INTERNET USAGE AND ADOLESCENTS HEALTH

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Abstract

Adolescents are the key to nation building process and constitute a good percentage to the total population of the country. Attainment of good health during this juncture is of paramount significance, not only in India but all across the world. With the changing landscape of media, the use of media, especially internet is on rise among adolescents. Adolescents are most vulnerable and early adaptors to new technologies. They have twenty four hours access to internet and therefore are witnessing a shift from an active to a more sedentary lifestyle**.** Therefore, an attempt has been made through to examine how internet access is linked with adolescents' health problems such as aches/pains, insomnia, lethargy, conflicts and neglected homework **.**The study was done on a sample size of 400 adolescents aged 12-19 years studying in government and private schools in Chandigarh city (India). 200 males and 200 females were divided in two age groups i.e 12-15 and 16-19 years were. A survey method using self-constructed questionnaire was used to collect data. Statistical analysis was done on SPSS work book using tools like mean, SD and paired t- test. A four point scale was used to access the usage of internet usage on the basis of hours i.e very often (4 or more hours a day), quite often (2-4), seldom (0-2) and never (0). Paired t test showed significant results to almost all the problems and that too among private school adolescents. The paper through review of literature also addresses the need of teaching media literacy to adolescents so as to promote health education in adolescents.

Key words: Adolescents, Health, Internet Usage, Communication, Entertainment, Information, Media literacy

1.   Introduction

Adolescents are the key to nation building process and constitute a good percentage to the total population of the country. Attainment of good health during this juncture is of paramount significance, not only in India but all across the world. With the changing landscape of media, the use of media, especially internet is on rise among adolescents. Adolescents are most vulnerable and early adaptors to new technologies. They have twenty four hours access to internet and therefore are witnessing a shift from an active to a more sedentary lifestyle**.** Therefore, an attempt has been made through to examine how internet access is linked with adolescents' health problems such as aches/pains, insomnia, lethargy, conflicts and neglected homework.

1.1.2 Adolescence

Blos (1962) stated that the word adolescence is derived from the verb adolescence, which means to grow into maturity and is Latin in orgin. Paula (2004) explained adolescence as a transitory period between childhood and adulthood. It is also known as formative stage when different behaviors are learned and developed. Kurz et al. (1994) mentioned adolescents fall in the category of 10-19 years. United Nations International Children Emergency fund, UNICEF (1998) mentioned that adolescents constitute 30% of the total world's population. At this juncture of life adolescents not only gain height but they also put on more weight.

1.2 Significance

What makes this age group i.e. 12-19 years of adolescents worthy to study is that adolescents are the key to nation building process. Mishra (2006) mentioned that adolescents falling in the category of 10-19 years constitute a fifth of the world's population, and, in India they make upto twenty three per cent of the total population of the country. Adolescence is the phase of life which causes psychological transition from childhood to adulthood. By giving attention to adolescent's health at this stage one would not only improve the socio-economic development of the country but would also provide better quality of life in the society on the whole.

1.3 Objectives

    1)   To examine how internet usage is linked with adolescents' well being.

    2)   To examine the relationship between access to internet and scholastic performance of adolescents.

2. Research methodology

The methodologies adopted for the present study have been discussed   under the following headings:

2.1 Locale

The present study conducted by using survey method in the city of Chandigarh. Chandigarh, is one of the most well planned cities of the country and Union territory in India that serves as the capital of two states, Haryana and Punjab and people from many other states of India have also settled in Chandigarh that is why Chandigarh in particular was chosen for the present study.

2.2 Selection of Sample

The sample was chosen by two stage random sampling method, at initial stage schools were selected; one government and one private school from each sector and subsequently 400 respondents in the age group of 12-19 years were selected from these schools. The judgmental and systematic methods were used for representing a sample so as to get dependable results for doing critical analysis of internet usage and adolescents health.

2.3 Classification of Data

The classification of data is shown by the pie chart below. At the first stage, six schools were selected three government and three private and then 200 respondents were selected from government school and 200 respondents from private school.
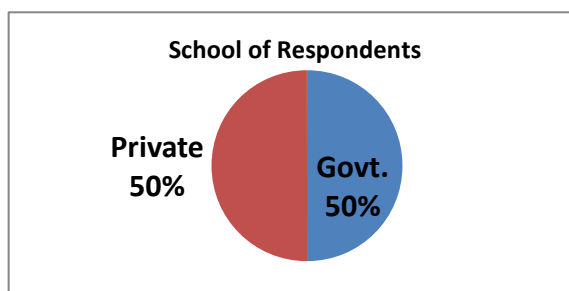

Figure 1.1: Schooling of Respondents

From age point of view, again two groups of respondents were framed. First group was for age between 12-15 years (both years included) and second group was for age 16-19 years (both years included). Both groups formed on basis of equal number of respondents. Hence, 200 respondents were from 12-15 years and remaining were in 16-19 years of age.
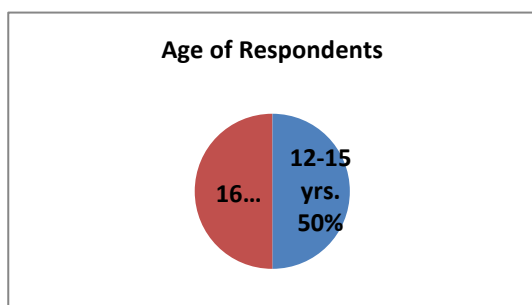

Figure 1.2: Age Based Classification of Respondents

Equal number of respondent's i.e. 200 male respondents and 200 female students were selected. Pie chart below shows the gender based classification of sample.
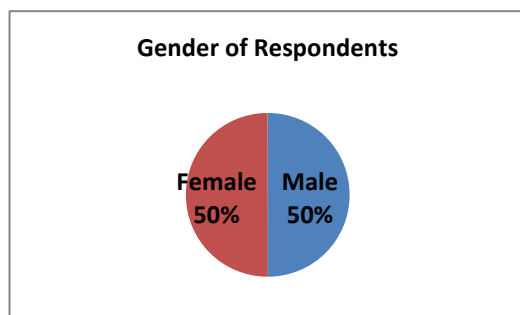
Figure 1.3: Gender Based Classification of Respondents
     A table below gives a summary of classification sample

Table 1.1: Sample Classification

Government School				Private School				Total
Age - 12-15 yrs.		Age - 16-19 yrs.		Age - 12-15 yrs.		Age - 16-19 yrs.		
Male	Female	Male	Female	Male	Female	Male	Female	
50	50	50	50	50	50	50	50	400

2.4 Collection of Data
     Data has been collected from both primary and secondary sources.

2.4.1 Primary Data
     The data was collected by self-constructed questionnaire.
     According to Gigli (2004) television is most dominated medium worldwide. Gerbner et al. (1980) has classified the television viewers into three categories: light viewers (who watch less than two hours of television a day), medium viewers (who watch between two and four hours of television a day), and heavy viewers (who watch more than four hours of television a day). Similarly, in the present study, the categorization has been done taking into consideration the categorization of Gerbner. Following scale has been used in the questionnaire to access the media usage for information and entertainment on the basis of hours.

Table 1.2: Media Usage Scale

Access	Very often	Quite often	Seldom	Never
Hours	4 or more	2-4	0-2	0

     The questions were kept simple, unambiguous and suitable to adolescents' understanding capacity.

2.4.2 Secondary Data
     The reliability, suitability and source of the data was taken into consideration while using secondary data.
2.4.3 Statistical Analysis of the Data
     The Likert scale constitutes the quantitative component of this study. According to Best and Kahn (2006), the Likert-type scale is valuable because it is efficient .The possible responses for the first part of the Likert survey, seeking responses to the question, were: very often (4); quite often (3); seldom (2); never (1).Each response was assigned a corresponding numerical value, as commonly done with Likert scales. Responses agreeing with the very often viewpoint corresponded with highest numerical values; never statements had the lowest numerical values. As the Likert-style responses were analyzed quantitatively, the open ended questions were analyzed qualitatively. Data from each of the 400 returned questionnaire was entered into the statistical software program SPSS for analysis. Data was organized and coded and responses were assigned an identification number. The analysis was conducted first for the whole group and next for the subgroups.

3.   Review of Literature
     Morgan et al. (2003) measured health and well-being of college freshman in relationship to internet use. It was found that depressive symptoms were decreased with the increased use of the internet, while meeting

various needs such as chatting, sending and receiving of messages, and emails whereas the depressive symptoms were increased when it is used for games, shopping or research. It was further revealed that when internet was used for communication purposes, it created positive benefits on the well being among college freshman, and that non-communication Internet use may be associated with negative effects on well-being.

Wimmer (2003) raised some interesting questions about the relationship between internet uses and feeling of depression and loneliness, somewhat unexpectedly, a 2 year panel study of 169 individuals found that internet use appeared to cause a decline in psychological well-being. Even though most panel members were frequent visitors to chat rooms and used e-mail heavily, their feeling of loneliness increased as they reported a decline in their amount of interaction with family members and friends. The researcher hypothesized that online communication does not provide the kind of support obtained from convectional fact-to-face communication.

According to National Assessment Educational Progress (NAEP) 2000 Mathematics Assessment, the most recent year for which such estimates are available, about half (47%) of eighth grade students used the home computer for school work at least once per week, and about one in five (21%) used one almost every day for that purpose.

Bushman and Anderson (2001) stated that access to computers in the home is associated with better education outcomes, the effects of television use on education outcomes only appear once program content is taken into account. They also observed those who frequently watch non-educational programs on television tend to have lower academic grades than those who watch educational-type programs. Children who watch excessive amounts of television score lower on standardized academic assessments than those who watch less television. Research that takes into account program content generally finds that educational programming is associated with positive academic outcomes while entertainment programs are negatively associated, though most of that research focuses on young children rather than adolescents.

Jackson et al. (2006) revealed that a positive statistical relationship was observed between home computer and internet access to academic performance. Children belonging to low income parents have shown a positive reading scores and overall GPA while use internet at home for academic purposes.

According to Tamyra and Roberto (2007) students can be benefitted from internet in having better academic performance as internet can provide a wealth of educational resources for students whereas non-educational sites lower the academic performance of children. In fact, many non-educational type sites have caused distractions among children from fulfilling their school obligations. In addition to internet, instant messaging on cell phones and on computer, the two most popular mediums used for communication purposes among adolescents may also be distracting and influencing their academic performance.

Miglani (2012) mentioned in the article that video games results in poor score in classroom. Addiction to social networking websites and cases of anxiety and depression among PEC students is on all time high. Facebook addiction cases have been reported in which students suffer from obsessive compulsive disorder (OCD). Addiction to "video games", a PEC with intelligent quotient of 130, which is considered a 'genius score', was an average performer in class 6.5 point score due to obsession. From a handful cases three years ago to over 53 cases in the last 10 months, the cases are on a rise.

4.   Internet Usage & Adolescent Health

Many findings in grey background largely indicate that adolescents face health problems while using internet .Results from the findings in many cases, have shown mean values more than 3 which clearly indicates higher extent of health problem with adolescents related to aches/pains, insomnia, lethargy, conflicts and neglected home work.

TABLE 4.1: INTERNET USAGE & ADOLESCENT HEALTH

			Aches/Pains		Insomnia		Lethargy		Conflicts		Neglected HW	
			Govt. (N=200)	Private (N=200)	Govt. (N=200)	Private (N=200)	Govt. (N=200)	Private (N=200)	Govt. (N=200)	Private (N=200)	Govt. (N=200)	Private (N=200)
Entertainment	Never	Mean	3.70		3.60		2.98		3.38		3.56	
		SD	(.35)		(.58)		(.46)		(.64)		(.65)	
	Seldom	Mean	3.60	3.59	3.35	3.45	2.80	2.92	3.21	3.33	3.27	3.42
		SD	(.45)	(.52)	(.75)	(.63)	(.49)	(.48)	(.66)	(.59)	(.76)	(.65)
	Quite Often	Mean	3.46	3.58	3.29	3.63	2.83	2.83	3.21	3.24	3.26	3.30
		SD	(.55)	(.52)	(.57)	(.71)	(.41)	(.46)	(.52)	(.64)	(.82)	(.72)
	Very Often	Mean	3.30	3.61	3.07	3.40	2.44	2.93	3.09	3.29	3.06	3.28
		SD	(.77)	(.52)	(.83)	(.77)	(.64)	(.49)	(.70)	(.65)	(.94)	(.83)
Information	Never	Mean	3.63		3.37		2.89		3.33		3.38	
		SD	(.45)		(.78)		(.46)		(.62)		(.74)	
	Seldom	Mean	3.59	3.61	3.48	3.42	2.80	2.90	3.18	3.32	3.31	3.36
		SD	(.46)	(.49)	(.59)	(.71)	(.51)	(.50)	(.67)	(.64)	(.79)	(.71)
	Quite Often	Mean	3.39	3.56	3.28	3.39	2.60	2.86	3.12	3.24	3.17	3.34
		SD	(.67)	(.54)	(.76)	(.63)	(.60)	(.46)	(.61)	(.61)	(.82)	(.68)
	Very Often	Mean		3.62		3.37		2.93		3.33		3.34
		SD		(.52)		(.78)		(.46)		(.62)		(.81)

			Aches/Pains		Insomnia		Lethargy		Conflicts		Neglected HW	
Communication	Never	Mean	3.69		3.71		2.85		3.15		3.44	
		SD	(.33)		(.38)		(.47)		(.77)		(.71)	
	Seldom	Mean	3.64	3.64	3.46	3.41	2.87	2.88	3.26	3.23	3.35	3.40
		SD	(.44)	(.46)	(.69)	(.63)	(.49)	(.45)	(.66)	(.63)	(.77)	(.67)
	Quite Often	Mean	3.54	3.53	3.29	3.41	2.70	2.94	3.22	3.40	3.33	3.33
		SD	(.49)	(.58)	(.77)	(.69)	(.52)	(.45)	(.57)	(.58)	(.75)	(.70)
	Very Often	Mean	3.25	3.62	3.16	3.37	2.71	2.87	3.20	3.26	3.07	3.30
		SD	(.66)	(.51)	(.77)	(.78)	(.58)	(.52)	(.63)	(.64)	(.80)	(.80)

Paired t-test values have been found to be significant in almost all the problems and with regard to all extent or degrees of usage of internet. An observation here is that in all these cases of significant differences, private school adolescents have been found to be major users of internet. Hence, private school going adolescents have been main victims or sufferers of these problems. Another observation which was made is that the use of internet is related to very often usage for entertainment and communication purposes. Significant difference lies with regard to mean values in these case.

Figure 4.1: Internet Usage & Adolescents Health
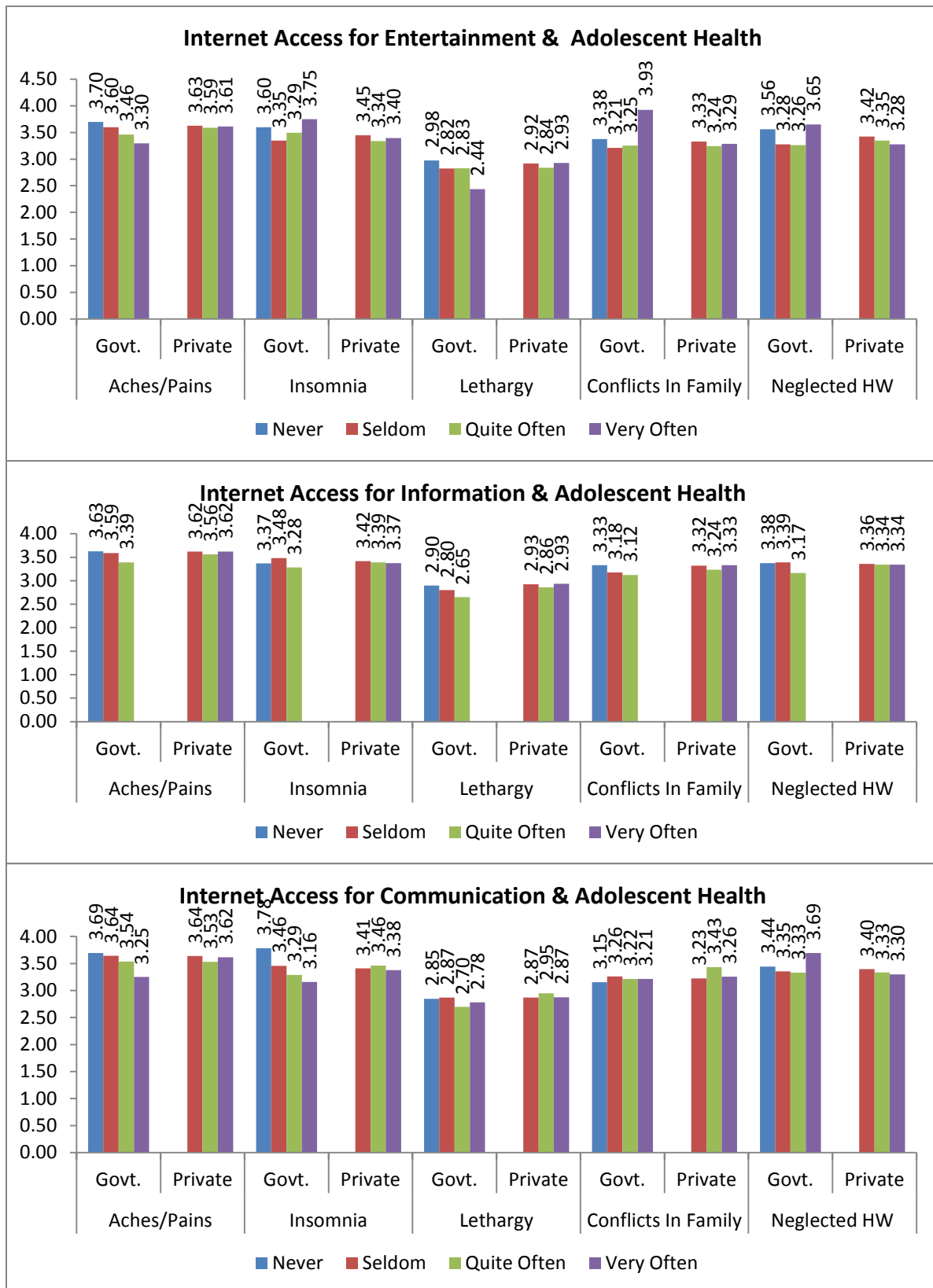
In order to test if media habits of adolescents can affect their scholastic performance, an investigation has been made to test this association between media habits and scholastic performance of adolescents. Scholastic performance of adolescents has been divided in four categories viz. less than 60%, 60%-70%, 70%-80% and 80% and above. In general eighty percent of adolescents fall in 60-80% range.

Null hypothesis in this case is that there is no association between media usage and scholastic performance of adolescents. Chi-square test has been used to test the significance of this association.

5. Internet Usage and Scholastic Performance

Internet as media of entertainment, information and communication has been quite popular among adolescents. This is evident from the table below showing internet access by all categories of scholastic performance, be it below sixty percent or more than eighty percent, be it entertainment or information or communication purpose. Chi – square results indicate that private school adolescents have been using more of internet for all purposes as compared to government school adolescents.

TABLE 5.1: INTERNET USAGE AND SCHOLASTIC PERFORMANCE

			Scholastic Performance (Marks Percentage)							
			Below 60%		60% - 70%		70% - 80%		80% or More	
			Govt. (N=16)	Private (N=13)	Govt. (N=111)	Private (N=74)	Govt. (N=58)	Private (N=76)	Govt. (N=15)	Private (N=37)
Entertainment	Never	Count	5	0	19	0	20	0	4	0
		%	31%	0%	17%	0%	34%	0%	27%	0%
	Seldom	Count	9	1	63	34	27	33	9	18
		%	56%	8%	57%	46%	47%	43%	60%	49%
	Quite Often	Count	1	8	18	27	5	21	2	8
		%	6%	62%	16%	36%	9%	28%	13%	22%
	Very Often	Count	1	4	11	13	6	22	0	11
		%	6%	31%	10%	18%	10%	29%	0%	30%
	Chi-Square		18.532		23.163		37.854		14.972	
	Sig.		.000		.000		.000		.002	
Information	Never	Count	8	0	53	0	22	0	7	0
		%	50%	0%	48%	0%	38%	0%	47%	0%
	Seldom	Count	7	3	42	28	27	28	7	18
		%	44%	23%	38%	38%	47%	37%	47%	49%
	Quite Often	Count	1	6	16	36	9	28	1	8
		%	6%	46%	14%	49%	16%	37%	7%	22%
	Very Often	Count	0	4	0	10	0	20	0	11
		%	0%	31%	0%	14%	0%	26%	0%	30%
	Chi-Square		17.043		68.846		50.264		23.114	
	Sig.		.001		.000		.000		.000	
Communication	Never	Count	1	0	6	0	3	0	2	0
		%	6%	0%	5%	0%	5%	0%	13%	0%
	Seldom	Count	11	5	62	24	41	33	9	17
		%	69%	38%	56%	32%	71%	43%	60%	46%
	Quite Often	Count	2	3	26	24	10	24	3	11
		%	12%	23%	23%	32%	17%	32%	20%	30%
	Very Often	Count	2	5	17	26	4	19	1	9
		%	12%	38%	15%	35%	7%	25%	7%	24%
	Chi-Square		4.473		18.078		17.307		7.461	
	Sig.		.215		.000		.001		.059	

Figure 5.1: Internet Usage & Scholastic Performance
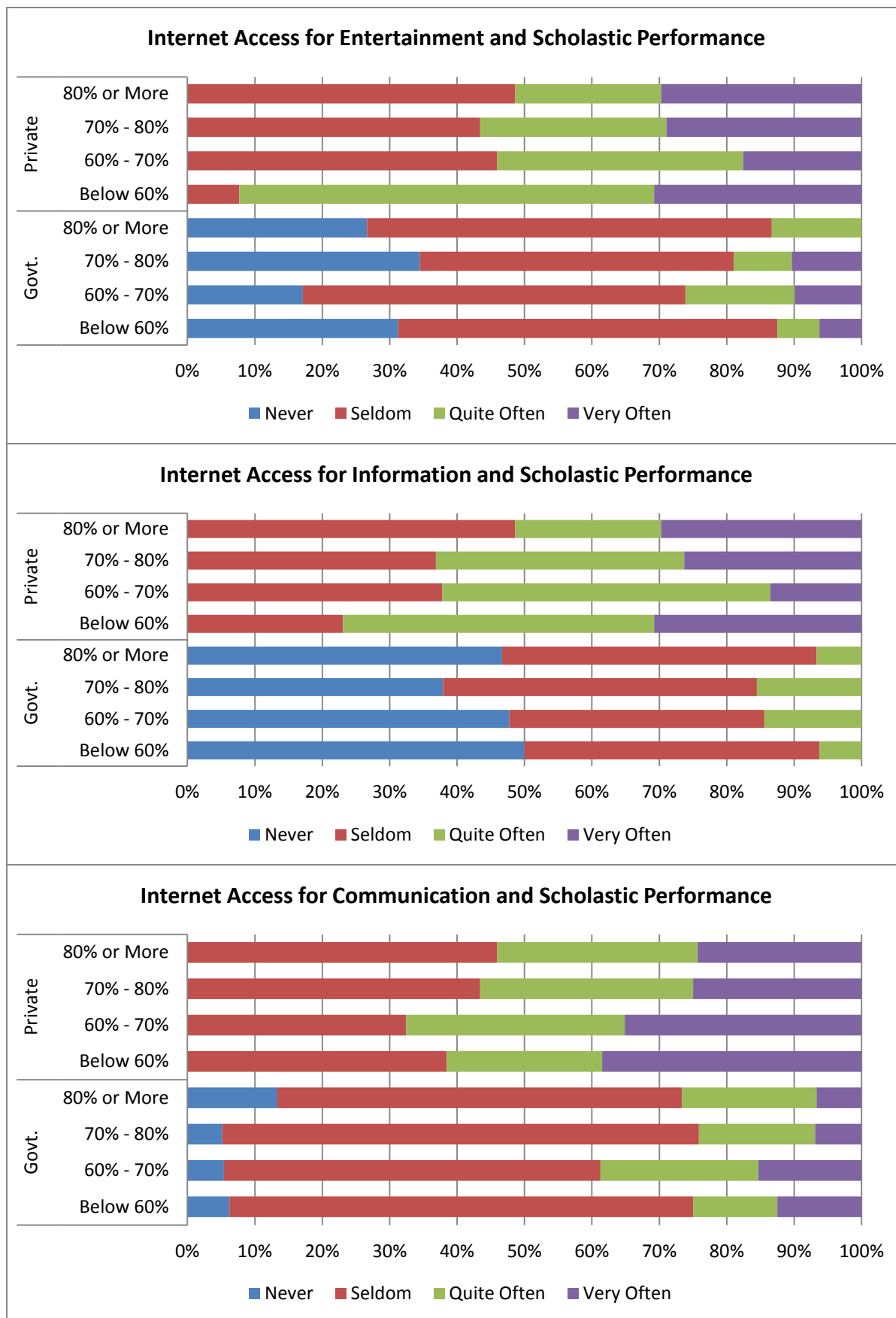
Conclusion

The present study highlights the critical analysis of internet usage and adolescents health. In India, adolescents in the age group of 10-19 years constitute 21.4 percent of the population. The health of the adolescents is an explanation of the national asset in the growth of its future manpower. Thus, from the findings it was observed that internet usage is causing all sorts of problems among private school going adolescents. They are suffering from aches/pains, from lethargy, insomnia; and also facing behavioral issues at home viz. conflict with parents and other family members and neglecting homework. As per Chitra Reddy, (2006) with advent of urbanization and increase in per capita income the country and particularly the northern region is witnessing a shift from an active to a more sedentary lifestyle. Similar results have been found in present study too.

Hence the null hypothesis of this investigation, that there is no significant difference of stress, sedentary habits and aggressive behavior among adolescents falling under various categories of media access stands summarily rejected in case of modern media like internet access for entertainment. Thus, it can be claimed that adolescents' access and usage of internet is significantly causing physical and behavioral problems among private school going adolescents. Since the accessibility of new media is high in private school adolescents than government school adolescents, the reason could be socio- economic background of the adolescents the usage is more in private school. As far as the impact of changing technologies on the well being is concerned, the findings of the present study was similar to what Mathers et al .have argued that over exposure to electronic media is associated with poor health status, psychological distress and anxiety.

It has been observed that adolescents whose usage of various media and spent quite a lot of time on it, can become victims of certain physical problems like aches/pains, insomnia, and lethargy. In some cases, excessive media usage may also lead to certain behavioral issues like conflicts with parents and other family members, and neglecting homework. Keeping in mind these problems faced by adolescents, the researcher has made an investigation into media habits of adolescent's vis-à-vis various physical and behavioral problems faced by them. The null hypothesis of this investigation, that there is no significant difference of stress, sedentary habits and aggressive behavior among adolescents stands summarily rejected in case of internet access for entertainment. Thus, it can be claimed that adolescents' access and usage of internet is significantly causing physical and behavioral problems among private school going adolescents. Aggressive behavior of adolescents like having conflicts with parents, especially private school adolescents is strongly linked while using internet.

Internet usage for entertainment and information purposes has caused a significant difference in the scholastic performance of adolescents. Mainly, private school going adolescents have been benefitted with the usage and even in higher score categories; they are spending more time on internet. According to Tamyra and Roberto, (2007) the internet can provide a wealth of educational resources for students and can be beneficial towards increasing academic performance. This statement has been upheld in the present study.

Well, it is a established fact that in order to survive in this fast paced digital world , the use and role of internet is going to increase manifold but at the same time it is extremely important for adolescents to keep in mind that the use of internet should not be made at the cost of their mental and physical health.

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