Internet Usage and Mental Health among High School Students of Kanyakumari District, Tamil Nadu

Ratna Ruba Robinson[1], Dr. Mukundan[2]

[1]PhD Scholar, Department of Psychology, Mother Teresa Women's University, Kodaikanal 624 101

[2]Former Principal, NVKSD College of Education, Attoor, Kanyakumari District

Abstract: *Technology plays a vital role in all of our lives today. One area that has seen tremendous growth and development at a swift pace all over the world is the internet. Internet has taken the center stage in the daily routine of the modern day people. It cannot be refuted, that this advancement is most sought out by adolescents. Many authors even acknowledge that adolescents are most vulnerable to the internet than any other age group, and how it affects mental health has been a concern to many mental health professionals. This study investigates internet usage and mental health among 656 high school students of class 9-12 of Kanyakumari district, south India. T-test, one-way ANOVA and Pearson's product moment correlation were employed for analysis of the data. The findings reveal that males used the internet more than females. Usage was more among urban students and 17 year olds used the internet more. Mental health was higher among females. 17 year olds had higher mental health than other age groups. No significant correlation was found between internet usage and mental health of high school students.*

Keywords: internet use, mental health, adolescence, high school students

1. Introduction

Technology plays a vital role in all of our lives today. One area that has seen tremendous growth and development at a swift pace all over the world is the internet. Internet is an essential and integral part of lives of people in the modern world. It is used in almost every aspect of our work environment, life style, home needs and for socializing. Though there are some parts of the world and among those who belong to the lower economic strata where internet is still not used, we can safely say that internet is increasingly being used among people and soon will spread to the remotest areas as well. While there are still people who have no access to the internet at all, there are others who are increasingly becoming addicts to internet due to their excessive and pathological use of the internet. Internet usage is high and addiction is common among Chinese adolescents (Cao & Su, 2006) and it has been noted by many researchers that internet addiction is also observed among other cultures such as Korea, US, Taiwan and Australia as well (Cao & Su, 2006). Such tremendous growth been noted in India as well, with 42 million active users in urban India in 2008 as compared to 5 million in 2000 (Goel, Subramanyam & Kamath, 2013).

The internet can be extremely satisfying to the self-esteem of the youth, which is the prime motive behind an active internet user. Therefore internet usage is very much connected to mental health of an individual. The more satisfying internet use is to the self, the more the usage. It had also been established by many authors that high school going adolescents are most vulnerable to internet. Stress is inevitable part of everyone's life. It is more so for the adolescent age (Robinson & Raja, 2016) as they are in the transition stage. In the Indian context, unfortunately, there is a lack of adequate psychological intervention such as counseling facility in schools and colleges that caters to the emotional and psychological needs of children particularly

the adolescent age group. It is more a concern when adolescents involve in inappropriate online activities.

Therefore, in this study the investigator has attempted to find out the relationship between internet use in high school students and their mental health.

Many studies in the past have investigated the relationship between internet usage and mental health among adolescents. Gross (2004) found that adolescent boys and girls were involved similar online activities which involved online social interaction that occurred in private setting such as email and instant messaging. His study showed no association between internet usage and wellbeing. Kelleci and Inal (2010) in their study revealed that internet use was associated with more severe psychiatric symptoms.

A study by Singh (2015), showed positive and significant relation between internet addiction and depression. Males were found to have higher levels of internet addiction and were more addicted to the internet than females. Higher levels of internet use are associated with higher levels of depression.

In light of this, the current study investigates the relationship between internet use and their mental health in high school students.

2. Objectives

1) To find out the significant difference in internet usage of high school students with regard to personal variables namely gender, locale of residence and age;
2) To find out the significant difference in mental health among high school students with regard to personal variables namely gender, locale of residence and age;

3) To study the relation between internet usage and mental health of high school students.

3. Hypothesis

1) There will be no significant difference in internet usage of high school students with regard to personal variables namely gender, locale of residence and age;
2) There will be no significant difference in mental health of high school students with regard to personal variables namely gender, locale of residence and age;
3) There will be no significant correlation between internet usage and mental health of high school students.

4. Methods

In this present study, the investigator used the survey method to collect data. Random sampling technique was used to collect data.

Tools
Internet usage scale developed by Robinson & Mukundan (2016) was used collect data on internet usage, and mental health status scale developed by Robinson & Mukundan (2016) was used to obtain data on mental health status of adolescents.

Sample
The sample for the present investigation consists of high school students of rural and urban locale of Kanyakumari district. The total sample of 656 students from class 9 - 12 were randomly chosen for the study, out of which 306 (46.6%) were male and 350 (53.4%) were female. Out of the total sample, 423 (64.5%) were from rural locale and 233 (35.5%) were from urban area.

Statistical technique
Data was analyzed by descriptive statistics, Pearson's Product moment correlation coefficient and t-test for independent means.

5. Results

The analysis of data brought out the following results.

It was found that 195 (29.7%) had low internet usage, 288 (43.9%) had moderate internet usage and 173 (26.4%) had high internet usage. It was also found that 174 (26.5%) had low mental health, 309 (47.1%) had moderate mental health and 173 (26.4%) had high levels of mental health.

Table 1: Difference in Internet Usage of high school students with regard to Personal Variables

Internet usage		N	Mean	SD	t	p
Gender	Male	306	93.5294	47.32858	11.054	.000[**]
	Female	350	51.56	49.52219		
Locale of residence	Rural	423	64.8842	54.76774	-4.136	.000[**]
	Urban	233	82.4893	47.08394		
[**] *Significant at 1% level*						

Table 1 shows that there is significant difference in internet usage of high school students with regard to personal variables namely gender and locale of residence. The mean scores show that internet usage was higher among males than females. With regard to locale of residence, the mean scores show that internet usage was higher among urban students than their counterparts.

Table 2: Significant difference in Internet Usage of high school students with regard to age

Internet usage		Sum of squares	df	Mean Square	F	p
Age	Between Groups	28104.078	3	9368.026	3.396	.018[*]
	Within Groups	1798573.6	652	2758.548		
	Total	1826677.7	655			
[*] *Significant at 5 % level*						

Table 2 shows that there is significant difference in internet usage of high school students with regard to age. Since significant difference was found, post-hoc analysis was made and is presented below.

Table 2 (a): Scheffe test results showing the Significant Difference in Internet Usage with regard to Age and religion

Internet usage		N	Mean	Pair	p (Scheffe)
Age	14 (A)	176	64.8636	A Vs B	0.979 [NS]
	15 (B)	180	67.2778	B Vs C	0.748 [NS]
	16 (C)	191	73.3037	A Vs C	0.501 [NS]
	17 (D)	109	83.844	A Vs D	0.033 [*]
				B Vs D	0.81 [NS]
				C Vs D	0.425 [NS]

The Scheffe test analysis, in table 2a, shows that internet usage was higher among 17 year olds students than among 14 year old students.

Table 3: Difference in Mental health of high school students with regard to Personal Variables

Mental Health		N	Mean	SD	t	p
Gender	Male	306	132.045	26.591	-2.706	.007[**]
	Female	350	137.16	21.791		
Locale of residence	Rural	423	133.7329	24.78795	-1.483	139[NS]
	Urban	233	136.6652	23.21989		
[**] *Significant at 1% level*				*NS – Not Significant*		

Table 3 shows that there is significant difference in mental health of high school students with regard to personal variable gender. The mean scores show that mental health

was higher among females than males. There is no significant difference with regard to locale of residence.

Table 4: Difference in high school students' mental health with regard to age

Mental Health		Sum of squares	df	Mean Square	F	p
Age	Between Groups	10900.737	3	3633.579		
	Within Groups	374771.87	652	574.803		
	Total	385672.61	655		6.321	.000**
** Significant at 1% level						

Table 4 shows that there is significant difference in mental health of high school students with regard to age. Since significant difference was found with regard to age, post-hoc analysis has to be made and is presented below.

Table 4 (a): Scheffe test results showing the Significant Difference in mental health with regard to Age

Mental Health		N	Mean	Pair	p (Scheffe)
Age	14 (A)	176	130.7273	A Vs B	0.916 NS
	15 (B)	180	132.55	B Vs C	0.568 NS
	16 (C)	191	136.0942	A Vs C	0.205 NS
	17 (D)	109	142.6697	A Vs D	0.001**
				B Vs D	0.007 NS
				C Vs D	0.158 NS

The Scheffe test analysis, in table 4a, shows that mental health was higher among 17 year olds students than among 14 year old students.

Table 5: Pearson's Correlation between Internet Usage and Mental Health Status

Variables	N	R	p-value
Internet Usage & Mental Health Status	656	-0.02	0.606 NS
NS – Not Significant			

Table 5 shows the correlation analysis between the variable internet usage and mental health. It is seen that there is no correlation between internet usage and mental health.

6. Findings

The findings of the study reveal that
1) Internet usage was higher among males than females
2) Internet usage was higher among students living in urban locale than student living in rural areas.
3) There is significant difference in internet usage of high school students with regard to age.
4) Internet usage was higher among 17 year olds students than among 14 year old students.
5) Mental health was higher among females than males.
6) There is no significant difference in mental health with regard to locale of residence.
7) Mental health was higher among 17 year olds students than among 14 year old students.
8) There is no significant correlation between internet usage and mental health of high school students.

7. Recommendations

A future without internet is impossible. It is essential to take necessary steps to minimize the negative effects of the internet and enhance intelligent and wise use. Hence there is a need to highlight some recommendations that the findings

of this study has brought out. Much responsibility mainly lies with parents and schools. Findings of this study show that internet usage was higher among males than females. It is also found that Internet usage was higher among students living in urban locale than students living in rural areas. Thus, it is recommended that parents take precautions as to how they model online behavior, setting boundaries and time limits and encouraging healthy online activities. It is essential to restrict excessive use and personal devices at early age. From the finding, we learn that males need more guidance and supervision with regard to internet usage. Those living in urban locale may have easy access due to network connections etc. and hence, usage may be high in urban areas. Children, in the Indian context, mostly go online only after school hours. Therefore, it is recommended that parents supervise their child's online behavior and guide them appropriately, particularly those from urban areas, who provide internet facility at home for any time access. High school students spend most of their waking hours in school, and with peers. Internet usage was higher among 17 year olds students than among 14 year old students. From this finding, it is clear that age wise guidance is necessary. Many parents may give freedom to elder children to use the internet more. However, supervision is recommended irrespective of the age of the child. Age relevant guidance is recommended. Further, it is found that mental health was higher among females than males and no significant difference in mental health was found with regard to locale of residence. Schools have an added advantage when it comes to addressing problems concerning this age group. Though online activities take place out of school hours, much communication and peer interaction regarding online behavior takes place in schools among friends. Therefore, it is recommended that much initiative be taken by schools and management in addressing students with regard to healthy internet usage. Boys may be given more importance and guidance through talks and seminars. Importance may be given to issues that affect their mental health. In order to enhance overall mental health, healthy peer interaction may be encouraged. Findings reveal that mental health was higher among 17 year olds students than among 14 year old students. More focus may be given to the younger age group; however, the needs of the older age group cannot be dismissed.

The findings reveal that there is no significant correlation between internet usage and mental health of high school students. Though there is no relationship between internet usage and mental health, the previous findings warrant the need for guidance, counseling and appropriate modeling from elders. Family environment, parent bonding, strong value systems and constant guidance are all necessary to enhance positive and wise internet usage and mental health.

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