

“A STUDY WAS DONE TO ASSESS THE EFFECTS OF ELECTRONIC GADGETS (TELEVISION, MOBILE PHONE AND COMPUTER) ON THE HEALTH STATUS AMONG SECONDARY SCHOOL STUDENTS IN THE SELECTED DISTRICTS OF MAHARASHTRA.”

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Abstract

Unsafe the use of electronic media has ill the effects on all aspects of the health. Aim of the study was to assess the effects of electronic gadgets (television, mobile phone and computer) on the health status among secondary school students.

The present study is a quantitative non-experimental approach and cross-sectional survey research design. Non-probability – Convenient sampling technique the use d to select 300 samples. The tool consists, Socio-demographic data, the use of electronic gadgets, Self-reported the health status and nine the health assessment tools. The ‘ r ’ values of each tool of the health assessment were more than 0.70 and less than 0.94 Pilot study showed that the main study is feasible and the useful.

Each the health problem of students was increased two to five times more in after the use electronic gadgets than before the use. There was an only the association between mothers’ education with digestion, fingertip skin and comfort. Also mothers occupation and digestion as well as a bowel movement. The association found between the problem of digestion and the use of a television, the problem of sleep as well as an emotion with a mobile phone the use and the problem of comfort with the computer .

The author concluded that practicing Safe the use of electronic the gadgets is vital for our the health.

Keywords: Electronic gadgets . Secondary school students. health status .

Introduction:

A gadget is a small tool such as machines that has a particular function but is often thought of as a novelty. Gadgets are electronically simplified applications that make work easy. They play a significant role in each human beings’ life every day. The Importance of Gadgets in our lives as gadgets increase our efficiency, bring joy to the family, make things compact, help in saving space, make joy or fun and encourages innovation and creativity. [1]

To begin with, TV the invention that helps us to get the useful information, knowledge and entertainment. The TV gives a collection of programs, movies, series, documentary and educated programs. Moreover, TV is an easy, cheap, and available tool to communicate with all over the world and know the latest news anytime anywhere. Recent a television has inbuilt internet connection facility. Mobile phones became a popular way to communicate; you can send emails, the use chat, voice chat or even video chat with your friends and family. As an example, we can connect to the internet through a mobile. We can also the use so

many applications in the system like GPS, dictionary, entertainments, and others. The computer the use d for video-conferencing that gives not only immediacy when communicating with a real person but also visual cues, such as facial expressions, making such communication more real.[2]

The average screening time of a television in 49 % children was more than 2 hours per day and more than 4 hours during weekend days or on holidays , average spending time with a mobile phone was an hour and a half a day and the minimum the use of the computer was 2-4 hours per day. A study on the use of electronic media by secondary school students showed that minimum the use of a television was 3 hours, a mobile phone 3 hours and 3 hours the computer . The studies showed that any one or all together electronic gadgets screening more than 2 hours leads many the health problems. [3]

There are downsides to digital technology too. Seventeen of the disadvantages are listed as Data Security , Crime and Terrorism , Complexity ,Privacy Concerns ,Social Disconnect ,Work Overload ,Digital Media Manipulation ,Job Insecurity ,Plagiarism and Copyright , Anonymity and Fake Personas ,Over-reliance on Gadgets ,Addiction ,Second-hand Living ,Organization and Storage ,Depersonalized Warfare ,Longevity ,Social Depersonalization and many more. [4]

Distribution of studied students according to their associated symptoms related to their the use d of electronics. About half or less of adolescence the use d of electronic suffering from moderate to severe form of different symptoms as sleeping problems or anxiety, besides to their feeling of lack of concentration due to their long the use or lack of sleep at night. In addition to other related complain like as earache, backache, carpal tunnel syndrome, itchy or sensitive eyes, Also, about one- third of students the effect on their school achievement [5]

The lacunas found in previous studies were, studies related to the effect of one electronic gadget, specific one or two the health problem were considered , only self-reported information was the use d, the sample was from risk group , not compared the health problems before and after the use and no measure to prevent or correct the health and other problems.

Need for study.

Young people the use the internet and social media to connect with, comment on and discuss things with others, through social networking, emailing and online messaging ,find, create or share interesting photos, videos and articles ,join or follow interest groups ,play online games ,learn more about topics that interest them and as a study tool for school.[6]

Adolescents have common the health problems as sexually transmitted diseases (unsafe sex), infectious diseases as respiratory infections (smoking and tobacco the use) , emotional problems (depression and aggressiveness) , injuries and accident (alcohol and drug the use) and malnutrition (under-nutrition or obesity.) The use of electronic media increases the problems and its complications.[7]

The reasons to increase the intensity and frequency of the health problems caused by electronic gadgets in adolescent are lack of exercise, unaware about safe the use of electronic gadgets, slow progress of the problems, and strong attachment with gadget because of its multi-functioning ability and careless or risky behaviour. Investigator saw this in his day to day life that provokes him to do research study on the effects of electronic gadgets on the health of students.

Present study assesses the effect of electronic gadgets on the health of students like a television results on hearing, body weight & digestion whereas a mobile phone make changes in sleep, fingertip skin and emotion along with the computer associated with vision, body comfort and bowel movement. After assessment those students have any problems will be advised for further investigation and treatment. Safe the use of electronic gadget booklets will be given to concern schools and will have a presentation on it.

Problems statement: ‘A study to assess the the effects of electronic gadgets (television, mobile phone and computer) on the health status among secondary school students in the selected districts of Maharashtra’.

Objectives of the study: 1. to assess the use of electronic gadgets (a television, a mobile phone and the computer) among secondary school students. 2 To compare the self-reported the health status before and during the use of electronic gadgets (a television, a mobile phone and the computer) among secondary school students. 3.To find out the association between socio-demographic variables with the effects of electronic gadgets on the health status of secondary school students at 0.05 LOS. 4. To find out the association between the use of electronic gadgets (a television, a mobile phone and the computer) with the effects of electronic gadgets on the health status of secondary school students AT 0.05 LOS.

Hypothesis: 1. H 0: There is no an association between the use of electronic gadgets (a television, a mobile phone and the computer) and the effects of electronic gadgets on the health status of secondary school students at 0.05 LOS. 2. H01: There is no an association between socio-demographic variables and the effects of electronic gadgets (a television, a mobile phone and the computer) on the health status of secondary school students at 0.05 LOS.

Research methodology:

Present study is quantitative non-experimental approach and cross-sectional survey research design. Six secondary schools were selected from six districts of Maharashtra state. Non-probability – Convenient sampling technique with sampling size300 .Students who were using a television, a mobile and the computer (all three) more than one year were included in this study. Tool has four sections, Section –I. Socio-demographic data, Section –II. The use of electronic gadgets, Section –III . Self-

reported the health status before starting the use of electronic gadgets and Section – IV. The health assessment tools used (Modified tools) to collect current the health status. Tool consisted a. self-reported information, b. results of physical assessment done by the investigator and c. Open- ended question on additional information regarding the health problem and treatment. Modified tools are the use d by the researcher. Total 9 the health assessment tools were the use d and those were the health assessment of Hearing , Body weight ,Digestion , Sleep, Fingertip /Digital ulcer , Emotional status ,Vision , Bowel movement and Comfort , (Pain assessment).

The validity of tool was done by the experts in nursing, Physicians, IT experts, lawyers, teacher, Statistician, langue experts (Marathi and English), psychologist, sociologist and school principals and teachers. Total of 36 experts validated the tool. The reliability of the tool was done with split half technique and Spearman's Brown's prophecy and coefficient of co-relation tests were the use d to find out reliability of tool. The 'r' values of each tool of the health assessment were more than 0.70 and less than 0.94 b. Part of each tool is for physical assessment. The use d standard method of assessment (All the articles were calibrated) c. Part of each tool is an open- ended question regarding additional information on each component of the health assessment. The pilot study showed that the main study is feasible and the useful.

Analysis of results:

Based on objectives and hypotheses analysis was done. (For analysis SPSS 22 version software was the use d. Table description and the discussion is combined in discussion chapter).

Table No 1. Demographic distribution of students according to frequency and percentage. N= 300

Sr.No.		Socio-demographic data	Freq.	%
1		Standard in which the student is studying		
	a	8 th	100	33.33
	b	9 th	100	33.33
	c	10 th	100	33.33
2		Gender / Sex		
	a	Male	150	50
	b	Female	150	50
3		Habitat		
	a	Urban	126	42
	b	Rural	174	58
Sr.No.		Socio-demographic data	Freq.	%
4		Place of residence		
	a	Home	243	81
	b	Hostel	32	10.7
	c	Rented room	25	8.3
5		Monthly family income in Rs.		
	a	Up to Rs.10,000	202	67.3
	b	Rs.10,001 to Rs. 25,000	26	8.7
	c	Rs.25,001 to Rs.50,000	23	7.7
	d	Rs.50,001 to Rs. 1,00,000	19	6.3
	e	Above Rs.1,00,001	0	0
6		Mother's education		
	a	No formal education	6	2
	b	Primary education	129	43
	c	Secondary and higher secondary education	108	36
	d	Collegiate / graduate	47	15.7
	e	Post-graduation and doctorate	10	3.3
7		Father's education		
	a	No formal education	3	1
	b	Primary education	78	26
	c	Secondary education	182	60.7
	d	Collegiate / graduate	33	11
	e	Post-graduation to doctorate	4	1.3
8		Mother's occupation		
	a	Housewife	128	46
	b	Service (Specify)	162	54
9		Father's occupation		

	a	Farmer	208	69.3
	c	Service (Specify	92	30.7
10		Type of family		
	a	Nuclear (only mother , father and children stay together)	107	35.7
	b	Joint (grandparent./ cousins stay together)	193	64.3
11		Do you have information regarding the health hazards / diseases cathe use d by electronic gadgets?		
	a	Yes - Specify the source of information(Parent, teachers and internet.)	78	26
	b	No	222	74

Table no.2. Comparison between current self -reported the health status before after the use of electronic gadgets. n=300

Sr. No.	Electronic Gadget	The health problem	The health status before the use of electronic gadget				Current the health status with the use of electronic gadget			
			Yes		No		Yes		No/	
			F	%	F	%	F	%	F	%
1	A television	Hearing	8	2.7	292	97.3	40	13.33	260	86.66
		Body weight	7	2.3	293	97.7	35	11.66	265	88.33
		Digestion	4	1.3	296	98.7	12	4	288	96
2	A mobile phone	Sleep	5	1.7	295	98.3	27	9	273	91
		Fingertip skin	4	1.3	296	98.7	12	4	288	96
		Emotional status	6	2	294	98	16	5.33	284	94.66
3	The computer	Vision	5	1.7	295	98.3	18	6	282	94
		Bowel movement	5	1.7	295	98.3	32	10.66	268	89.33
		Comfort	6	2	294	98	23	7.66	277	92.33

Table no. 3: The association between socio-demographic variable with self-reported current of the health status of students N=300

Sr. No	Demographic data	The health status of students	Values			Result
			λ ² Value	df	LOS	
1	Monthly family income	Bowel movement	14.42	8	0.05	*Significant
2	Mothers' education	Digestion	16.46	8	0.03	*Significant
3	Mothers' education	Fingertip skin	28.11	12	0.00	*Significant
4	Mothers' education	Comfort	23.42	12	0.02	*Significant
5	Mothers' occupation	Digestion	8.89	2	0.01	*Significant
6	Mothers' occupation	Bowel movement	9.64	2	0.00	*Significant

- Foot Note: Only significant the association between demographic data and the health status of students' parameters were mentioned. (Significant if P value is less than 0.05)

Table no. 4: The association between current the health status of students with the use of electronic gadgets (a television, a mobile phone and the computer) . n= 300

SN	The health problem	The use of electronic gadget.	df	λ ² Value	P value	Result
1	Hearing	Television	4	2.52	0.64	Not significant
2	Body weight	Television	4	1.06	0.90	Not significant
3	Digestion	Television	4	18.54	0.00	*Significant
4	Sleep	Mobile phone	2	11.59	0.00	*Significant
5	Fingertip skin	Mobile phone	2	2.68	0.44	Not significant
6	Emotion	Mobile phone	3	19.17	0.00	*Significant
7	Vision	Computer	3	1.41	0.70	Not significant
8	Bowel movement	Computer	2	0.80	0.90	Not significant
9	Comfort	Computer	3	12.2	0.03.	*Significant

* (Significant if P value is less than 0.05)

Discussion:

Table No 1. Demographic distribution of students according to frequency and percentage. n= 300

The table values describe that students belong to place of residence at home were 243 (81%). No form education mothers were 6 (2%) and fathers' were 3 (1%). Working mothers were 162 (54 %) and working fathers were 92 (30.7%). The most important factor was students do not have information regarding the health hazards of electronic gadgets were 222 (74%).

A study was conducted on the effect of technology among secondary school adolescents (Safwat C, Adel H, George M and Sobhy S. 2012). That study included similar demographic variables like gender, parental working status (one or both), family type, age, average time spent /day and duration of the use in years [8]

Table no. 2: Comparison between self-reported the health status students before and after the use of electronic gadgets. n =300

Table values reveal that frequency and percentage of each the health problem of students was increased two to five times more in after the use electronic gadgets than before the use .

An article on downsides to digital technology supports to our study. The seventeen of the disadvantages are listed as data security , crime and terrorism , complexity ,privacy concerns ,social disconnect ,work overload ,digital media manipulation ,job insecurity ,plagiarism and copyright , anonymity and fake personas ,over-reliance on gadgets ,addiction ,second-hand living ,organization and storage ,depersonalized warfare ,longevity ,social depersonalization and many more. [9]

A study conducted on The effect of Technology on Human Behaviour.(Christine Safwat Heba Adel Mireille George Silvana Sobhy 2012) Study results concluded that the effect of technology show in face to face communication, she/ he does not feel at ease .we found that using social networks has no the effect on family relations. This result might be because use students sometimes the use social networks while interacting with their families whether by watching a television, and the use of a mobile phone and the computer . Our assumption that technology has a negative impact on suffering from physical diseases is proved. Commonly problems were back pain, significantly decrease the hours of sleep, fewer exercising and takes less part in sports. Technology turned out to have no negative impact on the students' achievements in both secondary and university levels. [8]

Table no. 3: The association between socio-demographic variable with self-reported current of the health status of students. Table values showed that there was only the association between mothers' education with digestion, fingertip skin and comfort. Also mothers' occupation and digestion, as well as bowel movement showed the association. Chi - square test was the used to find out the association. If p- value is less than 0.05 shows the association

A similar result was found in a study conducted on to evaluate mobile phone dependence among students of medical college and associated hospital of central India. (Dixit S, Shukla H, Bhagwat A, and et.al. 2010). The study results were no statistical the association was observed in relation to gender, place of stay and academic sessions with anxiety (nomophobia).[10]

A study (Nagwa A. Zein El Dein. 2013) done on harmful the effect of commonly the used electronic devices on adolescence and its safeguard at Shebin El-Kom . The result showed that the relationship between sex of adolescence and use of electronics. There was a significance difference ($P < 0.001$) between both sex (boys, and girls) in their duration of the uses of electronic devices/ day, number of hrs. There was no statistical significant difference ($P > 0.05$) between both sexes (boys & girls) from associated signs and symptoms from the use of electronic devices on their sleep, concentration, ear, or backache. In contrast to a statistical significance difference ($P < 0.05$) from their electronics.[5]

There was no the association between many demographic variables and the effect of electronic gadgets so null hypothesis was accepted.

Table no. 4. The association between the health status of students and the use of electronic gadgets (a television, a mobile phone and the computer)

Table values showed that there was an association between problem of digestion and the use of a television, problem of sleep as well as emotion with a mobile phone the use and problem of comfort with the computer. Chi - square test was the used to find out the association. If p- value is less than 0.05 then there is the association.

A television and the health problems -A cross sectional study -Impact of media on the physical the health of urban school children of age group 11-17yrs was done in Chennai (R. Priyadarshini and et.al. 2013) The results revealed that 90% of the participants eat while watching TV. 33% eat fast foods at least once a week. 82% buy food products based on advertisements and 59% skipped some outdoor activity for TV. 42% diet&42% exercise to get the body like their favourite media personality. The Chi square test resulted significant the associations of BMI vs the variables such as eating fast foods($p = 0.027$),frequency of outdoor play($p = 0.019$),eating while watching TV($p = 0.037$),dieting for changing the body image like their favourite media person($p = 0.033$),skipped some outdoor activity for TV($p = 0.018$).[11]

A mobile phone the health problems- Sara T, Annika ,H and Mats H done research on 'A mobile phone the use and stress, sleep disturbances, and symptoms of depression among young adults - a prospective cohort study . The study group consisted of young adults. In prospective analysis, over the use of a mobile phone was associated with stress, sleep disturbances, and symptoms of depression for both men and women.[12]

The computer and the health problems-A study on The long- time the use of the computer s and stay in static position may results in the computer related serious harms like back pain, neck pain, repetitive strain injuries, the computer vision syndrome done at Dr. D.Y. Patil associated colleges in Pune, Maharashtra, The present study showed that the mean pre-test and post-test knowledge score was 9.04 and 18.24 respectively. The difference between mean scores is 9.2 and the calculated "t" value is 3.23, which was highly significant at the level of $P < 0.05$. There was the association between the long- time the use of the computer s serious harms like back pain, neck pain, repetitive strain injuries, the computer vision syndrome. [13]

There was an association between the use of electronic gadgets and few the healthproblems, but overall the null hypothesis was accepted.

Conclusion:

Secondary school students are most vulnerable for the ill effects of electronic gadgets. Students are deadly attracted towards a television, a mobile phone and the computer. They use electronic gadgets for many purposes like recreation, information and education for long- time and without knowing it's the health hazards. There was the association between the uses of electronic gadgets with the health problems. The author concluded the study that students need guidance, supervision and health care for safe the use of electronic gadgets.

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