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Original Research Article

Assessment of status of internet addiction among adolescent school students residing in Raipur city, Chhattisgarh

Shweta Shalini[1]*, Shubhra A. Gupta[2], Mini Sharma[2], Madhu Gaikwad[3], Smita Verma[2], Nirmal Verma[2]

[1]Department of Community Medicine, Government Medical College, Kanker, Chhattisgarh, India
[2]Department of Community Medicine, Pt. J. N. M. Medical College, Raipur, Chhattisgarh, India
[3]Department of Community Medicine, Late B. R. K. Memorial Government Medical College, Jagdalpur Chhattisgarh, India

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***Correspondence:**
Dr. Shweta Shalini,
E-mail: shalini2792@yahoo.co.in

ABSTRACT

Background: With over 560 million internet users, India is the second largest online market ranked only behind China as of January, 2019. Rapid expansion and proliferation of the internet has provided better opportunities for communication, information, and social interaction. In addition, when this use becomes obsessive and at the expense of other aspects of a person's life, the internet could be problematic which has led to the emergence of the concept of internet addiction. The present study was conducted with the objective to find out the status of internet addiction in school going adolescent students and its determinants.
Methods: A multicentre cross-sectional study was carried out in 160 school going adolescent students of Raipur city. Young's Internet Addiction Scale consisting of 20-item was used in the study.
Results: Out of 160 students, 94 (58.8%) were in the score range of 20-49 i.e., mild addiction and 33.8% (54) were in score range of 50-79 i.e., moderate addiction. Internet addiction was more common in boys as compared to girls and was statistically significant ($p<0.05$). Type of school was also significantly associated with internet addiction.
Conclusions: As addiction of internet is seen in majority of students, there is an urgent need to use a comprehensive approach including periodical awareness of the students as well as parents regarding balancing the time between internets surfing, studies and outdoor physical activities.

Keywords: Internet addiction, Socio-demographic factors, School going adolescents

INTRODUCTION

The internet and mobile technology are increasingly important to the educational and social lives of adolescents, and are becoming a part of their identity.[1] There has been an explosive growth in the use of internet not only in India but also worldwide in the last decade. With over 560 million internet users, India is the second largest online market, ranked only behind China as of January, 2019. Rapid expansion and proliferation of the internet have provided better opportunities for communication, information, and social interaction. The internet is used by some to facilitate research, to seek information, for interpersonal communication, and for business transaction. On the other hand, it can be used by some to indulge in excessive gaming, chatting for long hours, and even gambling.[2] Easy access and social networking are two of the several aspects of the Internet

fostering addictive behaviour.[3] In addition, when this use becomes obsessive and at the expense of other aspects of a person's life, this use of the internet could be problematic which has led to the emergence of the concept of internet addiction. The term "Internet Addiction" was proposed by Dr. Ivan Goldberg in 1995 for pathological compulsive internet use.[4,5] Internet addiction commonly refers to the individual's inability to control his or her use of the Internet (including online-related, compulsive behaviour), which eventually causes one's marked distress and functional impairment in daily life. Research studies in the western and Asian contexts suggest that the risk of Internet addiction among young people is increasing.[4] Measuring internet addiction was a challenge. Young linked excessive internet use most closely to pathological gambling, a disorder of impulse control in DSM IV and adapted the DSM IV criteria to relate to internet use in the internet addiction test developed by her.[6] In India, use of internet is enormous, especially in the young population. It can have negative impact on identity formation and may negatively affect cognitive functioning, lead to poor academic performance and engagement in risky activities, and inculcate poor dietary habits.[7] The absence of large-scale epidemiological studies and huge disparities in the use of diagnostic criteria have resulted in establishing the prevalence of Internet addiction. Hence, the present study was conducted with the objective to find out the status of internet addiction in school going adolescent students and its determinants.

METHODS

It was a multi-centre cross-sectional observational study done among 160 school going adolescents (both boys and girls) of standard 9th to 12th in selected schools of Raipur city. The data collection was done from July 2019 to August 2019. Approval from the principal was taken before the start of the study. Adolescents studying in selected schools of Raipur city who were willing to participate, present on the day of survey and whose parents gave written consent for the study were included in the study.

Study tools and techniques

Pretested, predesigned structured questionnaire consisting of Young's internet addiction test was used for assessing status of internet addiction. Young's internet addiction test for assessing status of internet addiction. It is a 20-item questionnaire measured on five-point Likert scale. The items, each rated from 1 (rarely) to 5 (always), include compulsive behavior related to use of the Internet, the occupational or academic difficulties, lack of competence at home, problems in interpersonal relations, and emotional problems. The rationale for choosing Young's diagnostic questionnaire for the study was that it is the first global psychometric measure and hence has been extensively and frequently used across many studies globally, is self-completed, has been validated on adult and adolescent populations, and has good internal consistency reliability as well as concurrent validity. After all the questions have been answered, number for each response are added to obtain a final score. The higher the score range, greater the level of addiction. Self-administered method was the study technique utilized in current study.

Study sample and sampling technique

160 school going adolescent students were selected for current study. multistage random sampling technique was used. Out of all the schools, 5 schools were selected by lottery method. Purpose of study was explained to the principal of the selected schools and permission was taken for the study. From each school, 9 students were selected from each class of 9th to 12th (36 students). A written informed consent was taken from their parents for the study. Out of a total of 180 study subjects, 20 students were not having mobile, and therefore were excluded from the study. Hence, the study sample came out to be 160.

Data collection and measures of internet addiction

All questionnaires were distributed to the participants in classroom settings at a predetermined time and were collected onsite after 30 min. The questionnaires were anonymous and self-administered. Teachers left the classrooms during the 30-min period to avoid any bias, influence, or hesitancy.

Statistical analysis

After data collection, data was compiled and entered in Microsoft excel spread sheet and were scored on the basis of the scoring key available for Young's Internet Addiction test (none=score of 0-20, mild=score of 21-49, moderate= score of 50-79, severe=score of 80-100). Statistical analysis was done and data were analysed using percentages, independent t-test and correlation.

RESULTS

Socio-demographic characteristic of the study subjects are depicted in (Table 1). A total of 160 school going adolescents were studied in which majority were male (54.4%), of more than 15years age group (54.4%), studying in private school (55%), studying in class 9 (28.1%), belonging to reserved category (57.5%), residing in joint family (53.7%), Hindu by religion (90%). Father and mother of 41.88% and 36.25% study subjects were graduate/ postgraduate respectively. Also, both the parents of 12.5% of study participants were working. The status of internet addiction among the study subjects using Young's internet addiction test is depicted in (Table 2, Figure 1). Addiction was seen among 92.5% (148) of study subjects. The level of internet addiction among the addicted study subjects is depicted in (Table 2, Figure 2). With absolutely no prevalence of severe internet

addiction, mild (63.5%) and moderate levels of addiction (36.50%) was found to be higher than with what has been reported elsewhere in the literature. The distribution of internet addiction with respect to the socio-demographic profile of study subjects is shown in Table 3.

Table 1: Socio-demographic characteristics of study subjects (n=160).

Variables		N (%)
Age of subject (years)	13	1 (0.6)
	14	31 (19.4)
	15	41 (25.6)
	16	53 (33.1)
	17	29 (18.1)
	18	5 (3.1)
	Mean age 15.58±1.11	
Type of school	Government	72 (45)
	Private	88 (55)
Gender	Male	87 (54.4)
	Female	73 (45.6)
Class in which studying	Class 9	45 (28.1)
	Class 10	43 (26.9)
	Class 11	36 (22.5)
	Class 12	36 (22.5)
Category	General	68 (42.5)
	OBC/ST/SC	92 (57.5)
Type of family	Nuclear family	74 (46.3)
	Joint family	86 (53.7)
Religion	Hindu	144 (90)
	Non-Hindu	16 (10)
Education of father	Graduate & postgraduate	67 (41.88)
	Higher Secondary	54 (33.75)
	Middle	14 (8.75)
	Primary	15 (9.38)
	Illiterate	10 (6.26)
Education of mother	Graduate & postgraduate	58 (36.25)
	Higher secondary	47 (29.38)
	Middle	23 (14.38)
	Primary	23 (14.38)
	Illiterate	9 (5.63)
Occupation of father	Employed	149 (93.13)
	Un-Employed	11 (6.867)
Occupation of mother	Employed	23 (14.38)
	Un-Employed	137 (85.63)
Information regarding working parents	None/ One parent working	140 (87.5)
	Both parents working	20 (12.5)

Majority of study subjects were falling under the category of mild addiction. Moderate level of addiction (45%) was higher among study subjects who's both parents were working.

Table 2: Status of internet addiction among study subjects (n=160).

Variables	Score	N	%
Status of internet addiction (n=160)			
Internet addiction present	21-100	148	92.5
Internet addiction absent	0-20	12	7.5
Mean Score of internet addiction among study subjects	40.56±17. 91		
Level of internet addiction present (n=148)			
Mild internet addiction	21-49	94	63.5
Moderate internet addiction	50-79	54	36.5
Severe internet addiction	80-100	0	0

The association and correlation of socio-demographic profile of study subjects with the overall scores of internet addiction is shown in (Table 4). The findings of the present study corroborate with other studies stating that addiction is more common in males (p=0.00) than in females and is positively correlated.[8] Also addiction is more common in government school (p=0.047) with negative correlation. Category is positively correlated with addiction more common in reserved category (p=0.003).

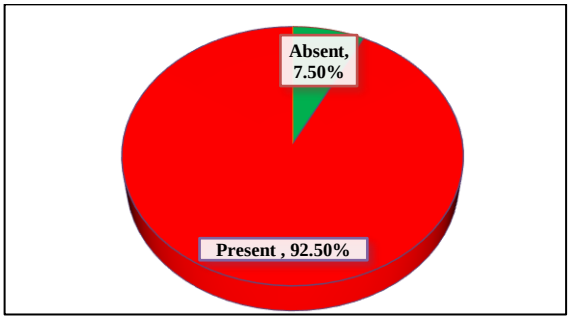

Figure 1: Status of internet addiction among study subjects (n=160).

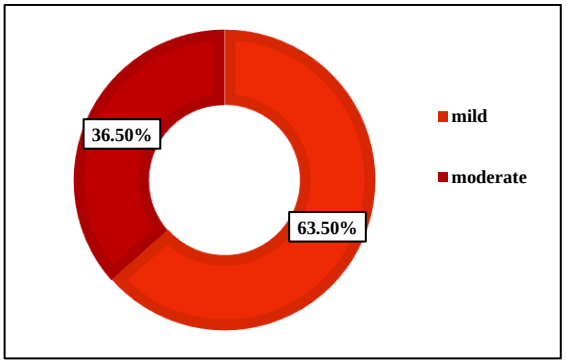

Figure 2: Status of internet addiction among study subjects (n=148).

Table 3: Distribution of internet addiction with respect to the socio-demographic profile of study subjects (n=160).

Socio-demographic profile	Addiction				
	N	No Addiction	Mild Addiction	Moderate Addiction	Severe Addiction
Age (years)					
≤15	73	7 (9.6)	42 (57.5)	24 (32.9)	0 (0)
>15	87	5 (5.7)	52 (59.8)	30 (34.5)	0 (0)
Gender					
Male	87	0 (0)	50 (57.5)	37 (42.5)	0 (0)
Female	73	12 (16.4)	44 (60.3)	17 (23.3)	0 (0)
Type of school					
Government	72	0 (0)	43 (59.7)	29 (40.3)	0 (0)
Private	88	12 (13.6)	51 (58)	25 (28.4)	0 (0)
Category					
General	68	8 (11.8)	38 (55.9)	14 (20.6)	0 (0)
OBC/SC/ST	92	4 (4.3)	49 (53.3)	39 (42.4)	0 (0)
Occupation of mother					
Employed	23	3 (13)	10 (43.5)	10 (43.5)	0 (0)
Unemployed	137	9 (6.6)	84 (61.3)	44 (32.1)	0 (0)
Information regarding working parent					
Both parent working	20	3 (15)	8 (40)	9 (45)	0 (0)
None/One parent working	140	9 (6.4)	86 (61.4)	45 (32.2)	0 (0)

Table 4: Association and correlation of socio-demographic profile of study subjects with the overall scores of internet addiction (n=160).

Socio-demographic profile	N	Mean	SD	T & P value	Correlation
Age (years)				t=-0.26 p=0.79	r =0.021 p=0.79
≤15	73	40.15	18.07		
>15	87	40.90	17.88		
Gender				t=4.11, p=0.00*	r=-0.311, p=0.00
Male	87	45.64	16.36		
Female	73	34.49	17.90		
Type of school				t= .005, p=0.047	r=-0.158, p=0.047
Government	72	43.67	17.06		
Private	88	38.01	18.29		
Category				t=-3.067, p=0.003	r =0.237, p=0.003
General	68	35.63	16.66		
OBC/SC/ST	92	44.20	18.02		
Occupation of mother				t=0.304, p=0.762	r=-0.024, p=0.762
Employed	23	41.61	20.76		
Unemployed	137	40.38	17.47		
Information regarding working parent				t=-0.251, p=0.802	r=0.020, p=0.802
Both parent working	20	41.50	22.00		
None/one parent working	140	40.42	17.34		

The present study has shown no association between internet addiction and age of the study subject (p=0.79), occupation of mother (p=0.762), and working pattern of parents of study subjects (p=0.802). The health problems of the study subjects related to increase use of internet is depicted in (Table 5). Maximum number of study subjects were suffering from lack of sleep (58.75%) followed by problem of eye sight in 42.5% of study subjects. 39.38% of study subjects were not having any kind of health problems. However, the study could not discern the fact

whether the health problem was due to internet overuse or due to other reasons.

Table 5: Health problems among study subjects (n=160).

Health problems	N	%
Problem of eye sight	68	42.5
Headache	45	28.13
Lack of sleep	94	58.75
Social isolation	31	19.38
Others	23	14.38
None	63	39.38

*multiple responses

DISCUSSION

The present study shows that internet addiction was present in 92.5% of study subjects, in which majority of study subjects were having mild addiction (63.5%) followed by moderate addiction (36.5%). Maximum number of study subjects were suffering from lack of sleep (58.75%). This is in contrast to the study conducted by Bhatia et al in which out of 300 students, 24% (72) were in the score range of 50-79 i.e., moderate addiction and 06.33% (19) were in the score range of 80-100 i.e., severe addiction.[1]

The addiction was less common in males (88.42%) as compared to females (93.38%). When inquired about health problems, maximum students (42.00%) had problems related to eye sight followed by anxiety (37.67%) and headache (24.33%). In a study done in Mangalore among undergraduate medical students, the internet addiction test score revealed 21 (23.33%) as being non problematic users (score <20), 52 (57.77%) as cases of mild internet addiction (score 20-49), 17 (18.88%) as moderate internet addiction (score 50-79) and none as severe internet addiction (score >79).[13] A study done by Malviya et al showed that 13.6% subjects were found to have sleep disturbance due to excessive late night use of internet and 16.9% were found to be succumbed into their desire of using internet for just a "few more minutes".[14] In a study carried out by Choi et al it was reported that the case of Internet addiction was more common in male students compared to female students, and in 2001, Hahn et al reported that males used the Internet more than females; however, the Internet usage levels of females have increased in recent years.[9-11]

The prevalence of internet addiction among urban school students was found to be i.e., 83.3%, while it was 78% in rural school students by Sowndarya et al.[15] Mild IA was common among both. Male gender, smart phones and hours spent on internet were common risk factor for IA in both groups. This study targeted study subjects in a specified area (students of standard 9 to 12) and as such, has resulted in a limitation to generalisation within students of other standards. This study did not assess the impact of internet addiction in the cognitive, psychomotor and affective domains of the study subjects which is of major concern. More number of schools could have been included in the study. The study participants may have responded in such a way as to portray themselves in a good light.

CONCLUSION

In the last one decade, internet has become an integral part of our life. The present study was done to find the status of internet addiction among school going adolescent students of Raipur city. It was found that 92.5% of study subjects were addicted to internet out of which 63.5% were mildly addicted & 36.5% were moderately addicted. The major health problem related to addiction was found to be lack of sleep (58.75%). Addiction was associated with gender, type of school and category of the study subjects and were correlated.

Recommendations

In the emerging era, where young people have been more exposed to the internet and use online activity as an important form of social interaction. However, it may still remain a matter of debate whether to call internet addiction a distinct disorder by itself or a behavioural problem secondary to another disorder. Following points can be recommended on the basis of the study done: As observed in the present study, majority of the mothers of study subjects (85.63%) were staying at home. They need to look/control after excessive internet accessibility to their children while promoting outdoor activities. Internet games and other applications used by the children should be carefully monitored. Majority of time of the study subjects is spent in school. The study found that 63.5% of study subjects were mildly addicted to internet. Therefore, to prevent its progression, teachers should keenly monitor the behaviour and mood changes of the students and should involve them in spiritual activities such as meditation to calm their minds. They should promote the use of school library for increasing knowledge instead of asking them to search in internet. The present study showed that study subjects of government schools were more into internet addiction as compared to private schools. Therefore, the government should provide a school library consisting of sufficient quantity of books of appropriate content which the students can refer to, instead of using internet.

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REFERENCES

1. Bhatia M. Pattern of internet addiction among adolescent school students of a North Indian city. Int J Commu Med Public Health. 2016;3(9):2459-63.
2. Goel D, Subramanyam A, Kamath R. A study on the prevalence of internet addiction and its association with psychopathology in Indian adolscents. Indian J Psychiatr. 2013;55:140-3.
3. Kuss DJ, Griffiths MD. Online social networking and addiction; A review of the psychological literature. Int J Environ Res Public Health. 2011;8:3528-52.
4. Daniel T, Shek L, Rachel C, Sun F, Lu YU. Neuroscience in the 21st Century from Basic to Clinical. 2 nd ed. New York: Springer Science; 2013.
5. Goldberg I. Internet Addiction 1996. Available from: http://web.urz.uniheidelberg.de/Netzdienste/anleitung/wwwtips/8/addict.html. Accessed on 20 October 2022.
6. Young KS. Internet Addiction: The emergence of a new clinical disorder. Cyberpsychol Behav. 1998;3:237-44.
7. Pfaff DW. Neuroscience in the 21st century: from basic to clinical. New York: Springer; 2013.
8. Anderson KJ. Internet use among college students: An exploratory study. J Am Coll Health. 2001;50:21-6.
9. Choi R. Internet overuse and excessive daytime sleepiness in adolescents. Psychiatr Clin Neurosci. 2009;63:455-62.
10. Hahn A, Jerusalem, M. Internetsucht: Reliabilitat and validitat in der online-Forschung. Marktforschung: theoretische Grundlagen und praktische Erfahrungen. Germany: Gabler; 2001: 213-33.
11. Sahin C. An analysis of internet addiction levels of individuals according to various variables. Turk Online J Educ Technol. 2011;10:60-6.
12. Krishnamurthy S, Chetlapalli SK. Internet addiction: Prevalence and risk factors: A cross-sectional study among college students in Bengaluru, the Silicon Valley of India. Indian J Public Health. 2015;59:115-21.
13. Chathoth VM, Kodavanji B, Arunkumar N, Pai SR. Internet Behaviour pattern in undergraduate medical students in Mangalore Int J Innovat Res Sci Eng Tech. 2013;2(6):23-8.
14. Malviya A, Dixit S, Shukla H, Mishra A, Jain A, Tripathi A. A Study to evaluate internet addiction disorder among students of a medical college and associated hospital of central India. Natl J Community Med. 2014;5(1):93-5.
15. Sowndarya TA, Pattar M. Pattern of internet addiction among urban and rural school students, Mangaluru, India: a comparative cross-sectional study. Int J Contemp Pediatr. 2018;5:1750-4.

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