

Research Article

# A Quasi Experimental Study Assess Effectiveness of Self Instructional Module (SIM) on Knowledge Regarding Impact of Mobile Phone Dependency on Health and Academics Among Adolescents Aged Between 13-18 Years Studying in Selected Schools, of District Hisar, Haryana

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## I N F O

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## A B S T R A C T

A Quasi Experimental study Assess Effectiveness of Self Instructional Module (SIM) on Knowledge regarding Impact of Mobile Phone Dependency On Health and Academics Among Adolescents Aged Between 13-18 years Studying In Selected Schools, Of District Hisar, Haryana. The study was conducted on 60 students, out of them 30 for experimental group and 30 for control group chosen by purposive method. A self structured knowledge questionnaire tool was used. A self instructional module was prepared on impact of mobile phone dependency on health and academics. The study result revealed that experimental group pre test knowledge score mean was 13.80, S.D. 4.730 and control group knowledge score mean was 13.267, S.D. 5.225. The self instructional module was only given to the experimental group and after 1 week post test was taken. In post test of experimental group knowledge score mean was 22.33, S.D. 5.827 and control group knowledge score mean was 15.50, S.D. 4.918. The post test score is higher than pre test score and the mean difference between experimental group pre test and post test was 8.53 and between control group pre test and post test was 2.24 so, the mean difference of experimental group was higher shows the effectiveness of self instructional module in the form of booklet. The paired T test value was 7.661and the result was significant.

**Keywords:** Knowledge, Impact, Dependency, Health, Academics, Adolescent.



## Introduction

Technology, a word which has become the talk of the nation, is dominating people's life today. A technological invention has been carried out by modern people in easing their life to be more flexibility and reasonable in order to be able to overcome upcoming challenges and compatible to the globe such mobile phone has become such a massive part of our lives. Over last 15 years there has been tremendous growth in use of mobile phone because of usefulness in communication and interaction and the sphere of work and private life, beside communication, mobile phone have been used for other purpose like playing game and listening song and using internet for social network its helps to reduce the loneliness and making new friends and resultantly mobile phone have parcel part of life mobile phone users.<sup>1</sup>

According to Cromer Mobile phones simply refer to a mobile electronic device which is the means of digital telecommunication. Mobile phones enable the owners or subscribers today to stay connect with their friends and family with the various functionality and applications provided through the running of an advance operating system. The information and communication technology which here refers to the mobile phones, develop extremely rapidly today has now become the most device in the globe. In the last 20 years, worldwide mobile phone subscriptions have grown from 12.4 million to over 5.6 billion, penetrating about 70% of the global population. Its usage has also become an important public health problem as there have been reports of plenty of health hazards, both mental and physical, in people of all age groups. On 31 May 2011 the World Health Organization confirmed that cell phone use indeed represents a health means, and classified mobile phone radiation as a carcinogenic hazard, possibly carcinogenic hazard, possibly carcinogenic to humans.<sup>2</sup>

Over usage of mobile phones leads to physiological health hazards like headaches, ear aches, warmth sensation, fatigue and musculoskeletal symptoms. Apart from the various benefits of cell phone, it's over usage leads to mobile phone addiction. It is one of the biggest non drug addictions in the world. On 31 May 2011, the world health organization confirmed that mobile phone use may represent a long-term health risk, classifying mobile phone radiation as a "carcinogenic hazard" and "possibly carcinogenic to humans" after a team of scientists reviewed peer-review studies on cell phone safety. One study of past cell phone use cited in the report showed a "40% increased risk for brain cancer in the highest category of heavy users."<sup>3</sup>

In spite of some knowledge on unfavorable health effects, the usage of cell phones has increased dramatically especially since the time they have become more affordable

and available all over the world. Almost 87-90% of the population in an advanced country like the USA use cell phones, and a sizeable number of these is school and college going students. Effects of overuse of cell phone devices in the general population have been carried out by many, but few on specific groups like the teenagers, younger generation or say college-students.<sup>4</sup>

A research conducted by IAMAI (Internet and Mobile Association of India) and IMRB International (Indian Market Research Bureau) in June 2013, indicates that the Internet usage in India has gone up with more and more Internet users using the Internet on a regular basis. In June 2013, India had 190 Million Internet Users, of this; 130 Million belonged to Urban India and the rest 60 Million were from Rural India. Rapid expansion and proliferation of the internet has provided better opportunities for communication, information and social interaction. However, the excessive undisciplined use by some individuals has led to the emergence of the concept of internet addiction.<sup>5</sup>

India now has the world's third-largest national digital population, with approximately 120 million internet users in 2011. The number of internet users in India has grown five-fold since 2005. Mobile Internet usage is growing at the rate of nearly 85% per annum, with nearly 75% of non voice usage being devoted to entertainment, where video and music streaming are major growth activities. The understanding that the internet use can be a disorder is still in its initial stages in India. There are limited numbers of studies estimating how common the issue of internet addiction is in India. In a study carried out by Yadav et al., among high school students in Ahmedabad India, there was a strong positive correlation between internet addiction and depression, anxiety and stress. In India we note that the scenario is similar with people from both rural and urban areas, educated or illiterate, and belonging to almost all ages; now dependent on a cellular phone. The alarming fact is that many of these devices reach the market without any safety testing on their electromagnetic radiation.<sup>6</sup>

Constant usage and sort of addiction to cell phones has affected the people physically and psychologically by making them have aches and pains and in some a disability too; lose their required number of hours of sleep; get angry and scrap over trivial matters, and so on and so forth.<sup>7</sup>

In a UK survey 2004, it was reported that almost half of the users said that when they lost their cell phone it would result in a sort of -bereavement]. This did happen because many people are afraid to leave home without it, and feel uncomfortable when others peruse their mobile menus or messages. So, most adolescents carry their cell phones with them all the time, many keep it under their pillows or on their side table at night.<sup>8</sup>

The mobile phones can help students in studies but only if they use them wisely. Most of the students become additive to mobile phones and are found playing games, chatting with their friends and watching movies and other stuff. If students are busy keeping their eyes on their mobile phones at all times they won't get time for studying which would lead to poor grades.<sup>9</sup>

There is high risk of accident if you are talking on the mobile phone and driving as you are giving your half attention to the mobile call and are having half attention on the road. Research studies have also claimed that mobile phones have a negative impact on health of an individual. If you are using mobile phone for long hours daily it might lead to serious health issues. Many people are not aware of the harmful effects of radiofrequency waves (RF) and their role in cancer and other serious risks. Most mobile operators use from radiofrequency waves in the range up 300 MHz to 3 GHz that can be harmful for human health.<sup>10</sup>

However, they could lead to increased body temperature, especially in the head and neck, which have a low threshold dose and increases the probability of injury if there is long-term exposure to these waves. The International Commission of Non Ionization Radiation Protection (ICNIRP) reports show that people who use cell phones more than 50 minutes a day face early dementia or other thermal damage due to the burning of glucose in the brain.<sup>11</sup>

## Objectives

The objectives of the study is

- To assess the pre-test level of knowledge regarding impact of mobile phone dependency on health and academics among adolescents in experimental and control group.
- To develop and administer self instructional module (SIM) on knowledge regarding impact of mobile phone dependency on health and academics among adolescents in experimental group.
- To assess the post-test level of knowledge on impact of mobile phone dependency on health and academics among adolescents in experimental and control group after administering self instructional module (SIM).
- To assess the effectiveness of self instructional module (SIM) on impact of mobile phone dependency on health and academics among adolescents in experimental group.

- To find out the association between the pre-test level of knowledge regarding impact of mobile phone dependency on health and academics among adolescents with selected socio demographic variables in experimental and control group.

## Hypothesis

H01. There will be significant difference between pre-test and post-test knowledge score regarding impact of mobile phone on health and academics among adolescent.

H02. There will be significant association between pre-test knowledge scores regarding impact of mobile phone on health and academics among adolescent with selected demographic variables.

## Materials and Methods

“A Quasi Experimental study Assess Effectiveness of Self Instructional Module (SIM) on Knowledge regarding Impact of Mobile Phone Dependency On Health and Academics Among Adolescents Aged Between 13-18 years Studying In Selected Schools, Of District Hisar, Haryana”. The conceptual framework selected for this study was based on Roy's adaptation model (input, control process, effector, output) developed by Roy. Methodology is the most important part of the study which forms blue print for study; an evaluative research approach was used. The quasi experimental research design used in the study. The data collection tool was used in the study is self structured knowledge questionnaire and the reliability of the tool was established by the split half method that is  $r= 0.808$  so the tool was reliable and feasible for the study and validated by the research committee of Maharaja Agrasen College of Nursing and by experts suggestions. The permission was obtained from the ethical committee of institution through Principal, MACON Agroha. A pilot study was conducted on 10% sample size from 22/02/2020 to 29/02/2020 to assess the availability and feasibility of the study. A written permission was taken from the Principles of selected school of District Hisar, Haryana to collect data for the study and written information consent was also taken from participant of the study for the willingness. The study was conducted in the month of march first week 02/03/2020 to 09/03/2020. The data collected were analyzed by using both descriptive and inferential statistics, i.e., mean, median, mode, standard deviation, percentage, frequency distribution, chi-square, paired' test and unpaired  $t'$  test.

## Results

Section 1: Description of the Demographic Variables.

**Table 4.1. Frequency Distribution of Demographic variables of adolescent under 13**

SECTION-1 Socio-Demographic Performa		Experimental f(%)	Control f(%)	Experimental (N=6)	Control (N=6)
Age	13-14 years	20%	37%	6	11
	15-16 years	57%	40%	17	12
	17-18 years	23%	23%	7	7
Gender	Boys	63%	40%	19	12
	Girls	37%	60%	11	18
Education Level	10th standard	60%	33%	18	10
	11th standard	40%	40%	12	12
	12th standard	0%	27%	0	8
Residence Area	Rural	70%	97%	21	29
	Urban	30%	3%	9	1
No. of Mobile Phone using	One	70%	43%	21	13
	Two	20%	43%	6	13
	More than 2	10%	13%	3	4
	No one	0%	0%	0	0
Years of Mobile Phone using	1 year	47%	13%	14	4
	2 years	17%	40%	5	12
	3 years	13%	17%	4	5
	More than 3 years	23%	30%	7	9
Reason for Mobile Phone using	Playing game	17%	23%	5	7
	Listening music	17%	23%	5	7
	For study purposes	40%	43%	12	13
	Using social networking site	27%	10%	8	3
Type of Family	Joint Family	27%	63%	8	19
	Nuclear Family	57%	33%	17	10
	Extended Family	17%	3%	5	1
Family Income	Less than Rs. 21,000	73%	97%	22	29
	Rs. 21,000 – 25,000	3%	3%	1	1
	Rs. 26,000 - 30,000	10%	0%	3	0
	Above 30,000	13%	0%	4	0

Source of Information	Family and friends	43%	63%	13	19
	News paper	30%	3%	9	1
	Mass media	23%	27%	7	8
	Networking	3%	7%	1	2

This table shows the frequency percentage distribution of sample according to socio demographic variables. As above table shows, the large number students belong to 15-16 years 17(57%) of experimental group and 12(40%) of control group, 17-18 years – 18 years.

7(23%) of experimental group and 7(23%) of control group, 13-14 years 6(20%) of experimental group and 11(37%) of control group. Out of them 19(63%) were boys and 11(37%) were girls in experimental and 12(40%) were boys and 18(60%) were girls in control group. Also large number 18(60%) students were belongs to 10<sup>th</sup> class, 12(40%) belongs to 11<sup>th</sup> class in experimental group and 12 (40%) belongs to 11<sup>th</sup> class, 10(33%) belongs to 10<sup>th</sup> class and 8(27%) belongs to 12<sup>th</sup> class in control group. According to residence most of students 21(70%) belongs to rural area and 9(30%) belongs to urban area in experimental group and 29(97%) belongs to rural area and 1(3%) belongs to urban area in control group. Large number of students 21(70%) have one mobile phone, 6(20%) have two mobile phone, 3(10%) have more than 2 mobile phone in experimental group and 13(43%) have one mobile phone, 13(43%) have two mobile phone, 4(13%) have more than two mobile phone in control group. Large number of students 14(47%) using mobile phone from one year, 7(23%) using mobile phone more than three years, 5(17%) using mobile phone from two years, 4(13%) using mobile phone from three years in experimental group and 12(40%) using mobile phone from

two years, 9(30%) using mobile phone more than 3 years, 5(17%) using mobile phone from three years, 4(13%) using mobile phone from one year in control group. Large number of students was using mobile phone for study purpose 12(40%), using social networking site 8(27%), playing games and listening music was 5(17%) in experimental group and using mobile phone for study purpose was 13(43%), playing games and listening music was 7(23%) and for using social networking site was 3(10%) in controlled group. According to type of family most of student belongs to nuclear family 17(57%), 8(27%) belongs to joint family, 5(17%) belongs to extended family in experimental group and 19(63%) belongs to joint family, 10(33%) belongs to nuclear family, 1(3%) belongs to extended family in controlled group. Large number has monthly family income less than Rs. 21,000 were 22(73%), above Rs. 30,000 were 4(13%), Rs. 26,000 – 30,000 were 3(10%), Rs. 21,000 – 25,000

were 1(3%) in experimental group and large number of students has family income less than Rs. 21,000 were 29(97%), Rs. 21,000 – 25,000 were 1(3%) in controlled group. According to source of information 13(43%) got from family and friends where as 9(30%) from news paper, 7 (23%) from mass media, 1(3%) from networking site in experimental group and 19(63%) students got information from family and friends,

8(27%) got through mass media, 2(7%) got from networking site and 1(3%) got from news paper in controlled group.

## Section 2: Description of Frequency Percentage and Descriptive Statistic of Pre Test Knowledge Score.

**Table 4.2. Showing pre-test knowledge score of adolescent regarding impact of mobile dependency on health and academic**

[N=60]

CRITERIA MEASURE OF KNOWLEDGE SCORE		
Category Score	Frequency percentage	
	Pre Experimental	Pre Control
Adequate (21-30)	2(6.7%)	3(10%)
Moderate (11-20)	18(60%)	15(50%)
Inadequate (0-10)	10(33.3%)	12(40%)

Maximum=30      Minimum=0

The above Table depicts that 2(6.7%) of adolescent have adequate knowledge about impact of mobile phone dependency on health and academics, 18(60%) have moderate knowledge score and 10(33.3%) have

inadequate knowledge score in experimental group and 3(10%) have adequate knowledge score, 15(50%) have moderate and 12(40%) have inadequate knowledge score in controlled group.

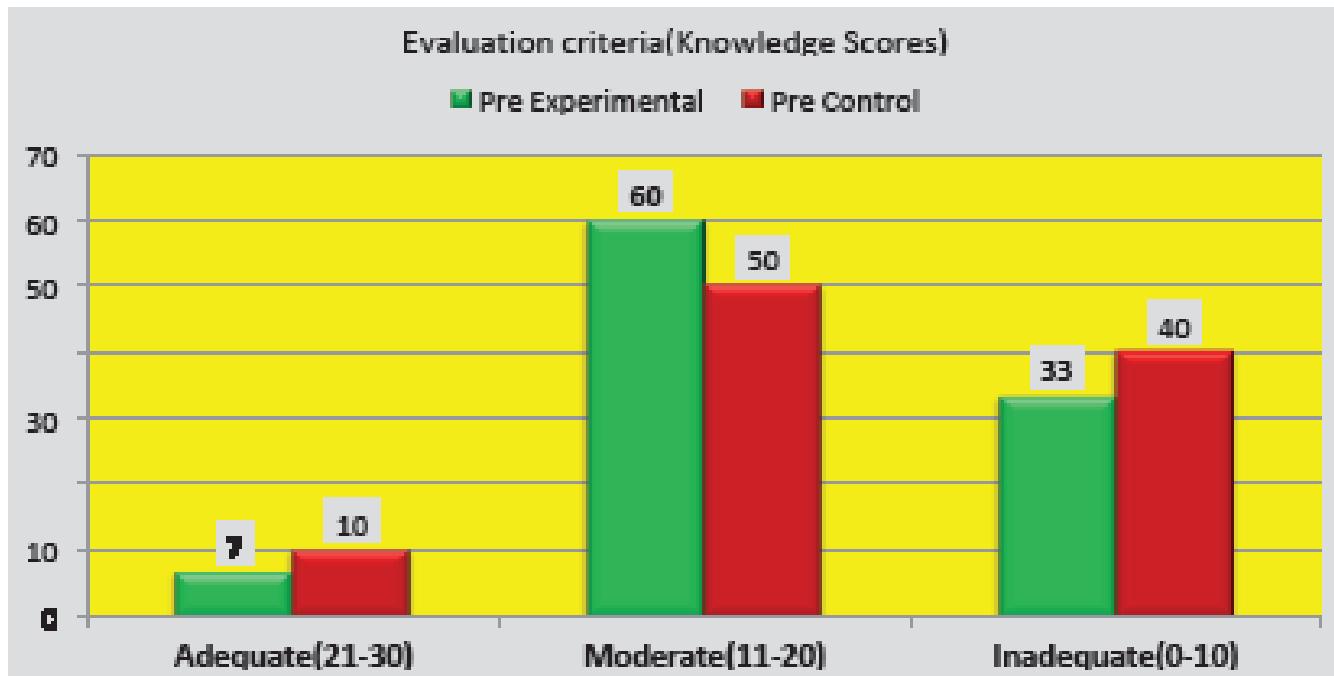


Figure 4.1.Level of Pre Test knowledge score

Table 4.3.Descriptive statistics of Pre Test knowledge score

Descriptive statistics		Mean	S.D.	Median	Maximum	Minimum	Range	Mean%
Pre Test Score	Experimental group	13.80	4.73	15	22	4	18	46.00
	Controlled group	13.27	5.22	15	22	5	17	44.22

Maximum= 30 Minimum=0

Above table, it is observed that the subject has moderate knowledge about impact of mobile phone dependency on health and academics. The mean of pre test knowledge score 13.80, S.D. 4.73, median 15, range 18, mean% 46.00 and maximum score was 22 and minimum score was 4

of experimental group. The mean of pre test knowledge score was 13.27, S.D. 5.22, median 15, range 17, mean% 44.22, maximum score was 22, minimum score was 5 of controlled group.

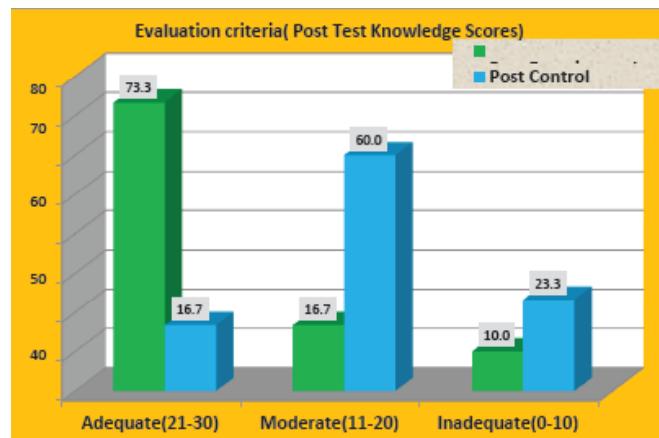
### Section 3: Description of Frequency Percentage and Descriptive Statistic of Post Test Knowledge Score.

Table 4.4.Showing Post Test knowledge score

CRITERIA MEASURE OF KNOWLEDGE SCORE		
Category Score	Frequency percentage	
	Post Experimental	Post Control
Adequate (21-30)	22(73.3%)	5(16.7%)
Moderate (11-20)	5(16.7%)	18(60%)
Inadequate (0-10)	3(10%)	7(23.3%)

The above Table depicts that 22(73.3) of students have adequate knowledge regarding impact of mobile phone dependency on health and academics, 5(16.7) have moderate knowledge, 3(10%) have inadequate knowledge of

experimental group and 5(16.7%) have adequate knowledge, 18(60%) have moderate knowledge score and 7(23.3%) have inadequate knowledge score about impact of mobile phone dependency on health and academics of controlled group.



**Figure 1.Level of Post Test knowledge score**

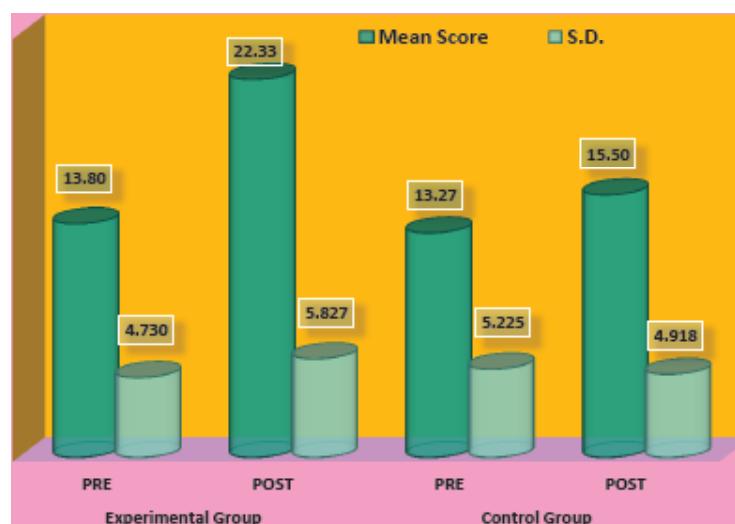
**Table 4.5.Descriptive statistics of Post Test knowledge score**

Descriptive statistics		Mean	S.D.	Median	Maximum	Minimum	Range	Mean%
Post Test Score	Experimental group	22.33	5.827	23	28	7	21	74.44
	Controlled group	15.50	4.918	16.5	24	8	16	51.67

Maximum =30 Minimum=0

Above table, it is observed that the students of experimental group have adequate knowledge regarding impact of mobile phone dependency on health and academics. The mean of post test knowledge score was 22.33; S.D. was 5.827, median 23, range 21, mean% 74.44, maximum score of

post test knowledge score was 28 and minimum score was 7. For the students of controlled group the mean of post test knowledge score was 15.50; S.D. was 4.918, median 16.5, range 16, mean% 51.67, maximum score of post test knowledge score was 24 and minimum score was 8.



**Figure 2.Comparison of level of knowledge score of pre and post test of experimental and control groups**

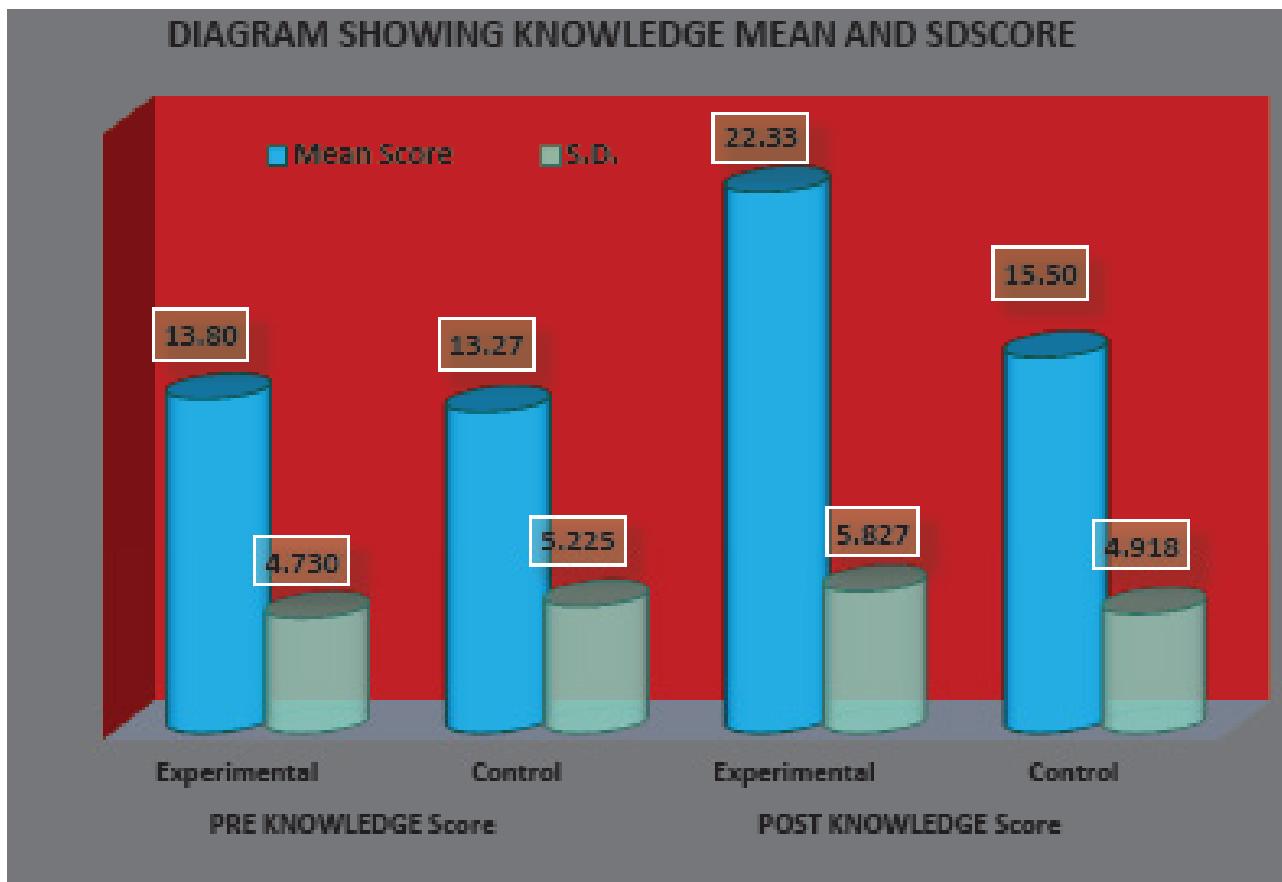
**Table 4.7. Description of descriptive statistics of pre and post test of experimental and control group.**

	KNOWLEDGE Score					Paired T Test				
	Pretest		Posttest							
Group	N	Mean	SD	Mean	SD	df	T	Result		
Experimental Group	30	13.80	4.730	22.33	5.827	29	7.661	Significant		
Control Group	30	13.267	5.225	15.50	4.918	29	2.026	Non Significant		
Unpaired T Test	df	58		df	58					
	T	0.414		T	4.908					
	Result	Non Significant		Result	Significant					

Maximum = 30      Minimum = 0

The above table shows that the result was significant. In pre test of experimental group knowledge score mean was 13.80, S.D. 4.730 and control group knowledge score mean was 13.267, S.D. 5.225. In post test of experimental group knowledge score mean was 22.33, S.D. 5.827 and control group knowledge score mean was 15.50, S.D. 4.918. The above table shown that the post test score is higher than pre

test score and the mean difference between experimental group pre test and post test was 8.53 and between control group pre test and post test was 2.24 so, the mean difference of experimental group was higher shows the effectiveness of self instructional module in the form of booklet. The paired T test value was 7.661 and the result was significant.



**Figure 4.3. Comparison within the group with Paired T Test**

## Section 5: Association Between Pre Test Knowledge Score With Demographic Variables.

This section deals with the findings related to the association between pre test knowledge score and selected demographic

variables. The chi-square test was used to determine the association between the pre test knowledge score levels and selected demographic variables.

**Table 4.8.Table showing association of pre test knowledge score and demographic variables.**

Demographic Variables		Association of KNOWLEDGE Score with Demographic variables (Pre TESTKNOWLEDGE) Experimental Group							
Variables	Opts	Adequate	Moderate	Inadequate	Chi Test	P Value	df	Table Value	Result
Age	13-14 years	1	1	4	7.831	0.098	4	9.488	Not Significant
	15-16 years	0	12	5					
	17-18 years	1	5	1					
Gender	Boys	0	11	8	4.689	0.096	2	5.991	Not Significant
	Girls	2	7	2					
Education Level	10th standard	1	10	7	0.648	0.723	2	5.991	Not Significant
	11th standard	1	8	3					
	12th standard	0	0	0					
Residence Area	Rural	2	12	7	0.952	0.621	2	5.991	Not Significant
No. of Mobile Phone using	One	2	12	7	3.286	0.511	4	9.488	Not Significant
	Two	0	3	3					
	More than 2	0	3	0					
	No one	0	0	0					
Years of Mobile Phone using	1 year	2	7	5	7.576	0.271	6	12.592	Not Significant
	2 years	0	4	1					
	3 years	0	1	3					
	More than 3 years	0	6	1					
Reason for Mobile Phone using	Playing game	1	2	2	3.306	0.770	6	12.592	Not Significant
	Listening music	0	4	1					
	For study purpose	1	7	4					
	Using social networking site	0	5	3					
Type of Family	Joint Family	0	7	1	4.434	0.350	4	9.488	Not Significant
	Nuclear Family	2	8	7					
	Extended Family	0	3	2					

Family Income	Less than Rs. 21,000	1	12	9	5.025	0.541	6	12.592	Not Significant
	Rs. 21,000 – 25,000	0	1	0					
	Rs. 26,000 - 30,000	0	2	1					
	Above 30,000	1	3	0					
Source of Information	Family and friends	2	8	3	9.231	0.161	6	12.592	Not Significant
	News paper	0	3	6					
	Mass media	0	6	1					
	Networking	0	1	0					

Table 4.8 shows that the association between the level of pre test knowledge score and socio demographic variable. Based on the 5<sup>th</sup> objectives used to Chi-square test used to associate the level of knowledge and selected demographic variables. The Chi-square value shows that there is no significance association between the level of scores and

otherdemographic variables (Age, Gender, Education Level, Residence Area, No. of Mobile Phone Used, Years of Mobile Phone Using, Reason for Mobile Phone Using, Type of Family, Family Income, Source of Information) The calculated chi-square values were less than the table value at the 0.05 level of significance.

**Table 4.9.Table Showing Association of pre test knowledge Scores and– 18 years.**

Demographic Variables		Association of KNOWLEDGE Score with Demographic variables (Pre Test KNOWLEDGE Control Group)							
Variables	Opts	Adequate	Moderate	Inadequate	Chi Test	P Value	df	Table Value	Result
Age	13-14 years	2	5	4	2.747	0.601	4	9.488	Not Significant
	15-16 years	0	6	6					
	17-18 years	1	4	2					
Gender	Boys	0	5	7	3.958	0.138	2	5.991	Not Significant
	Girls	3	10	5					
Education Level	10th standard	2	4	4	3.450	0.486	4	9.488	Not Significant
	11th standard	0	6	6					
	12th standard	1	5	2					
Residence Area	Rural	3	14	12	1.034	0.596	2	5.991	Not Significant
	Urban	0	1	0					
No. of Mobile Phone using	One	2	8	3	3.192	0.526	4	9.488	Not Significant
	Two	1	5	7					
	More than 2	0	2	2					
	No one	0	0	0					

Years of Mobile Phone using	1 year	1	2	1	6.900	0.3302	6	12.5915872	Not Significant
	2 years	2	7	3					
	3 years	0	1	4					
	More than 3 years	0	5	4					
Reason for Mobile Phone using	Playing game	1	4	2	6.407	0.379	6	12.592	Not Significant
	Listening music	0	4	3					
	For study purposes	2	7	4					
	Using social networking site	0	0	3					
Type of Family	Joint Family	2	11	6	2.529	0.639	4	9.488	Not Significant
	Nuclear Family	1	4	5					
	Extended Family	0	0	1					
Family Income	Less than Rs. 21,000	3	15	11	1.552	0.460	2	5.991	Not Significant
	Rs. 21,000 – 25,000	0	0	1					
	Rs. 26,000 - 30,000	0	0	0					
	Above 30,000	0	0	0					
Source of Information	Family and friends	2	11	6	2.829	0.830	6	12.592	Not Significant
	News paper	0	0	1					
	Mass media	1	3	4					
	Networking	0	1	1					

Table 4.9 shows that the association between the level of score and socio demographic variable. Based on the 5<sup>th</sup> objectives used to Chi-square test used to associate the level of knowledge and selected demographic variables. The Chi-square value shows that there is no significance association between the level of scores and otherdemographic variables (Age, Gender, Education Level, Residence Area, No. of Mobile Phone Used, Years of Mobile Phone Using, Reason for Mobile Phone Using, Type of Family, Family Income, and Source of Information). The calculated chi-square values were less than the table value at the 0.05 level of significance.

## Discussion

The present study reveals that in experimental group the pre test knowledge score is 2(6.7%) of student have adequate knowledge, 18(60%) have moderate, 10(33.3%) have inadequate knowledge score and in post test 22(73.3%) of students have adequate knowledge, 5(16.6%) have moderate knowledge, 3(10%) have inadequate knowledge score so the difference of pst test knowledge score shows the effectiveness of self instructional module.

In controlled group the pre test knowledge score is 3(10%) of students have adequate knowledge, 15(50%) have

moderate, 12(40%) have inadequate knowledge score and in post test 5(16.7%) have adequate knowledge, 18(60%) have moderate knowledge and 7(23.3%) have inadequate knowledge score so post test knowledge more in control group also but experimental group post test score is higher than the control group so it shows the effectiveness of self instruction module in the form of booklet.

Table No. 4.7 shows that the result was significant. In pre test of experimental group knowledge score mean was 13.80, S.D. 4.730 and control group knowledge score mean was 13.267, S.D. 5.225. In post test of experimental group knowledge score mean was 22.33, S.D. 5.827 and control group knowledge score mean was 15.50, S.D. 4.918. The above table shown that the post test score is higher than pre test score and the mean difference between experimental group pre test and post test was 8.53 and between control group pre test and post test was 2.24 so, the mean difference of experimental group was higher shows the effectiveness of self instructional module in the form of booklet. The paired T test value was 7.661 and the result was significant.

Over last 15 years there has been tremendous growth in use of mobile phone because of usefulness in communication and interaction and the sphere of work and private life, beside communication, mobile phone have been used for other purpose like playing game and listening song and using internet for social network its helps to reduce the loneliness and making new friends and resultantly mobile phone have parcel part of life mobile phone users. 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 regarding the hazards of mobile phones as they use this very frequently.

## Conclusion

In today's world mobile phone is not essential but has become mandatory and demands increased usage of time, but the students become more unknowingly addicted to it, without realizing the adverse effects on their health. Hence enhancing knowledge regarding internet addiction disorder will help them to consciously reduce the effects.

## Limitations

- The size of the sample was 60; hence it was difficult to make broad generalizations.
- Limited only to the adolescents of Govt. School students present during the period of data collection.
- Busy schedule of school students made it difficult for them to devote time to fill the questionnaires.

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