Original research article

PREVALENCE OF INTERNET ADDICTION AND ITS ASSOCIATED FACTORS IN TAMIL NADU

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Abstract

Introduction:

Internet addiction has become a 21st Century epidemic. To prevent and treat internet addiction, evaluation of current prevalence and its associated factors are needed.

Aim:

To find the prevalence and associated factors of internet addiction in Tamil Nadu.

Materials and methods:

Internet addiction severity was assessed by internet addiction scale (TN). A Semi structured questionnaire was used to collect associated factors. Statistical analysis was done and results were evaluated.

Results:

1367 people participated in this study. Among them 61.7% were male. Prevalence of mild, moderate and severe internet addiction were   57.6%, 29.8%, and 9.1% respectively.

Among gender, Prevalence of moderate and severe internet addiction in males were 31.3% and 10.3% respectively, and 27.3% and 7% respectively among females.

Considering age, Prevalence of moderate and severe internet addiction in less than 18 age group were 42.9% and 7.1%, and between 18 to 40 age group, these were 33.5% and 10.4% respectively. In the above 40 age group, the prevalence of moderate and severe addiction were 19.4% and 6.3% respectively.

Considering internet content, among facebook users, moderate and severe internet addiction were 36.1% and 11.4% respectively. In videogame players, moderate and severe internet addiction were 24% and 32% respectively. Among whatsapp users, moderate and severe internet addiction were 24.2% and 4% respectively. And among youtube watchers moderate and severe internet addiction were 30.6% and 9.8% respectively.

Conclusions:

In general, Prevalence of problematic internet addiction was 38.9% among which moderate and severe internet addiction were 29.8% and 9.1% respectively. Males were found to be more addicted . Internet addiction was found to decrease with increase in age. Unmarried population were more addicted than married. Considering content, Videogames have the most addictive potential followed by facebook and youtube. Whatsapp users showed the least addiction. Age, sex, education, economy, marital status and content influence internet addiction.

Keywords – internet addiction, prevalence, demographic factors, online platforms

Introduction

There has been an enormous growth of Internet usage all over the world. Internet helps in education, work, communication, entertainment etc thus easily becoming an essential part of our daily life (1).

Estimates suggest that there were 4.88 billion internet users in 2021 globally (2). In India, it is predicted that there will be 840 million Internet users by 2022 (3).

Internet addiction is a relatively new phenomenon and considered to be a "21st Century epidemic"(4). Psychologist Mark Grifths quoted that, "Internet addiction is a non-chemical behavioral addiction, which involves human–machine (computer-Internet) interaction" (5).

"Internet addiction is inability to control one's use of the internet despite negative consequences "(6,7) , and " persists over a significant period "(8).

The features of internet addiction are Salience (preoccupied with the Internet), Excessive Use (excessive online behaviour and compulsive usage), Neglect Work (Job or school performance and productivity are most likely compromised), Anticipation (thinks about being online when not at the computer), Lack of Control (trouble managing his or her online time) and Neglect Social Life (9-12). Internet addiction creates psychological, social, school and work problems and difficulties in a person's life (13).

Anxiety, Depression, somatization, obsessive–compulsive disorder, paranoid ideation and hostility are higher in internet addicted people than the general population (14,15).

Regarding psychosocial risk factors of internet addiction, male gender (16), urban areas, low parental supervision (17), negative parent-child relationships (18) have been found to be related to internet addiction (19).

Studies have indicated that internet addiction is associated with different factors like age (having lower age) (20) and male gender (21).

The studies in Europe and the United States showed a prevalence of Internet addiction from 7.9% to 25.2% among adolescents (22).

Some studies identified that 25.1% of American university students (23), 10.6% to 13.6% of Chinese college students (24,25), 35.4% in Nepal students (26) ,19.85% to 42.9% IA in India (27,28), 40.7% in Iranian university students (29), 38.2–63.5% in Japanese university students (30), 1.6% IA in Turkey students (31) had internet addiction.

However these available data are old and Updated data are needed to analyse current addiction prevalence and to develop interventions for prevention and treatment. The purposes of this study are to document the prevalence of internet addiction and identify associated factors in Tamil Nadu.

Materials and methods

This study was approved by Institutional Ethical Committee , Government omandurar medical college, Tamil Nadu, India. It was conducted with self administered questionnaire through online mode. Two forms were given. One form had socio demographic questions and another form had internet addiction scale (Table 1). Internet addiction scale has 10 questions about internet addiction, based on DSM 5 and ICD 11 addictive behaviours criteria (32,33). It uses 4 point Likert scale, scores ranging from 0-30. Options were given in frequency form (never, occasionally, frequently, always). Internet addiction severity is graded with theoretical norms (1-10 mild, 11-20 moderate, 21-30 severe). Higher score reflects higher severity.   Statistical analysis was done by using Statistical Package for the Social Sciences (SPSS) version 20. Statistically significant difference was considered at p-value <0.05. From the data, the prevalence of internet addiction and associated factors were evalauted.

Results

Table 1

Internet Addiction Scale (TN)

No.	Item (During past one month)	Nil	Occasionally	Frequently	Always
1	When internet, social media/mobile phone/video game is not available, I feel empty, sad and frustrated.	0	1	2	3
2	While using internet , I lose count of the time I spend on it	0	1	2	3

3	Internet usage is increasing gradually over time.	0	1	2	3
4	I am not able to stop or restrict using my phone.	0	1	2	3
5	While I study or work, I spend more time on phone unnecessarily.	0	1	2	3
6	If someone criticises me or stops me from using phone , I develop anger and frustration towards them.	0	1	2	3
7	Immediately after waking up, I pick up my phone first to surf the internet , social media or play video games.	0	1	2	3
8	My bed time is delayed due to usage of phone.	0	1	2	3
9	Using phone affects my education / work.	0	1	2	3
10	I prefer to spend time on mobile phone rather than with my family members	0	1	2	3

Table 2

Socio demographic variable

Socio demographic variables	N (%)
Sex	
Male	524 (61.6%)
Female	843 (38.4%)
age	
Below 18	42 (3.1%)

18-40	925 (67.7%)
Above 40	400 (29.2%)
Education level	
School level	126 (9.2%)
College level	1241 (90.8%)
Monthly income	
Below 20,000 per month	364 (26.6%)
20,000 and above per month	1003 (73.4%)
Marital status	863 (63.1%)
Married	504 (36.9%)
Unmarried	

Table 3

Prevalence of internet addiction in general population

Addiction	Percentage
Nil	48 (3.5%)
Mild	788 (57.6%)
Moderate	407 (29.8%)
Severe	124 (9.1%)

Table 4

Prevalence of internet addiction and gender

No.	Sex	Count	Grading				P value
			Nil	Mild	Moderate	Severe	
1	Female	Count	22	322	143	37	>0.05
		% within Sex	4.2%	61.5%	27.3%	7%	
2	Male	Count	26	466	264	87	
		% within Sex	3.1%	55.3%	31.3%	10.3%	

Table 5

Prevalence of internet addiction and age

No.	Age	Count	Grading				P value
			Nil	Mild	Moderate	Severe	
1	18-40	Count	21	498	310	96	<0.05
		% within Age	2.3%	53.8%	33.5%	10.4%	
2	above 40	Count	25	272	78	25	
		% within Age	6.3%	68.0%	19.4%	6.3%	
3	below 18	Count	2	19	18	3	
		% within Age	4.8%	45.2%	42.9%	7.1%	

Table 6

Prevalence of internet addiction and education

No.	Education	Count	Grading				P value
			Nil	Mild	Moderate	Severe	
1	College	Count	39	709	366	112	>0.05
		% within Educational	3.2%	57.8%	29.9%	9.1%	
2	School	Count	9	69	36	10	
		% within Educational	7.3%	55.6%	29.0%	8.1%	

Table 7

Prevalence of internet addiction and economic status

No.	Monthly income	Count	Grading				P value
			Nil	Mild	Moderate	Severe	
1	above 20,000	Count % within monthly income	32	581	298	82	>0.05
			3.2%	58.5%	30.0%	8.3%	
2	upto 20,000	Count % within Monthly income	15	198	105	42	
			4.2%	55.0%	29.2%	11.6%	

Table 8

Prevalence of internet addiction and marital status

No.	Marital status	Count	Grading				P value
			Nil	Mild	Moderate	Severe	
1	Married	Count	37	553	206	66	<0.05
		% within Marital status	4.3%	64.1%	23.9%	7.7%	
2	Unmarried	Count	11	235	200	58	
		% within Marital status	2.2%	46.6%	39.7%	11.5%	

Table 9

Prevalence of internet addiction among different online users

| No. | Mostly watched | Count | Grading | | | | P value |
			Nil	Mild	Moderate	Severe	
1	Facebook, twitter	Count %within Mostly watched	8 2.3%	177 50.2%	127 36.1%	40 11.4%	<0.05
2	Videogame	Count % within Mostly watched	0 0.0%	11 44.0%	6 24.0%	8 32.0%	
3	Whatsapp	Count %within Mostly watched	23 5.5%	280 66.3%	102 24.2%	17 4.0%	
4	Youtube	Count % within Mostly watched	7 1.7%	237 57.9%	125 30.6%	40 9.8%	
5	Others	Count % within Mostly watched	9 5.7%	84 53.2%	46 29.1%	19 12.0%	

In this study, 1367 people participated. Among them 61.7% were male. Other demographic details are shown in table 2. In general population, Prevalence of mild, moderate, severe internet addiction were 57.6%, 29.8%, 9.1% respectively. (Table 3).

Among gender, prevalence of mild, moderate, severe internet addiction in male were 55.3%, 31.3%, 10.3% respectively, and in female were 61.5%, 27.3%, 7% respectively. (Table 4)

Prevalence of mild, moderate, severe internet addiction in less than 18 age group were 45.2%, 42.9%, 7.1%, and between 18 to 40 age group, these were 53.8%, 33.5%, 10.4% respectively. In the above 40 age group, the prevalence of mild, moderate, severe addiction were 68%, 19.4%, 6.3% respectively. (Table 5).

Prevalence of mild, moderate, severe internet addiction in School level educated population were 55.6%, 29%, 8.1% respectively and in College level population, these were 57.8%, 29.6%, 9.1% respectively. (Table 6).

In low income group, mild, moderate, severe internet addiction were 55%, 29.2%, 11.6% respectively and in above 20,000 per month, these were 58.5%, 30%, 8.3% respectively. (Table 7)

Among Unmarried population, mild, moderate, severe addiction grading were 46.6%, 39.7%, 11.5% and married population, these were 64.1%, 23.9%, 7.7% respectively. (Table 8).

When considering internet content, in facebook users, mild, moderate, severe internet addiction were present 50.2%, 36.1%, 11.4% respectively. In videogame players, mild, moderate, severe internet addiction were present as 44%, 24%, 32% respectively. Among whatsapp users, mild, moderate, severe internet addiction were present as 66.3%, 24.2%, 4% respectively. And in youtube watchers, mild, moderate, severe internet addiction was 57.9%, 30.6%, 9.8% respectively. (Table 9).

Discussion

Mild internet addiction is considered as average online use; and moderate and severe internet addiction are considered as problematic internet use. (34).

In this study, moderate and severe internet addictions were assessed and evaluated with associated factors.

In overall population, Prevalence of problematic internet addiction was 38.9% among which moderate and severe internet addiction were 29.8% and 9.1% respectively. These addiction prevalence has great variation when we analyse its associated factors.

When we consider gender differences, internet addiction in men was 41.6% in which moderate and severe were 31.3% and 10.3% respectively, and among females it was 36.3% in which moderate and severe were 27.3% and 7% respectively. Males were found to be more addicted than females.

When considering age group, in the below 18 age group, internet addiction was 50% among which moderate and severe were 42.9% and 7.1% respectively, and between the 18 to 40 age group, it was 43.9% in which moderate and severe were 33.5% and 10.4%. In above 40 age group, the prevalence of addiction was 25.9% in which moderate and severe   addiction were 19.4% and 6.3% respectively. Below 18 age population are found to be more addicted than any other age group. As   age increases, internet addiction is   decreased. These showed the impact of internet addiction   on young population and the need for strategies to save future generations from internet addiction. These findings are in consistence with previous studies. (20,21)

Considering the educational qualification, Prevalence of internet addiction among school level educated population was 37.1% in which moderate and severe internet addiction were 29% and 8.1% respectively and in College level population it was 38.7% in which moderate and severe were 29.6% and9.1%. Education qualification did not show major differences in internet addiction.

Considering monthly income, Internet addiction in low income group were 40.8% in which moderate and severe were 29.2% and 11.6% respectively and above 20,000 rupees per month income were 38.3% in which moderate and severe were 30% and 8.3% respectively. Internet addiction spread beyond economic variation even it was more in low income population. It showed the impact of internet addiction on productivity of the working class.

Regarding to marital status, Internet addiction among the unmarried population was 51.2% in which moderate and severe were 39.7% and 11.5% and in married population,   it was 31.6% in which moderate and severe were 23.9% and 7.7% respectively. Unmarried population were more addicted than married. Possible reasons maybe due to young age, less responsibility in social life, more free time for browse etc. At the same time, it shows the infiltrating pattern of internet addiction in the young generation.

When Considering content, in facebook users, internet addiction was 47.5% in which moderate and severe were 36.1% and 11.4% respectively. In videogame players, addiction was 56% in which moderate and severe were 24% and 32% respectively. In whatsapp users, internet addiction was 28.2% in which moderate and severe were 24.2% and 4%. In youtube watchers, internet addiction was 40.4% in which moderate and severe were 30.6% and 9.8% respectively. There is huge variation of internet addiction related to content in internet. It tells the addictive potential of various internet platforms.

Videogames are the most addictive potential platform where almost all people have some form of addiction while 32% of users have severe internet addiction. Facebook comes second in internet addictive potential and youtube, third. Whatsapp users showed least addiction when considering other contents. These studies are in consistence with past studies which stated that various online platforms have different addictive potential (35,36, 37).

This study showed the current prevalence of internet addiction and its changing severity whilst analysing its associated factors. Age, sex, education, economy, marital status and content have influence in determining the severity in internet addiction. These findings will be useful in making policies for prevention and treatment strategies for internet addiction.

Conclusion

There is significant difference in prevalence of internet addiction and its associated factors. It shows variation of internet addictive potential with internet platforms. These findings will be helpful in preventive and treatment strategies for internet addiction.

Limitation

As this study is small in size, larger sample studies will be needed to analyse more. Day by day, various internet platforms and mode of access are evolving. It has to be included in upcoming studies. Psychological morbidities, parental factors, stress factors have not been asked in this study. Evaluation of these factors will be more helpful to know the dynamics of internet addiction.

Acknowledgement

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