

## A Study on Prevalence of Internet Addiction and its Relationship with Personality Traits in Undergraduate Medical Students

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### Abstract

*Objective:* To assess the prevalence of internet addiction and its relationship with the personality traits in undergraduate medical students. *Materials and Methods:* The present study employed a descriptive, correlative method and the sample comprised 300 undergraduate medical students of Mamata Medical College, Khammam. The tools used are Internet Addiction test (IAT) designed and developed by Young and NEO-Five Factor Inventory (NEO-FFI) questionnaires. *Results:* Results indicated that 71.6% of medical students are addicted to internet, internet addiction is high in final year medical students and internet addiction is significantly correlated with conscientiousness. *Conclusion:* The study demonstrated that there is high prevalence of internet addiction in medical students, so to prevent internet addiction in adolescents we should take measures like teaching and counseling them regarding the pathological effects of internet addiction and also personality screening to be done during the start of under graduation to identify the risk personalities and to counsel them from being addicted.

**Keywords:** Personality Traits; Internet Addiction; Medical Students.

### Introduction

The Internet has become an important information and entertainment source for adolescents, serving substantial role in changing the social lives of people [1,2]. The vast majority of teens in the world are using internet. India is no exception to this global trend of excessive internet use. Few studies have explored problematic internet use in Indian context.

It is therefore important to investigate the factors that predispose to problematic internet use among college students in the Indian context. An internet addict may typically spend 40-80 hours weekly online [3]. Some researchers observed that among all types of addictions, Internet addiction is seen at earlier ages in both sexes [3].

Prevalence statistics of Internet addiction among adolescents vary widely from 2% [4] to 20% [5] across cultures and societies. Internet addiction is typically

characterized by psychomotor agitation, anxiety, craving, loss of control, impairment of function, reduced decision-making ability which might lead to negative impact on academic performance [4,5,6]. A series of problems resulting from the misuse of internet accompanying the excessive use of internet is a primary attention of researchers all over the world. In fact prior to the publication of the latest DSM-5, there had been some debate as to whether internet addiction should be included as an independent entity. The DSM-5 has included "Internet Gaming Disorder" - a subtype of internet addiction, in section 3 as an area that needed future research before being included in future editions of the DSM [7].

Some studies have postulated relationships between Internet addiction, shyness and attention deficit hyperactivity disorder [8,9]. One of the study also tested sensation-seeking and Internet dependence in college students, the findings of this study seem to suggest that specific personality traits

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may predispose individuals to develop IAD [10]. There have been a number of longitudinal studies examining the relationship between general Internet use (including heavy use) and various aspects of psychosocial wellbeing [10]. However, none of these studies show consistent findings and none of these studies specifically investigated Internet addiction or attempted to measure it.

Numerous studies on the psychologically addictive characteristics of Internet use have led to a growing concern among educators about the impact of the Internet on childrens and adolescents well-being and a number of other studies have highlighted the danger that excessive Internet use may pose to students as a population group [11]. This population is deemed to be vulnerable and at risk given the accessibility of the Internet and the flexibility of their schedules [12]. However, the role of personality traits in using the Internet has been overlooked in the current literature, the present research aims at investigating the prevalence of internet addiction and its relationship with the personality traits.

## Materials and Methods

The current study is a descriptive and correlative study, was carried out on undergraduate medical students of Mamata medical college, khammam. Both male and female undergraduate medical students in the age group of 18-22 years are included in the study, conforming to internet use for the last 6 months or more, were enrolled. A total of 300 student volunteers were thus selected by random sampling . Study period from 1<sup>st</sup> august 2015 to 30<sup>th</sup> April 2016.

The study was approved by the research ethics committee. Subjects were briefed in detail about the nature and purpose of the study. Confidentiality was assured and informed consent was taken. Two questionnaires were administered to the subjects as described below.

**Young's Internet Addiction Test (IAT)** is a 20-item scale with a scoring of 0-5 for each question and a total maximum score of 100. Based on the scoring, subjects were classified into normal users (<20), mild (20-49), moderate (50-79) and severe (>79) internet addiction groups covering the degree to which use of internet disrupts everyday life with the score ranging from 20 to 100. The internal reliability of the scale is 0.93. This test assesses the generalised internet [13]. Yoo and co-workers have reported reliability coefficient of the

test with Cronbach's alpha method equal to 0.90 [9].

**The Neo-Five Factor Inventory (NEO-FFI)**, the short version, is 60-item (12 items per domain) questionnaire measuring the big five personality traits: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. The test was developed by Paul T. Costa, Jr. and Robert R. McCrae for use with adult (17+) men and women without overt psychopathology [14].

## Statistical Analysis

Mean and standard deviation were calculated for the variables, and percentages were computed for the variables. Correlation between the variables was assessed by means of the Pearson's correlation coefficient by using SPSS Software version 15.0

## Results

Statistical analysis showed that prevalence of Internet addiction was high in final year medical undergraduates which is showed in Table 1. Based on this study sample, prevalence of mild addiction in undergraduates is 46.6%, moderate addiction is 25%, there were no severely addicted students. Overall 71.6% of students were addicted to internet which is showed in Table 2. Mean scores of female students and male students were done and results showed that there is no significant difference between male and female internet addiction scores which is depicted in Table 3.

In order to test the hypothesis, correlation study was used between personality traits of internet addicted students with internet addiction scores,

**Table 1:** Of internet addiction in medical students

Year of study	No. of students	Internet addiction
First yr	134	68.3%
Second yr	28	67.8%
Third yr	18	50%
Final yr	120	74.6%

**Table 2:** Of internet addiction in medical undergraduates

Internet addiction	First yr	Second yr	Third yr	Final yr	Total
Mild	48.5%	35.7%	50%	46.6%	46.6%
Moderate	26.8%	32.1%	0	21.6%	25%
Severe	0	0	0	0	0

**Table 3:** Relationship of internet addiction between male and female

Gender	No. of. Students	Mean	SD	p value
Male	133	35.14	19.7	(NS)0.59
Female	167	34.27	18.8	

(NS)- not significant

**Table 4:** Correlation between personality traits of internet addicted students

Personality traits	Mean	SD	P value	( r )value
Neuroticism	24.54	5.91	0.193	0.087
Extraversion	26.3	6.04	0.073	-0.067
Openness	24.7	5.04	0.463	0.050
Agreeableness	25.5	5.49	0.376	0.532
conscientiousness	26.3	5.98	**0.0019	-0.210

\*\*significant; r-correlation coefficient

then the results are presented in Table-4. only conscientiousness is significantly correlated with internet addiction and there is no significant correlation with extraversion, openness, agreeableness, neuroticism.

### Discussion

Our study found that Internet addiction affects around 71.6% of the undergraduate medical students, moreover, adolescents and young adults are specifically deemed to be vulnerable and at risk, comprising a large percentage of the online population [15,16]. Young and Lee postulated that some online users consider the internet as an alternative, text-based reality where users are able to immerse themselves by taking on another social person through shaping a false and assumed identity, which in itself would be highly rewarding psychologically to guard against the attendant risks and difficulties of social relationship and avoiding the challenges of life in the real world [17]. Gender can be taken into account as one of the key contributory factors of Internet use [18]. Gender appears to be not significant in the level of Internet usage in this study. These results suggest that both female and male students are likely to become addicted to the Internet .

On the other hand, excessive and pathological Internet use is significantly correlated to conscientiousness and not significantly correlated to extraversion, agreeableness, and openness to experience in this study. Those who score high on conscientiousness have control over their impulses and are orderly, diligent, and strive to achieve

goals. In contrast, unconscientious individuals are predisposed towards acting impulsively, being disorganised, and tend to procrastinate on tasks. Therefore, such characteristics can demonstrate that students with unconscientiousness are highly prone for overusing the Internet. Individuals who score high on agreeableness tend to be prosocial, warm, trusting and friendly to others. Disagreeable individuals, on the other hand, are less pleasant to others, argumentative, uncooperative, and harsh disagreeable individuals may turn to the Internet as a means to satisfy their needs for antagonism [19]. The characteristics of well-adjusted individuals make them not seek social contacts on the Internet. The results of the present study are explainable in terms of extraversion and the individual’s tendency to invest time in social relationship, to experience positive emotions and community participation, extrovert individuals as web users do not consider online or cyber-relationships as social support [20].

Neuroticism scores are not significantly related to internet addiction in the present study but neuroticism involves attributes like shyness, guiltiness, being tense, and being moody [21]. Scholars described how those who were high on the trait of neuroticism were likely to use the Internet to avoid loneliness. They found that individuals who were high on neuroticism reported the lowest levels of perceived social support [2].

### Conclusion

Based on the study findings, it is concluded that excessive Internet use is related to their personality traits which are prone for addiction. Excessive time spent in front of a computer and web overuse may be detrimental to various aspects of their lives including the social, functional, physical, and psychological aspects, forsaking other important priorities in the process, at risk for a range of morbidities and, in the extreme, even mortality. With continuing advances in computing and Internet power and availability, this issue is likely to become increasingly prevalent. Although some researchers have suggested that people who have easier access to the Internet are more likely to become addicted [22], additional research is nevertheless needed to determine what factors may cause individuals to become addicted to the Internet. As a result, further experimentation with a more comprehensive level of analysis is necessary to examine cause and effects of pathological Internet use.

### Limitations

Limitations of the study are small size of the sample and the study was conducted in only one medical college, so results cannot be generalized to the population .

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