

# Effectiveness of Video Teaching Programme on Knowledge Regarding Impact of Smartphone Dependence on Physical Health, Academics and Behavior among Adolescents Studying in Selected in Junior Colleges

Bipasha Sharma<sup>1</sup>, Sheetal Barde<sup>2</sup>, Merlin Suji<sup>3</sup>

<sup>1</sup>M.Sc. Nursing, <sup>2</sup>Assistant Professor, <sup>3</sup>Tutor Symbiosis College of Nursing, Symbiosis International (Deemed University), Pune

## Abstract

Mobile phone use has become very common in today's world. Though it is very handy and we can connect in any part of the world there are also number of health issues. The study purposes to ascertain the knowledge level about smartphone's dependence impact on physical health academics and behavior among adolescents studying in junior colleges. Design used for the purpose of the study was Single set pre-test post-test. Sampling technique used for the selection of participants was Probability Random. To select the sample Random sampling technique was used. After the pre-test, intervention was planned followed by post-test was done after 1 week. Result shows that there was effectiveness of video teaching Programme on knowledge.

**Key Words:** Smartphone, video teaching programme, Knowledge, Effectiveness, Adolescent population.

## Introduction

Mobile are one of the important forms of communication these days. With the use of mobile we can connect to people living at any corner of the world not only that it is also very handy for young generation people to study as well as to carry their work by side<sup>2</sup>. Impacts of smartphone are mendable if the adolescents have adequate knowledge regarding the impacts of smartphone dependence on physical health, academic and behavior of the adolescents. We reside in a sphere that is abutting by description as well as deliberation of latest details and presenting communication technology as it is the key to future possessions, the promise of diminishing the hard work, overcrowding the difficulty of lengthy lectures, and dishearten educators of permitting access to up to date the worldwide details, news and also in giving consistently new exterior of amusement and freedom<sup>1</sup>. Through new space education mechanics, digital athenaeum, computerized voting, video conferencing, e-mail, teleshopping, mobile telephone, online chatting. Multiple users of mobile phones experience feeling of some symptoms during and after using mobile phones such as giddiness, insomnia, flickering and tingling

sensation, headache restlessness, forgetting, tachycardia and disturbance in digestive systems<sup>4</sup>. It also has been declared some parts of the human skull are more prone to destruction due to heat, bodily formation with faulty vascular system such as nerve fibers<sup>5</sup>.

## Statement of The Problem

Effectiveness of video teaching Programme on knowledge regarding smartphone dependence on physical health, academics, and behavior among adolescents studying in selected junior colleges in Pune city.

## Methodology

Safeguarding the study purposes, experimental research design single group pre-test and post-test (P1XP2) was selected by the investigator. The population of this study includes both male and female adolescents studying in Junior colleges in Pune city. Probability sampling method was used for selecting 100 adolescents who fits in the criteria. In this study the investigator assessed the knowledge level regarding impact of smartphone dependence on physical health,

academics and behavior.

**Content validity**

The tool was validated by submitting to 11 professionals, for their valuable view on the accuracy and relevancy of tool. The experts were basically selected on clinical expertise, interest and experience. Suggestions and comments of experts included grammatical error of the sentences.

**Reliability**

Reliability was evaluated using test retest method.

The tool was reliable as Cronbach’s alpha was found to be 0.4610.

**Data Collection:**

During the data collection time the main motive of the study was explained and confidentiality of the reply was assured to the adolescents. After the pre-test on the same day video teaching programme was given to samples, post-test was done on the day 7 using the same tool.

**Results**

**Table No 1: Description of samples (adolescents studying in Junior colleges)**

Sr. No.	Demographic variable	Knowledge	
		Frequency	%
1.	Age		
a.	14-16 years	0	0.0%
b.	16-18 years	74	74.0%
c.	18-20 years	26	26.0%
d.	20 and above	0	0.0%
2.	Gender		
a.	Male	49	49.0%
b.	Female	51	51.0%
3.	Education		
a	XI	0	0.0%
b.	XII	100	100.0%
4	Place of resident		
a.	Home	100	100.0%
b.	Hosteller	0	0.0%
c.	Paying guest	0	0.0%
d.	Relatives	0	0.0%
5.	Type of family		
a.	Nuclear	74	74.0%
b	Joint	15	15.0%
c.	Extended	0	0%
d.	Single parent	11	11.0%2

**Cont.. Table No 1: Description of samples (adolescents studying in Junior colleges)**

6	Use of smartphone for		
a.	Messenger /WhatsApp	24	24.0%
b.	Entertainment	20	20.0%
c.	Web surfing	31	31.0%
d.	Calls	25	25.0%
e.	Others	0	0.0%
7	How long you have been using smartphone?		
a.	Less than a year	9	9.0%
b.	1-3 year	67	67.0%
c.	3-5 years	14	14.0%
d.	more than 5 years	10	10.0%
8	Time spend on smartphone usage in a day		
a.	4 hours	66	66.0%
b.	6 hours	6	6.0%
c.	8 hours	19	19.0%
d.	more than 8 hours	9	9.0%
9	Family income		
a.	1-3 lakhs	26	26.0%
b.	3-5 lakhs	9	9.0%
c.	5-7 lakhs	26	26.0%
d.	7 lakhs and above	39	39.0%

The above table shows that experimental samples which are included were of age 16 and above. In which 74% were of 16-18 years, 26% of them were 18-20 years. It consists 100 samples in which 49% were male and 51% were female, 100% were from standard XII and 100% of them used to stay at home. It also shows that 74% belong to nuclear family, 15% belong to joint family, 11% were single parent. The experimental sample also shows that 25% used smartphone for calls

,31% for web surfing ,20% for entertainment while 24% for WhatsApp /messenger and also that 9% have been using smartphone for less than a year,67% for 1-3 years ,14% for 3-5 years and 10 5 for more than 5 years. The study shows that 66% spend 4 hours,6% for 6 hours,19% for 8 hours and 9 % for more than 8 hours on their smartphone and 26% family income was from 1-3 lakhs ,9% was 3-5 lakhs while 39 % was 7 lakhs and above.

**Table 2: Baseline level of knowledge in adolescents in pre-test**

Knowledge	Pre-Test	
	Frequency	%
Fair (score 0-8)	13	13.0%
Good (score 9-16)	87	87.0%
Excellent (score 17-24)	0	0.0%

The overhead table indicate the level of knowledge among adolescent in pre-test was 87.0% of the adolescent had good knowledge (score 9-16) and 13.0% of them had fair knowledge (Score 0-8).

**TABLE 3: Level of knowledge post intervention of the adolescents**

Knowledge	Post-Test	
	Frequency	%
Fair (0-8)	0	0%
Good (9-17)	83	83.0%
Excellent (18-24)	17	17.0%

The overhead table indicates the level of knowledge among adolescent in pre-test was 17.0% of the adolescent had excellent knowledge (score 18-24) and 83.0% of them had good knowledge (Score 9-17).

**Table 4: Effectiveness of video teaching programme on the level of knowledge in adolescent**

Knowledge	Pre-Test		Post-Test	
	Frequency	%	Frequency	%
Fair (score 0-8)	13	13%	0	0%
Good (score 9-17)	87	87%	83	83%
Excellent (score 18-24)	0	0%	17	17%

The overhead table indicates that in pre-test, majority of 87% of the adolescent population had good knowledge (score 9-17) and 13% of them had fair knowledge (score 0-8) In post-test, 83% of the adolescent population had good knowledge (score 9-17) and 17% of them had excellent knowledge (Score 18-24). This indicates that the knowledge among adolescent population improved after the video teaching programme.

**Table 5: Effectiveness of video teaching on the level of knowledge among adolescent using paired t-test**

	Mean	SD	p-value
Pre-Test	12	2.44	0.000
Post-Test	15	23.33	

Investigator has applied paired t-test for effectiveness of video teaching programme on the level of knowledge among adolescent studying in selected junior colleges in Pune city. Average knowledge score is 12 in pre-test while in post-test it is 15. Hence null hypothesis is

rejected as the corresponding p-value was small (less than 0.05). So, it is apparent that the intervention is significantly productive in improving the knowledge among adolescent population studying in junior colleges in Pune city.

**Table 6: Wilcoxon sign rank test for association between selected demographic variable and the finding among adolescent studying in junior colleges during pre-test**

DEMOGRAPHIC VARIABLE		KNOWLEDGE		p value
		Excellent	Fair	
Age	16-18 years	50	24	0.724
	18-20 years	17	9	
Gender	Male	32	17	0.724
	Female	35	16	
Maximum use of phone for	Messenger/WhatsApp	50	24	0.778
	Entertainment	9	6	
	Web surfing	8	3	
How long you have been using smartphone?	Less than a year	17	7	0.515
	1-3 years	13	7	
	3-5 years	23	8	
	More than 5 years	14	11	
Time spends on smartphone	4 hours	6	3	0.462
	6 hours	48	19	
	8 hours	8	6	
	More than 8 hours	5	5	
Type of family	Nuclear	45	21	0.746
	Joint	4	2	
	Extended	11	8	
	Single parent	7	2	
Family income	1- 3 lakhs	19	7	0.159
	3- 5 lakhs	5	4	
	5-7 lakhs	21	5	
	7 lakhs and above	22	17	

Hence, entire p-values are higher than 0.05, so we accept H<sub>0</sub> (null hypothesis) so that we can declare that there is no relationship among the response of pre-test score in section II and the demographic variables.

### **Recommendations:**

- A homogenous investigation can be done on immense samples, so that detection can be observed for larger samples.
- A relative research can be conducted on the level of knowledge

### **Summary:**

In the present study, 100 adolescents studying in junior colleges were selected through random sampling technique. Single group pre-test post-test method was the study design. The samples who participated in the study comprises 74% in the age group of 16-18 years. Hence, it reveals that among the samples 4% of them were male while 51% of them were females.

The pre-test knowledge regarding impact of smartphone dependence was assessed using self-structured questionnaire. The intervention used was the video teaching programme after pre-test post-test was done 1 week later. The mean score of knowledge in pre-test was 12 and in post-test it was 15. Here the null hypothesis is rejected as the p value is less than 0.05. Accordingly, it shows that video teaching programme was effective in upgrading the knowledge of adolescents studying in junior colleges.

### **Conclusion**

Mobile are one of the important forms of communication these days as well its multiple function is replacing laptop and computers day by day. We can see mostly the youngsters /teenagers engaging in mobile phone and spending most of their time. Mobile has replaced almost everything. There are various impacts of using mobile phones and people are unaware about it. Many researches have been conducted to see for the

impacts caused by smartphone among certain population. Proper knowledge is required in order to minimize the impacts caused by smartphones. The findings of the study proved that there is noticeable efficiency of video teaching Programme on knowledge regarding impact of smartphone on physical health, academics and behavior among adolescents studying in junior colleges.

**Ethical Clearance-** Ethical clearance taken from Institutional Research committee.

**Conflicts of Interest:** All authors have no conflicts of interest to declare.

**Source of Funding:** The source of this research costs from self.

### **References**

1. Jenaro C, Flores N, Gómez-Vela M, González-Gil F, Caballo C. Problematic internet and cell-phone use: Psychological, behavioral, and health correlates. *Addiction research & theory*. 2007 Jan 1;15(3):309-20.
2. Lepp A, Barkley JE, Karpinski AC. The relationship between cell phone use, academic performance, anxiety, and satisfaction with life in college students. *Computers in Human Behavior*. 2014 Feb 1; 31:343-50.
3. Duggan M, Rainie L. Cell phone activities 2012. Pew Research Center. 2012 Nov 25.
4. Felisoni DD, Godoi AS. Cell phone usage and academic performance: An experiment. *Computers & Education*. 2018 Feb 1; 117:175-87.
5. Jackson LA, Von Eye A, Fitzgerald HE, Witt EA, Zhao Y. Internet use, videogame playing and cell phone use as predictors of children's body mass index (BMI), body weight, academic performance, and social and overall self-esteem. *Computers in Human Behavior*. 2011 Jan 1;27(1):599-604.