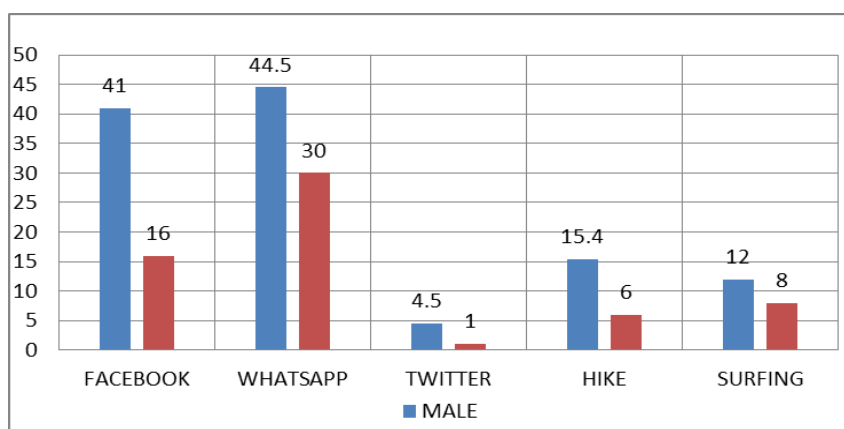
Among the study sample 16.4% (n=18) students admitted that they are abusing at least any one of the substances of abuse like alcohol, tobacco, cannabis for the past 6 months duration. Remaining 83.6% (n=92) students were not at all taking any substance. The prevalence of substance abuse is high among male students (14.54%, n=16) and least significant in female students (1.81%, n=2). The prevalence of internet addiction in our study population based on Young's internet addiction diagnostic questionnaire is 28.2% (n=31). Internet addiction is more prevalent among the male students (18.2%, n=20) than female students (10%, n=11). Among the 16 male substance abusers, 7 are addicted to internet as well. Similarly the 2 female students with substance abuse are also addicted to internet. The co-existent between substance abuse and internet addiction is 11.2% in male students.

Picture 1: Sex distribution of study population.
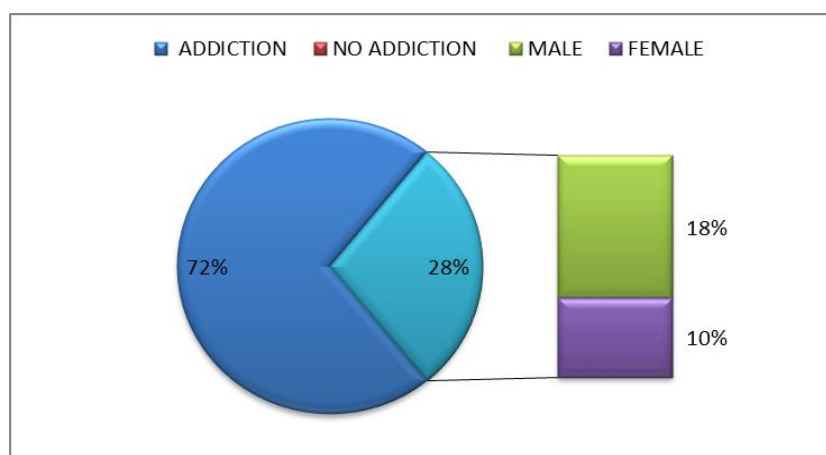
Table 1: Pattern of internet use among students.

	Male(n=62)	Female(n=48)	Total(n=110)
Facebook	40.9%(45)	16.3%(18)	57.2%(63)
Whatsapp	44.5%(49)	30%(33)	74.5%(82)
Twitter	4.5%(5)	0.9%(1)	5.4%(6)
Hike	15.4%(17)	6.3%(7)	21.8%(24)
Surfing	11.81%(13)	8.18%(9)	20%(22)

Picture 2: Pattern of internet use (In percentage).

Table 2: Prevalence of substance abuse among students.

	Male	Female	Total
Abusing substance	14.6%(16)	1.8%(2)	16.4%(18)
No substance abuse	41.8%(46)	41.8%(46)	83.6%(92)

Picture 3: Prevalence of internet addiction among students.

DISCUSSION

In our study, male students participated more than female students. In contrast with our study female students (71%) dominated a study in Malaysia. As most of the students belong to third year engineering course the mean age are 20.61, which is similar to a study conducted among undergraduate medical college students from three south Indian cities of Bangalore, Mangalore and Trissur.[6] The average time spent for using internet for non-academic purpose is 3.6 hours in our student sample. Nida Tabassum Khan[6] found 46% of the college students of his study sample access their Facebook account every passing two hour of their wakening moment, 19% do so at least three hour interval while 16.0% do so at least three hour interval . He found that more the time spend in online, more the addiction with social media. This study revealed social media addiction has direct impact on academic performance. In contrast to this finding Adesope et al[7] found that most of the students who use social networking sites for education to carry out group projects and assignments and the social media benefits students. This means that students can explore topics that they are interested in through online social networking.

The most frequently used social media in our study sample is Whatsapp in both sexes followed by facebook. Similar to our study finding Harshavardhan et al[8] found that Whatsapp was the most common social media platform used (70%) which eclipsed the time spend on other apps (Facebook-18% and Twitter-1.3%). While half of the students spent 1–2 h/day, a significant minority (10.67%) spent almost 6–7 h/day on Whatsapp. Nearly 12% of students qualified for Whatsapp dependence. Specific internet addiction, a concept described by Young may be applicable for specific Whatsapp addiction in certain population, including our study sample. 76.2% of students use both Twitter and WhatsApp, 21.5% use WhatsApp only, 1% use Twitter only, while 1% do not use any. Most medical students (89.8%) use Twitter/Whatsapp every day in a study conducted by Abdullah K Asiri et al[9] among medical students of Saudi Arabia. Most medical students (88.7%) use Twitter/Whatsapp during night and 29.7% of medical students has poor quality of sleep. Twitter/Whatsapp use was significantly more among female than male medical students (81.7% and 73.1%, respectively) which is contrast to our study finding.

In our study 14.6% (n=16) of male students abuse any one of substance abuse like alcohol, tobacco, cannabis. Surprisingly 1.8% (n=2) female students are also abusing substance which is a significant percentage in our society. Seven male students and two female students have both internet addiction and substance abuse in our study. The prevalence of alcohol abuse in adolescents with internet addiction was 27.4% in a study by Young Sik Lee et al.[10] He found that drug use may predict a high risk for internet addiction. He also concluded that students with a high risk for internet addiction have vulnerability for addictive behaviours, so co-morbid substance abuse should be evaluated and, if found, treated in adolescents with internet addiction.

The prevalence of internet addiction in our study sample is 28.18% (n=31). Internet addiction is higher in male (18.8%) than female students (10%) of our study population. Similar findings were replicated in a study among south Indian medical students.[11] Among the total 1763, 27% of medical students met criterion for mild addictive internet use, 10.4% for moderate addictive internet use and 0.8% for severe addiction to use. Internet addiction was higher among medical students who were male, staying in rented accommodations, spent more than 3 hours per day on internet. In a preliminary study among school students, 11.8% students had internet addiction; it was predicted by time spent online, usage of social networking sites and chat rooms and also by the presence of anxiety and stress. There was a strong positive correlation between internet addiction and depression, anxiety, stress.[12]

The prevalence of internet addiction and depression was found to be 6% and 21.5% respectively in a survey among dental students.[13] The first year students showed the highest mean internet addiction score. Chatting was the main purpose of internet use. Logistic regression analysis showed that the individuals who were depressed and scored less than 60% marks were more likely to be addicted to internet. Since our study mainly focused on the prevalence of internet addiction, other correlation like mood disorder, anxiety disorders are not included. Future studies should be directed on these areas too.

CONCLUSION

Fear of new technology and pathologizing online relationships are the reasons put forward by people arguing against the concept of internet use as 'addiction'. But several studies proved the existence of significant addiction as like chemical substances. Internet has become an essential part of our routine life. So it's not possible to advice students to maintain complete abstinence from internet use as we are suggesting for alcohol dependence. In most of the studies including our study, the prevalence of internet addiction exceeds 25% which indicates early intervention and education about judicious use of the internet is the need of the hour. Future studies should be focused on the psychological and personality factors that act as a vulnerability for internet addiction.

CONFLICT OF INTEREST

Authors display no conflict of interest.

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