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A Pre Experimental Study to Assess the Effectiveness of Structured Teaching Programme Knowledge Regarding Hazards of Mobile Phones among Adolescents Students in Bright Career S. S. Inter College, Lucknow

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Abstract: ***Background: Communication is essential in every area of life. The cellular mobile phone system is a way of providing portable mobile phone services. Mobile phone usage causes so much of problems. The mobile phones are of great use for all especially for girls in terms of security. School and college going students have recommended to must own one for safety. The negative impacts of addiction of mobile phones on students include social, educational, health and economical consequences. If students have awareness about health problems regarding over use of Smart phones, they can easily avoided the negative effects of it, this study is to identify the Health hazards that have been associated with usage of Mobile phones among First year nursing students. As well as, to determine their health awareness.Method: In this study the research approach was Quantitative research approach quasi experimental one group pre-test post-test design was applied. Total 30 samples selected by convenient sampling techniques. The intervention Video assisted teaching Programme was introduced to the group after the pre test. Knowledge was assessed by self structured questionnaire tool before and after the intervention. This study was conducted in selected Bright Career S.S. Inter College at Lucknow. Results: The result revealed that Mean and SD of Pre-test level of knowledge in reducing health hazards of Mobile Phone among adolescents was (8.83±2.50), which mean this score reveals that the adolescents under the study had inadequate knowledge in reducing health hazards of Mobile Phone during Pretest.During post test the Mean and SD was (16.766±1.99473), which mean this score reveals that the adolescents under the study had gained knowledge in reducing health hazards of Mobile Phone after administration of computer assisted teaching program me during Post test. There will be asignificant difference in the level of knowledge in reducing health hazards Mobile Phone among adolescents before and after video assisted teaching program Conclusion: The study concluded that, the video assisted teaching Programme was effective in improving the knowledge reducing Health Hazards of mobile Phone among Adolescents. The study findings revealed that knowledge was significantly improved by video assisted teaching Programme.***

Keywords: Effectiveness, Computer assisted teaching programme, Knowledge, Health Hazards, Mobile Phone, Adolescents

1.Introduction

Communication is essential in every area of life. The cellular mobile phone system is a way of providing portable mobile phone services. Radio link to a base station has connected to each phone; in turn this is linked to the mobile phone network which is the largest machine on the planet. [1]

The mobile phones are one's fashionable and responsible for more communication than any other technology. Despite the many advantages of mobile phones, many studies have confirmed the disadvantages overuse it. Youth are the most popular group used for mobile phone and deeply affected by the entry of mobile phones into their lives, especially university students.[2] Some people have only one mobile phone for different purpose like personal and business use where as many have different phones or one phone with multiple SIM cards to use for different purposes. Over time, the numbers of cell phone calls per day, the length of each call, and the amount of time people use cell phones have increased. Because of changes in cell phone technology and increases in the number of base stations for transmitting wireless signals, the radiation exposure from cell phone use has raised. . [3]

Mobile phone usage causes so much of problems. The mobile phones are of great use for all especially for girls in terms of security. School and college going students have recommended to must own one for safety. We all know there are dis-advantages in using mobile phones. . [4]

Exposure to blue wave length of mobile phones lead to disturbances in sleep and contribute to heart diseases, obesity, diabetes mellitus and other health conditions. Excessive texting and swiping on mobile phone lead to trigger finger or trigger thumb and thumb arthritis. . [5]

The use of mobile phones among young children and adolescents is also increasing dramatically. It is an intended need which is necessary to increase the awareness of the negative effects of excessive phone use on their sleep wake patterns, with serious health risks, as well as attention and cognitive problems. Hence it requires the assessment of knowledge and attitude regarding the hazards of mobile phones as they use this very frequently. The Cellular Telecommunications and Internet Association, States that the number of cell phone users has increased rapidly. There were over 400 million cell phone subscribers in the United

States in 2017.Globally, there are more than 5 billion cell phone users. [6]

WHO 2017 confirmed that the mobile phone users suffering from brain tumors, on the same side of the head is closer to mobile phone. In addition, wireless interactions consume the brain glucose in the result of long-term use of mobile phones. At 50 min of continuous talk with the mobile phone can change the brain cell activity in the area of the brain that is closer to the antenna and increase the glucose metabolism (cerebral power signal). The continuous use of mobile phone may lead to reduced learning that is induced by abnormalities in antioxidant enzyme activities. Mobile phones takes important place in the development of human civilization, but their excessive use cause some Health effects. The negative effects of smart phone on physical health include cancer; brain tumor; nervous disturbances; weakening of the immune system; problems with the eardrum; pain in the wrist, neck, and joints; fatigue. The Psychological effects include insomnia, depression, anxiety, and emotional instability. One should always keep in their mind that mobile phone is a friend, not a master, and it should never be used too much. . [7]

The negative impacts of addiction of mobile phones on students include social, educational, health and economical consequences. If students have awareness about health problems regarding over use of Smart phones, they can easily avoided the negative effects of it and thus, increase their life quality. So, this study is to identify the Health hazards that have been associated with usage of Mobile phones among First year nursing students. As well as, to determine their health awareness. . [8]

2.Methodology

In this study the research approach was Quantitative research approach quasi experimental one group pre-test post-test design was applied. Total 30 samples selected by convenient sampling techniques. The intervention Video assisted teaching Programme was introduced to the group after the pre test. Knowledge was assessed by self structured questionnaire tool before and after the intervention. This study was conducted in selected Bright Carrer S.S. Inter College at Lucknow.

Description of Tool

Part I: Socio demographic variables-

A tool to assess the demographic data of Adolescents such as age, sex, Religion, Place of resident, Fathers occupation, Mothers occupation, Family monthly income, leisure time activity, Duration of phone used per day, Source of information regarding reducing Health Hazards of mobile Phone.

Part II: Structured teaching programme

It consists of 25 self structured questionnaire related to regarding knowledge in reducing Health Hazards of mobile Phone.

Scoring mode:

Each correct answer was a score of 1 and incorrect was score of 0. Maximum scoring possible was 25 in knowledge questionnaire and minimum was 0.

Data collection procedure

The study conducted after obtaining permission from the the Principal Bright Carrer S.S Inter College, Lucknow. Informed consent was taken from the samples with self-introduction and purpose of the study was explained to the participants.

Day 1: A pre test administered to caregivers to assess their knowledge by using a Self Structured Questionnaire regarding knowledge in reducing Health Hazards of mobile Phone.

Day 1: Video assisted teaching Programme (VATP) package on reducing Health Hazards of Smart Phone was given for 15 minutes through LCD.

Day 7: Students were gathered in 7 days interval the post-test level of knowledge was assessed by administering same questionnaire on 8th day on each Participant.Thereafter the collected raw data coded and entered master sheet of the analysis.

Plan for data analysis

Statistical analysis is the organization and analysis of quantities data using statistical procedures including both descriptive and inferential statistics.

3.Result

Section I: Distribution of study subjects according to socio demographic variables

Table 1: Frequency and percentage distribution of subject in term of sociodemographic characteristic**.,** n=30

Variable	*f*	%
Age in year		
a.14 years	23	76.66%
b.15 years	6	20%
c.16 years	1	3.33%
d.17years	0	0%
Sex		
a.Male	15	50%
b.Female	15	50%
Medium of education		
a.Hindi	7	23.33%
b.English	23	76.86%
Religion		
a.Hindu	21	70%
b.Muslim	8	26.66%
c.Christian	1	3.33%
d.Other	0	0%
Residential area		
a.Rural	21	70%
b.Urban	8	26.66%
c.Semi urban	1	3.33%
Habit /Substance use		
a.Alcohol	2	6.66%

b.Smoking	3	10%
c.No substance abuse	25	83.33%
What type of the gadgets are use you used?		
a.Mobile	25	83%
b.Computer/laptop	1	3.33%
c.Internet café	1	3.33%
d.No	3	10%
How many hour you spend with the electronic gadget.		
a.2 to 3 hour	11	36.66%
b.3 to 4 hour	1	3.33%
c.< 2 hour	17	56.66%
d.>4 hour	1	3.33%
What is your sleep duration / day		
a.6 to 8 hour	18	60%
b.4 to 6 hour	2	6.66%
c.2 to 4 hour	4	13.33%
d.< 2 hour	6	20
Leisure time activity		
a. Watching television	4	13.33%
b. Reading book	16	53%
c. Using mobile phones	6	20%
d. Playing outdoor game	6	20%
Occupation of the father		
a. Government employee	2	6.66%
b. Private employee	13	43.33%
c. Self employee	14	46.66%
d. Semi government	1	3.33%
Occupation of the mother		
a. House wife	25	83.33%
b. Government employee	0	0%
c. Private employee	5	16.66%
d. Semi government employee	0	0%

Section II: Frequency and percentage distribution of the Pre test and Post test level of Knowledge in reducing health hazards of Mobile Phone among adolescents

Table 2: Frequency and percentage distribution of the Pre test level of Knowledge in reducing health hazards of Mobile Phone among adolescents

S.NO	Pre test level of Knowledge in reducing health hazards of Mobile Phone	Distribution of Adolescents	
		Frequency	Percentage (%)
1	Inadequate	28	93.3%
2	Moderately adequate	2	6.7%
3	Adequate	0	0%

Table 2 Reveals that majority of Adolescents 28(93.333%) had Inadequate level of Knowledge, 2 (6.66%) had moderately adequate level of Knowledge and 0 (0%) had adequate level of Knowledge in reducing health hazards of Mobile Phone during the Pretest

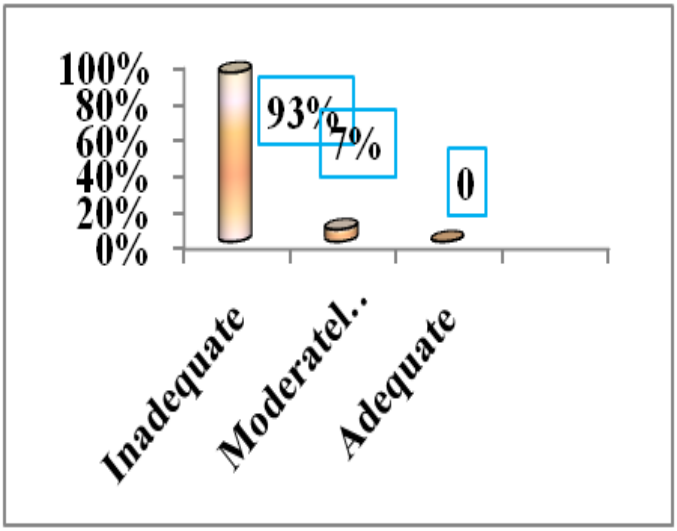

Figure 1: Categories wise comparison of knowledge score of adolescents.

Table 3: Post test level of Knowledge in Reducing Health Hazardus

S.NO	Post test level of Knowledge in reducing health hazards of Smart Phone	Distribution of Adolescents	
		F	%
1	Inadequate	0	0
2	Moderately adequate	19	63.33%
3	Adequate	11	36.66%

Table 3 Reveals that none of them had Inadequatelevel of Knowledge, 19 (63.33%%) had moderatelyadequate level of Knowledgeand 11 (36.66%%) had adequate level of Knowledge in reducing health hazards of mobile Phone among adolescents after the VATP (Post test).

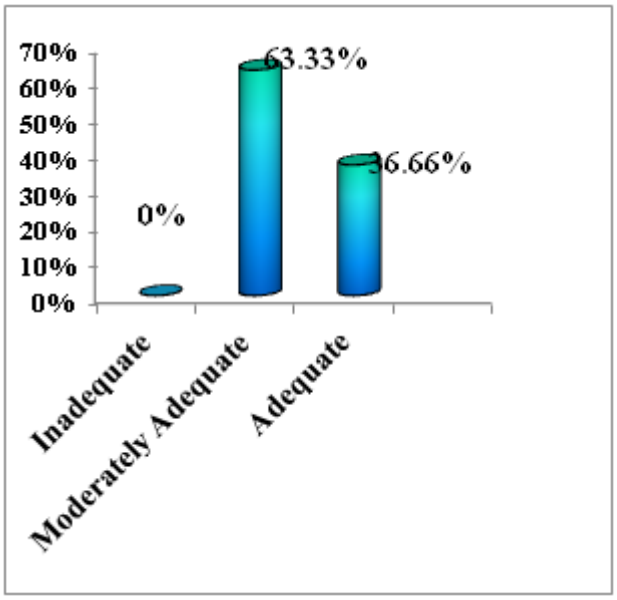

Figure 2: Categories wise comparison of knowledge score of adolescents

Section III: Assess the level of knowledge in reducing health hazards of mobile phone among adolescents.

Table 4: Mean Standard Deviation of pre-test level of knowledge in reducing health hazards of Mobile Phone among adolescents, n=30

S. No	Area	Mean	SD
1	Knowledge in reducing health hazards of Smart Phone among adolescents	8.83	2.50

Table 4 Reveals that the mean and SD of Pre-test level of knowledge in reducing health hazards of Mobile Phone among adolescents was (8.8333±2.50444), which mean this score reveals that the adolescents under the study had inadequate knowledge in reducing health hazards of Mobile Phone during Pretest.

Table 5: Mean Standard Deviation of post-test level of knowledge in reducing health hazards of Mobile Phone among adolescents

S. No	Area	Mean	SD
1	Knowledge in reducing health hazards of Mobile Phone among adolescents	16.766	1.99476

Table 5 Reveals that the During post test the Mean and SD was (16.766±1.99473), which mean this score reveals that the adolescents under the study had gained knowledge in reducing health hazards of Mobile Phone after administration of computer assisted teaching program me during Post test. This show that computer assisted teaching programme was effective in improving the knowledge of adolescents in reducing health hazards of Mobile Phone.

Section IV: Comparison of Mean, SD o f Pre-test and Post-test level of Knowledge in reducing health hazards of Mobile Phone among adolescents

Table 6: Categories wise pre and post test comparison of knowledge score among adolescents, n=30

S.No	Area	Max score	Pre-test score		Post-test score	
			Mean	SD	Mean	SD
1	Knowledge in reducing health hazards of mobile Phone among adolescents	25	8.83	2.5	16.7	1.9

Table 6 Reveals that the Mean and SD of Pre-test level of knowledge in reducing health hazards of Mobile Phone among adolescents was (8.83±2.50), which mean this score reveals that the adolescents under the study had inadequate knowledge in reducing health hazards of Mobile Phone during Pretest.During post test the Mean and SD was (16.766±1.99473), which meanthis score reveals that the adolescents under the study had gained knowledge in reducing health hazards of Mobile Phone after administration of computer assisted teaching program me during Post test. This show that computer assisted teaching programme was effective in improving the knowledge of adolescents in reducing health hazards of Mobile Phone.

Section V: Assess the effectiveness of video assisted teaching programme on knowledge in reducing health hazards of mobile phone among adolescents.

Table 7: 't' test value of Effectiveness of video assisted teaching programme on knowledge in reducing health hazards of Mobile Phone among adolescents

S. No.	Area	't'-value	Level of significance
1	knowledge in reducing health hazards of Mobile Phone among adolescents	3.763 *	Significant

Table 7 Reveals that Paired't' test was calculated to analyze the difference in pre-test and post-test level of knowledge in reducing health hazards of Smart Phone among adolescents. The result shows that highly significant difference between the score value of pre-test and post-test. Thus the difference observed in the mean score value of pre-test and post-test were true difference.This show that computer assisted teaching programme was effective in improving the knowledge of adolescents in reducing health hazards of Mobile Phone.

Hence the stated hypothesis "H_1: There will be asignificant difference in the level of knowledge in reducing health hazards Mobile Phone among adolescents before and after video assisted teaching program" is accepted.

Section VI: Association Between The Level Of Knowledge In Reducing Health Hazards Of Mobile Phone Among Adolescents With Their Selected Socio Demographic Variables.

Table 8: Association between the level of knowledge in reducing Health Hazards of Mobile Phone among Adolescents with their Selected Socio Demographic Variables

Demographic variables	Inadequate		Moderately adequate		Adequate		Total	Chi square value/association or no association
	f	%	f	%	f	%		
1.Age								
a)14years	0	0	1	3.33	0	0	1	X^2=0.30 Df =6 NS
b) 15years	0	0	14	46.66	9	30%	23	
c)16 years	0	0	4	23.33	02	6.66%	6	
d) 17 year	0	0	0	0	0	0	0	
2. Gender								X^2=0.14 Df =2 NS
a)Male	0	0	10	33.33	5	16.66	15	
b)Female	0	0	9	30	6	20	15	
3. Medium of education								X^2=16.02 Df =2 NS
a)Hindu	0	0	2	6.66	4	13.33	6	
b)English	0	0	17	56.66	7	23.33	24	
4.Religion								**X^2=48.54 Df =6 S**
a)Hindu	0	0	2	6.66	4	13.33	6	
b) Muslim	0	0	17	56.66	7	23.33	24	
c) Christian	0	0	0	0	0	0	0	
d)other	0	0	0	0	0	0	0	
5.Residential area								**X^2=15.35 Df =4 S**
a)Urban	0	0	14	46.66	7	23.33	21	
b)Rural	0	0	4	13.33	4	13.33	8	
c)Semi urban	0	0	1	3.33	0	0	1	
6.Substance abuse								**X^2=14.74 Df =4 S**
a)Alcohol	0	0	1	3.33	1	3.33	2	
b)Smoking	0	0	1	3.33	2	6.66	3	
c) no substance abuse	0	0	17	56.66	8	26.66	25	
7.Types of gadgets use								**X^2=16 Df =6 S**
a)mobile	0	0	18	60	7	23.33	25	
b)computer /laptop	0	0	0	0	1	3.33	1	
C)internet café	0	0	0	0	1	3.33	1	
d) not use	0	0	1	3.33	2	6.66	3	
8. **Hours you spent with the gadgets**								**X^2=11.218 Df =6 S**
a)	0	0	7	23.33	3	3.33	10	
b)3to 4hour	0	0	0	0	1	3.33	3	
c)<2 hour	0	0	11	36.66	7	23.33	18	
d) >4 hour	0	0	1	3.33	0	0	1	
9.sleeping duration								X^2=11.419 Df =6 NS
a)8to 6 hour	0	0	11	36.66	6	20	17	
b)4 to 6 hour	0	0	0	0	3	10	3	
c)3 to 4 hour	0	0	4	13.33	0	0	4	
d)<2 hour	0	0	4	13.33	2	6.66	6	
10.leisure time activity								**X^2=13.99 Df =6 S**
a)watching T.V	0	0	1	55	2	6.666	3	
b)Reading book	0	0	10	33.33	5	16.66	15	
c)Using mobile phone	0	0	4	13.33	2	6.66	6	
d)Playing out door game	0	0	4	13.33	2	6.66	6	
11.Occupation of the father								**X^2=14.90 Df =6 S**
a)Govt. employee	0	0	1	3.33	1	3.33	2	
b)Private employee	0	0	7	23.33	6	20	13	
c)Self employee	0	0	10	33.33	4	13.33	14	
d)semi Govt.	0	0	1	3.33	0	0	1	
12.Occupation of the mother								**X^2=14.71 Df =6 S**
a)House wife	0	0	16	53.33	9	30	25	
b)Government employee	0	0	0	0	0	0	0	
c)Private employee	0	0	3	10	2	6.66	5	
d)Self employee	0	0	0	0	0	0	0	

SA- Significant Association **NS**- No Significant

Table 8 Reveals that that, there was a significant association was found between the level of knowledgein reducing Health Hazards of Smart Phone among Adolescentswith their selected demographical variables like Age, Occupation of the Mother, Leisure time activity.

Hence the stated hypothesis "H_2: There will be a significant association between the level of knowledge in reducing health hazards of Mobile Phone among adolescents and their selected demographic variables". is accepted.

There is no significant association was found between the level of knowledgein reducing Health Hazards of Smart Phone among Adolescents with other demographic variables such as, Gender, Residential area, Religion, Occupation of the father, Family income (In rupees per month), Duration of smart phone use per day and Source of information in reducing Health Hazards of Smart Phone.

4.Discussion

As the above study showed that there were significantly changes in knowledge regarding Regarding Hazards of Mobile Phones Among Adolescents Students before and after administration of computer assisted teaching program. So the findings are correlated with following literature. Valarmathy (2017) conducted study to evaluate the effectiveness of Computer assisted teaching versus playway approach on the knowledge regarding the hazards of electronic gadgets among early adolescents in selected schools, In the pretest, among 30 adolescents 17 (56.7%) had inadequate knowledge, 13 (43.3%) had moderate knowledge and 0 (0%) had adequate knowledge in pretest. The level of knowledge was improved after intervention (Computer assisted teaching), 22 (73.3%) had moderate knowledge and 8 (26.7%) had adequate knowledge. the pretest mean was 10.4 and the posttest mean was 17.5, the mean difference was 7.6 and the standard deviation of pretest was 2.8 and posttest was 8.The calculated paired 't' value was 34.1 was highly significant than the table value (2.6) at 0.05 level. Hence the stated hypothesis was accepted. It was inferred that Computer assisted teaching on hazards of electronic gadgets was effective in improving the knowledge of the early adolescents.

Findings related to comparison of knowledge score- Nilesh Pendse (2012) conducted study on Knowledge and Attitude Regarding Health Hazards of Mobile Phone Users among the Junior College Students. This study finding has shown that, there is a significant association between knowledge of adolescents with age, family income and occupation of the mother.

5.Conclusion

The following conclusion was drawn from the study. The study proved that the video assisted teaching Programme was effective in improving the knowledge reducing Health Hazards of mobile Phone among Adolescents. The study findings revealed that knowledge was significantly improved by video assisted teaching Programme."H_2: There will be a significant association between the level of knowledge in reducing health hazards of Mobile Phone among adolescents and their selected demographic variables". is accepted.

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