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Impact of family determinants on internet addiction among adolescents in a rural block, Tamilnadu

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Abstract---Globally, it is agreed that the internet can serve as a tool that enhances well-being but there is no consensus regarding what constitutes problematic internet use and internet use relationship with offline behavioral addictions. Internet addiction threatens to develop into a major public health issue in the near future in a rapidly developing country like India. The objective of this study is to estimate the prevalence of internet addiction disorder and to assess the impact of family determinants on internet addiction among adolescents in a

rural block, Tamil Nādu the study was conducted among school going adolescents with age group 13 to 19 years in a rural block. A pretested semi-structured questionnaire was used with the Internet addiction test questionnaire (IAT) to evaluate internet addiction disorder. The study included 406 adolescents of which 173 were males and 233 were females. Female's adolescence was more addicted to internet than males. Among the participants 23.9 % had moderate addiction and 1.5% had severe addiction. The study reported higher addiction among adolescents of illiterate parents especially among those who were employed. Thus in this study females and middle age adolescent were found to have internet addiction as compared to males and other age groups. Moderate addictions were found in majority of adolescents. Hence, this ensues for a capacity building of medical officer in providing health care and psychiatric counselling of the adolescents through school health services and to educate adolescents regarding the risks, and vital usage of internet.

Keywords---Adolescents, Internet addiction, Moderate addiction and School health service.

Introduction

In present digital world, one's real identity is no longer enough rather a virtual presence is required as the new sense seems to be, internet has become an essential part of our life². The internet has developed an infinite space for information exchange, social networking along with the development of cyber behaviors.⁴ It has made people closer together by empowering several forms of interpersonal communication, remarkably e-mail, video conferencing, instant messaging and social networking. Internet, in a short spell, has developed to such levels that it now hard for most of us to envision a world without instant and incessant access to the internet⁸. Internet addiction threatens to develop into a major public health issue in the near future in a rapidly developing country like India. India ranks 2nd in internet usage worldwide and based on a report by 'Internet in India 2017', done by Internet and Mobile Association of India & Kantar IMRB in December 2017, the overall internet penetration has been estimated to be 35% of total population.⁹

Internet addiction has possibility that a new kind of compulsive activity is on the rise.¹⁵ In many recent literatures internet addiction has been described as problematic internet use/PIU⁸ People who are addicted to internet can develop many types of disorder and one of the disorders that are common for the modern day is internet Addiction Disorder.¹⁵ Thus concern has aroused as Internet addiction threatens to develop into a major public health issue in the near future in a rapidly developing country like India.

Internet addiction is more widespread than just on university campuses where laptops and computer labs are within easy reach with growing numbers among high school and middle school students nowadays¹⁸. Adolescent seem especially vulnerable, with case studies highlighting students whose academic performance

plummets as they spend more and more time online. Some also suffer health consequences from loss of sleep, as they stay up late to chat online, check for social network status updates or to reach the next game levels¹⁷. Thus Problems of Internet identity for adolescents are not just a computer security and privacy concern, but is a psychological one as well.¹⁶ We need to look at how the adolescent usage of online expression impacts characteristics such as who they are, what they seek in life and how they want to be perceived over the course of time¹³. Research has also explored the connection of PIU and social phobia, depression, anxiety, substance abuse, self-harm and ADHD.¹⁵ Research about internet addiction amongst adolescents are scanty especially from developing countries.¹⁰ Hence this study was conducted to estimate the prevalence of internet addiction disorder and to assess the impact of family determinants on internet addiction among adolescents in a rural block, Tamilnadu.

Materials & Methods

This cross-sectional study was carried out in school going adolescents in the age group of 13 to 19 year in a rural block of Kancheepuram district. The study was done for 6 months with sample size of 406 in this study was calculated by using the formula $N = Z^2pq/L^2$, where, the prevalence of internet addiction among adolescent was taken as 36%¹¹ with 95% confidence limits, set level of precision at 5% and 10% non-response rate. Institutional ethical committee approval was obtained. Informed consent and assent was obtained. Multistage random sampling was done. In first stage, among nine schools, four were randomly chosen by lot in the first stage due to feasibility reasons. There was 2120 study population in the selected 4 schools. School going adolescent having internet connection in home such as computer, mobile phone, laptop were included in the study. School going adolescent who don't have internet connection at their home and are not residing in that rural area for past 1 year were excluded. Total of 1260 adolescents were in the study in this stage. In the second stage of the sampling due to difference in the student population, probability proportion size was adapted. Systematic random sampling was done by enrolling every third student in the study. The participants were surveyed using a pre-tested structured questionnaire, in which section A included the basic demographic profile, purpose of usage, type of device used and section B consist young's internet addiction test. The severity of impairment was based on the final score obtained by summation of the individual scores and classified as internet addicted with score 50-100 and not addicted with scores 0-49. The study was initiated after obtaining Institutional ethics committee approval. Before interviewing the participant's patient information sheet and informed written consent from mother and assent from adolescents who are participating in the study. Permission was obtained from the school principal after explaining the study. The purpose and procedure of the study was explained to the participants in the local language. The data was analyzed using Statistical Package for Social Sciences (SPSS IBM) 21. Descriptive data were presented as percentages and unadjusted odds ratios (OR) to measure the strength of association and 95% confidence intervals (CI) were calculated. Chi-square test was used to lend statistical support to prove associations between categorical variables.

Result

The study included 406 adolescents of which 213 were males and 193 were females. Majority of the adolescent girls (66.3%) were aged 13–16 years of age and remaining (33.7%) fell into the 17–19 years bracket. The assessment of addiction levels using young's internet addiction questionnaire, 51% had no addiction, 24% mild addiction, 24% moderate addiction and 1 % with severe addiction (Figure 1). The odds of getting internet addiction is 2.2 times higher among female adolescents when compared to male adolescents and it indicates statistically significance ($p < 0.05$). The odds of getting internet addiction is 2.3 times higher among adolescents born to illiterate father compared to those born to literate father and $p < 0.05$ indicates statistical significance the odds of getting internet addiction is 12.7 times higher among adolescents born to illiterate mother compared to those born to literate mother and $p < 0.05$ indicates statistical significance.(Table 2).The odds of getting internet addiction is 8.3 times higher among adolescents born to unemployed mother compared to those born to employed mother and statistical significance is supported by the $p < 0.05$. The adolescents who are using mobile for surfing internet are 5.5 times more likely to get addiction to internet and the $p < 0.05$ indicates statistical significance. Adolescents using the internet for purposes of social networking are 2 times more likely to become addicted than those using it for academic purposes, and the difference is statistically significance ($p = 0.05$) (Table - 3).

Table 1: Sociodemographic Profile

S.No	Demographic Variables	Frequency N=406	Percentage %
1	Age(years) 13-16 years	269	66.3
	16-19years	137	33.7
2	Gender Male	173	42.6
	Female	233	57.4
3	Type of family Nuclear	313	77
	Joint	93	23
4	Fathers Education Literate	32	8
	Illiterate	374	92
5	Fathers Occupation Employed	380	93.6
	Unemployed	26	6.4
6	Mother Education Literate	88	21.7
	Illiterate	318	78.3
7	Mother Occupation Employed	87	21.4
	Unemployed	319	78.6

8	Socioeconomic Status		
	Class I	8	2
	Class II	79	19.5
	Class III	182	44.8
	Class IV	110	27
	Class V	27	6.7

Mode of Internet Usage

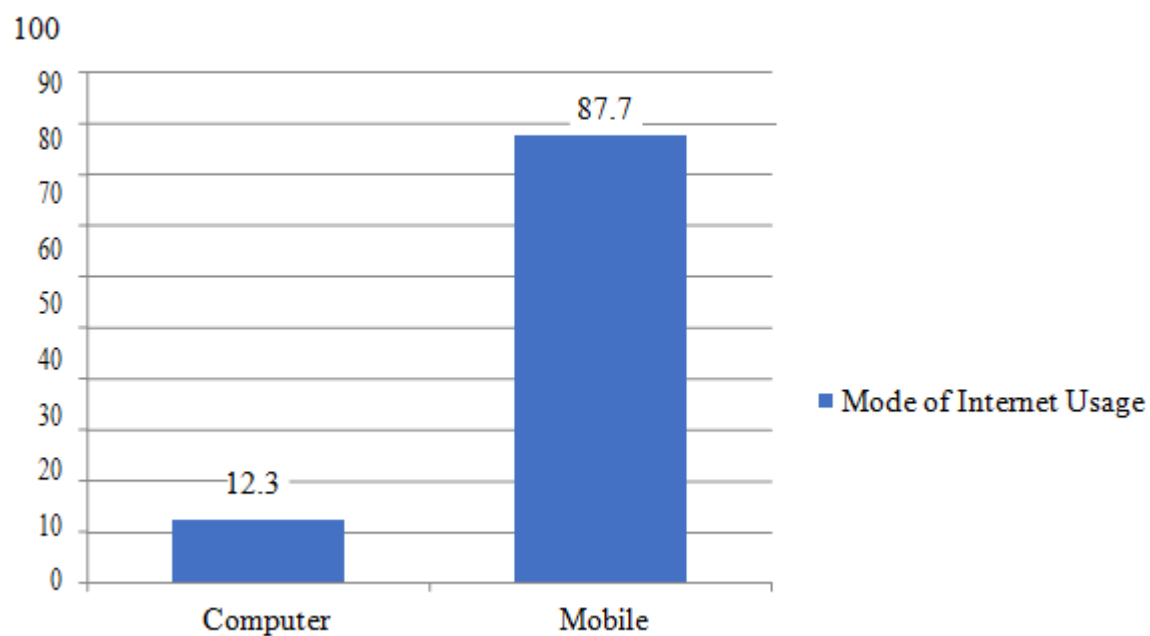


Figure 2: Distribution of study participants by mode of internet usage

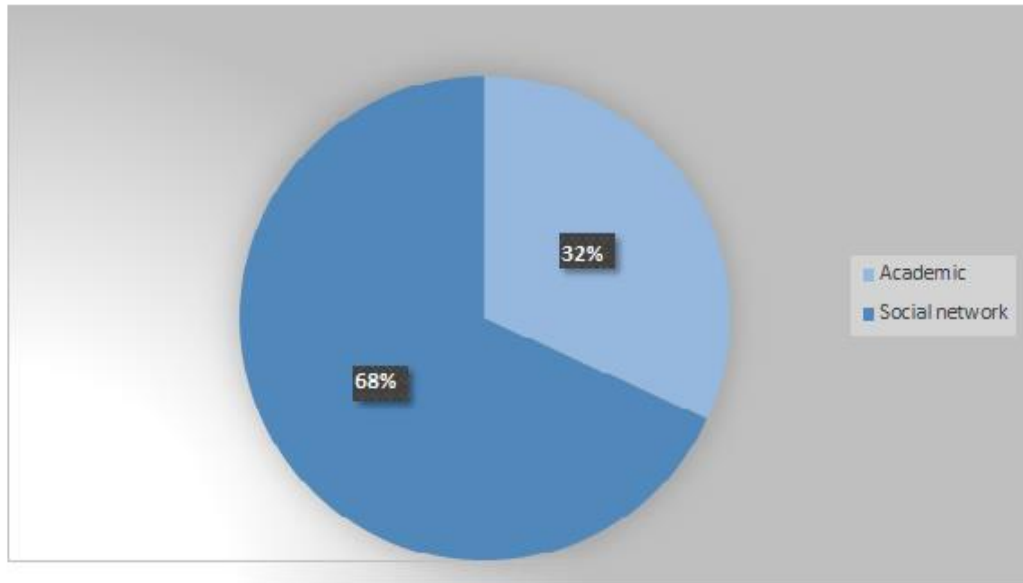


Figure 3: Purpose of using internet

Table 2: Internet Addiction and Family determinants of study participants

S.No	Variables	IA absent	IA Present	P value	Odds ratio
1	<u>Type of family</u>				
	Nuclear	183 (49.8%)	184 (50.2%)	0.095	1.776 (0.895-3.525)
	Joint	14 (35.9%)	25 (64.1%)		
2	<u>Fathers Education</u>				
	Literate	136 (57.4%)	101 (42.6%)	0.000*	2.384 (1.589-3.578)
	Illiterate	61 (36%)	108 (64%)		
3	<u>Fathers Occupation</u>				
	Employed	190 (48.2%)	204 (51.8%)	0.490	2.312 (.665-.208)
	Unemployed	7 (58.3%)	5 (41.7%)		
4	<u>Mother Education</u>				
	Literate	160 (75.1%)	53 (24.9%)	0.000*	12.728 (7.921-20.452)
	Illiterate	37 (19.2%)	156 (80.8%)		
5	<u>Mother Occupation</u>				
	Employed	164 (67.8%)	78 (32.2%)	0.000*	8.347 (5.231-14.319)
	Unemployed	33 (20.1%)	131 (79.9%)		
6	<u>Socioeconomic Status</u>				
	Class I	3 (37.5%)	5 (62.5%)	0.574	
	Class II	42 (53.2%)	37 (46.8%)		
	Class III	81 (44.2%)	102 (55.8%)		
	Class IV	56 (53.4%)	53 (46.6%)		
	Class V	15 (55.5%)	12 (44.5%)		

* < 0.05 indicates for statistically significant

Table 3: Association of Internet Addiction with other factors

S.No	Variable	IA Absent	IA Present	P value	Odds ratio
1	<u>Age (Years)</u> 13 to 15 years	126 (46%)	143(54%)	0.342	0.819 (0.543-1.237)
	15 – 19 years	71 (51.8%)	66(48.2%)		
2	<u>Gender</u> Males	124(58.2%)	89(41.8%)	0.000*	2.290 (2.290-1.538)
	Female	73(37.8%)	120(62.2%)		
3	<u>Type of device</u> Desktop/Laptop	13(26%)	37(74%)	0.000*	5.543 (2.98-10.29)
	Mobile	196(55%)	160(45%)		
4	<u>Purpose of usage</u> Academic	70(58%)	60(42%)	0.001*	2.0533 (1.3447-3.1353)
	Social networking	100(36.3%)	176(63.7%)		

*< 0.05 indicates for statistically significant.

Discussion

Prevalence of internet addiction

Among 406 schools going adolescents, 49% of the study participants had internet addiction. Nearly one fourth of participants had moderate addiction (26%) and very few had severe addiction (1.5%). A study done by abdol majid B similarly revealed comparable prevalence in which moderate addiction and severe addiction was the 28% and 2.2%¹. Another study done by Manohar Bhatia revealed 24% had a moderate addiction and 6.33% had severe addiction On the other hand, a study conducted by Kapil Dev Sharma found that there was a prevalence of internet usage of 28 percent. This could be a result of the failure to distinguish recreational use from essential use, as well as different diagnostic scales and cutoffs.

Types of Device

Majority of study participants used internet through the mobile and only few number of study participants used internet through desktop or laptop. Similarly a study done by Dorji et.al.,¹² and Mohandas¹⁷ B revealed that more number of participants preferred mobile for using internet than other devices⁷, On the other hand a study done by Sharma A et.al.,¹⁴ revealed that the participants in the study used mobile phones and laptops equally for accessing the Internet. This is likely due to the rural/urban distinction and availability of electronic devices for accessing the internet.

Purpose of internet usage

In the present study, students with moderate and severe addiction, the majority of the participants used the Internet mainly for social network than the academic purpose. Another study done similarly by Kapil dev sharma in Jaipur revealed nearly 81 % of participants use internet for the purpose of social networking which is statistically significant with the internet addiction¹⁵

Association of internet addiction and family determinants

In this study the females are more addicted to the internet when compared to males which is close to a study done by garmah mohammed which revealed that majority of the female had internet addiction this can be due in rural areas girls are not encouraged to go out as often boys and therefore they resort to the Internet as an alternative entertainment activity to outdoor activities when compared to boys and The other study done by sakthi v elarthanari revealed that male genders had higher addiction³. In this study the parent's education and internet addiction have significant association in which the adolescents of illiterate parents have higher addiction when compared to adolescents of literate parents. Another study done by arthanari³ had no significant association with the parent education and internet addiction.

Conclusion

In this study females and middle adolescence were found to have internet addiction as compared to males and other age groups. Participant's mothers who were unemployed and illiterate found to have internet addiction Mobiles phones were the primary device used by the participants for internet surfing, moreover mobile phones were used boundlessly for social networking rather than academic activities. Hence, this ensues for a capacity building, proper healthcare and psychiatric counseling for the adolescence by the medical officer through school health services and to educate them regarding the risks, and vital usage of internet.

Conflict of interest - Nil

Source of funding - Nil

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