

Internet addiction among rural adolescents from western India

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Abstract: *Background:* Internet addiction is defined as the psychological addiction to the internet and characterized as increasing investment to the activities on internet, unpleasant emotions when offline, increasing tolerance to the effect of become online and denial of the problematic behaviors. *Objective:* To study the amount of addiction of internet or internet overuse among the adolescents. *Methodology:* It was a Cross Sectional study among adolescents studying in the colleges of Sangli district in Western Maharashtra. Calculated sample size was 244. Sampling technique was convenience sampling. Study Tools was Problematic Internet Use Questionnaire (PIUQ). All the requisite ethical clearance, permissions and consents were obtained. Statistical analysis done using SPSS-22. *Results:* There were 251 study participants with the mean age 18.45 (± 1.67) years. The mean PIUQ score of the study participants was 41.90 (± 13.65). Mean score for females was lower as compared to males. *Conclusion:* There is a notable internet addiction among the youth especially males.

Keywords: Adolescents, Youth, Internet addiction, Mental Health, India.

Introduction

The internet has an irreplaceable place in our personal and professional life. Communication, economics, relationships, governance and rest all aspects of life are directly or indirectly associated with the internet. However, this has introduced us to new complication, the problematic use of internet [1]. The concepts like coercive or excessive or pathological use; internet abuse; internet addiction and internet exploitation have become increasingly popular. In the present study, the term “internet addiction” is preferred to define the uncontrolled and detrimental use of internet [2].

Internet addiction is defined as the psychological addiction to the internet and characterized as increasing investment to the activities on internet, unpleasant emotions when offline, increasing tolerance to the effect of become online and denial of the problematic behaviors [3]. Studies showed a relationship between excessive internet use and loneliness [3-4], antisocial values and lower emotional intelligence [4] and depression [2], and also the persons’ relationship especially with their mothers and peers deteriorates as a

result of internet addiction [5]. Adolescents increasingly become internet users.

The parental support decrease in adolescent period, while peer support increase. So that, peer pressure becomes more effective and this effect occasionally becomes an influence and pressure over adolescent. Peer pressure may be defined as the insistence and encouragement of the same age group individuals to make individual to do something [6]. Studies regarding same are rare in India and the literature regarding the subject is even scarcer from this locality. Hence, the current study was planned to assess the problematic use of internet among the adolescents from Sangli District (Maharashtra, India).

Material and Methods

It was a Cross Sectional study among the adolescent (age 10-19 years) studying in the schools and colleges of Sangli district in Western Maharashtra. Based on observed prevalence the calculated sample size was (error at 5%, $\alpha=5$), $244.47 \cong 245$. Duration of

the study was approximately 12 months, from Jan to Dec 2018. Sampling technique was convenience sampling. A college from randomly selected village, Ramanand nagar from Sangli district was selected as the sample. Study Tools was pre-designed, pre-tested and validated self-administered Questionnaire based on published literature. Its first section was Socio – demographic variables and second was Problematic Internet Use Questionnaire (PIUQ) [7].

PIUQ is a 18 point questionnaire with each statement being answered from 1 to 5; one being never to 5 being always. The questionnaire is internationally published, validated and reliable tool; which was used in unmodified state. Inclusion Criteria was all the willing students, having written consenting (or consented by their parents or guardians), to participate in the study. While the exclusion Criteria were the students who were not having access to personal internet in the form of mobile / home internet, absent at the time of study conductance, those without consent. Hence the final sample collected was 251.

Required Ethical Clearance from the college and the University Committees was taken. Permission was taken from head of the concerned institution. After the appropriate permissions from institute head, each student was contacted and supplied with consent form and summary of research conveying highlights about it. They were asked to show it to their parents or guardians (which ever applicable) and bring back the consent forms completed or otherwise on the next day. The students having written consent and willing to participate, were provided with the Questionnaire. Data was collected in one sitting and the data collection was done by the principal investigator. Care was taken to establish strict confidentiality

and also maximum level of comfort, while filling of the questionnaire. The questionnaires were collected in a sealed drop box to ensure anonymity. Evaluation was done based on the answers given by the students.

Statistical analysis was done by the investigators using Microsoft Excel and SPSS-22. Percentages and tests of significance were applied to study association between different factors.

Results

The number of participants in the study was 251, with the mean age of participants being 18.45 (± 1.67) years. Considering gender distribution of the study participants, 142 (56.57%) were males while 109 (43.43%) were females. When classifying the students according to their educational stream; 83 (33.07%), 68 (27.09%) and 100 (39.84%) belonged to arts, commerce and science respectively. Majority i.e. 132 (52.59%) belonged to nuclear family and 119 (47.41%) belonged to joint family. Only 6 (2.39%) participants were single child, 113 (45.02%) had one sibling, 132 (52.59%) had ≥ 2 siblings. Farming was the commonest profession of the father of participants 221 (88.04%). Majority of participants had homemaker mother 238 (94.82%).

Mean use of internet among the participants was 1.84 (± 1.21) hours daily. There was no statistically significant difference in any of the subgroups and use of internet per day. The mean Problematic Internet Use Questionnaire (PIUQ) score of the participants was 41.90 (± 13.65). The mean PIUQ score was higher in males as compared to females and the difference was statistically significant (Tab-1).

PIUQ score	N	Mean	Std. Deviation	SE of difference	Df	P value
Male	142	43.7535	14.21226	1.72 (0.87, 7.65)	249	0.014
Female	109	39.4954	12.55331			

Participants living in nuclear family had higher mean PIUQ score 43.39 (± 14.14) as compared to those living in joint family, 40.26 (± 13.02); however the difference was not statistically

significant. There was no statistical association with occupation of the both parents and PIUQ scores. Students studying Arts had higher mean scores, followed by

Commerce and Science respectively. On applying ANOVA, significant difference was found in the PIUQ scores and the different stream of education

(Table 2). The scores observed for each of the questions in PIUQ is presented in table 3.

Table-2: Stream of education difference in PIUQ score

PIQU score	N	Mean	Std. Deviation	F	Df	P value
Science	100	36.34	13.71	19.554	2	0.000
Arts	83	48.14	13.05			
Commerce	68	42.47	10.73			

Table-3: Scores observed for PIUQ

Sr.	Statement	Mean Score (Total)	Mean Score (Males)	Mean Score (Females)	Sig.
1	How often do you fantasize about the Internet, or think about what it would be like to be online when you are not on the Internet?	2.47	2.46	2.49	.673
2	How often do you neglect household chores to spend more time online?	2.05	2.10	1.99	.987
3	How often do you feel that you should decrease the amount of time spent online?	2.18	2.33	1.97	.022
4	How often do you daydream about the Internet?	2.38	2.49	2.24	.011
5	How often do you spend time online when you'd rather sleep?	2.28	2.48	2.03	.006
6	How often does it happen to you that you wish to decrease the amount of time spent online but you do not succeed?	2.19	2.39	1.93	.029
7	How often do you feel tense, irritated, or stressed if you cannot use the Internet for as long as you want to?	2.37	2.41	2.32	.192
8	How often do you choose the Internet rather than being with your friend / parent?	2.14	2.26	1.97	.030
9	How often do you try to conceal the amount of time spent online?	2.31	2.64	1.89	.008
10	How often do you feel tense, irritated, or stressed if you cannot use the Internet for several days?	2.22	2.38	2.00	.001
11	How often does the use of Internet impair your work or your efficacy?	2.48	2.52	2.42	.542
12	How often do you feel that your Internet usage causes problems for you?	2.42	2.58	2.21	.302
13	How often does it happen to you that you feel depressed, moody, or nervous when you are not on the Internet and these feelings stop once you are back online?	2.43	2.56	2.26	.405
14	How often do people in your life complain about spending too much time online?	2.37	2.49	2.20	.059
15	How often do you realize saying when you are online, "just a couple of more minutes and I will stop"?	2.39	2.44	2.33	.711
16	How often do you dream about the Internet?	2.38	2.41	2.34	.994
17	How often do you choose the Internet rather than going out with somebody to have some fun?	2.26	2.30	2.20	.002
18	How often do you think that you should ask for help in relation to your Internet use?	2.59	2.50	2.71	.998

Discussion

In our study we observed that the problematic use of internet was higher in male adolescents. Similar observations were made in Poland by Tomaszek et al, in 2019 [8]. After a study in Great Britain among adolescents the El Asam A et. al, noted that males were more likely to higher PIUQ scores as compared to females [9]. Similar observations were also noted in Slovenia [10]. In a study conducted among 1st year engineering students from India using Generalized Problematic Internet use scale-2, significant higher scores were found in Males as compared to females [11].

In the current study, scores were higher for females in only two questions of PIUQ, however the difference was not statistically significant. Mean score for male participants was higher than females for 16 out of 18 questions of PIUQ, and the difference was statistically significant for eight questions of PIUQ. In contrast to this, a study from Assam had observed higher internet addiction among the girls [12].

We also observed PIUQ scores higher among those living in nuclear family. Most likely the reason for this phenomenon would be less involvement of elders in day to day activities of adolescents and less interactions with people in nuclear family. Students belonging to science stream had lowest PIUQ score, followed by commerce and highest mean scores were from Arts students. In spite of having similar usage of internet the PIUQ score was lower among science students, most likely due to more use of internet

for educational purpose. In study regarding internet addiction conducted among students from 11th and 12th grade classes from New Delhi (India); Kumar N et. al., observed that excessive use of internet was least in science stream as compared with both commerce and humanities. Similarly, normal users were higher in science [13] Kumar N et. al., also believed the use of internet for study purpose may be higher among science students resulting in more constructive use.

Limitations of the study: The study is based on self-administered questionnaires, hence reporting bias cannot be eliminated. There is no mechanism to confirm the findings. Study is limited to students of one institute hence results cannot be generalized. Participants from both genders equally and random sampling could have increased internal validity.

Conclusion

Overall use of internet among the students is excessive. It can result in various psychosocial as well as physical problems. Students are generally aware about their problematic use of internet. The issue seemed to higher among males. Guidance clinics and curriculum has to be designed and introduced to guide the students regarding the same.

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