

To Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Health Hazards of Smart Phone Addiction Among School Going Students at Selected Schools of Bagalkot

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Abstract

Original Research Article

Background: smart phone addiction is a behavioral addiction characterized by excessive or compulsive use of smart phones, often leading to negative impacts on daily life, relationships, and mental/physical health. **Methodology:** A pre-experimental design with one group pre – test, post – test without control group design was used to assess Effectiveness of Structured Teaching Programmed programmed on knowledge regarding Health hazards of smart phone addiction among school going students at selected schools of Bagalkot. Simple random technique used to select 100 school going students. Data were analyzed by using Descriptive and Inferential statistics. **Results:** The overall findings of the study revealed that the school going students gain more knowledge in post-test score (17.7 ± 1.73) which was 59.0 % of the total score and pre-test knowledge score (7.96 ± 1.9) which was 26.5 % of the total score. The Effectiveness of STP on knowledge regarding health hazards of smart phone addiction was of 9.74 with SD ± 0.25 which was 32.5 % of total score. There was significant association between pretest knowledge scores of school going students with their socio demographic variables, Type of family ($\chi^2=0.031611$, $P=0.05$), Hence, the Hypothesis is accepted for type of family and is significance and rejected for other socio demographic variables and there was no significant association between knowledge scores and other socio demographic variables. **Conclusion:** Finally, the study concluded that the structured teaching programme was significantly more effective in improving the knowledge level of the school going students regarding the health hazards of smart phone addiction.

Keywords: Assess the effectiveness of STP on knowledge regarding health hazards of smart phone addiction in school going students.

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INTRODUCTION

In 1973, Motorola engineer Dr. Martin Cooper and his team created the first working mobile phone prototype. Dr. Cooper made the world's first cell phone call in New York City, calling Joel Engel, a rival researcher from Bell Labs.[1] A smart phone is a modern mobile phone equipped with advanced computing capabilities.[2] In recent years, smart phones have advanced quickly and become more affordable, resulting in their widespread use around the world. Although experts still debate whether excessive phone use should be labeled an "addiction," it is evident that overusing smart phones can lead to addictive behaviors and has become a major global concern.[3]

The presence of cell phones in classrooms has become a major topic of discussion in the media,

particularly as conversations about technology's place in education increase. Many reports highlight the difficulties schools and teachers face in handling this issue, as smartphones have become a regular part of most students' lives.[4]

Using smartphones too much or in unhealthy ways can cause various physical and health issues, including sleep problems, eye fatigue, and muscle or joint pain. It can also raise the chances of traffic accidents and other serious injuries. Besides the physical impact, smartphone addiction is connected to mental, behavioral, and social difficulties, such as poor focus, unhealthy habits, lower performance at school or work, and less in-person interaction. Due to these concerns, this study aims to explore how common smart phone addiction is, how it

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relates to psychological distress, and what factors contribute to it among university students in Jordan.[5]

A descriptive cross-sectional study was conducted by D Yildiz on 2022 in Turkish, aimed to investigate the associations between excessive screen time and psychosocial well-being in a sample of Turkish preschool children. Sample size 220 by using the Random sample selection. Data was collected by the Questionnaire method. The study results that Emotional symptoms, conduct problems, peer relationship problems, and total difficulties scores were significantly higher in the children with excessive screen time, while the hyperactivity-inattention and pro social scores were not different between the low and excessive screen time groups. The study concluded that preschool children with excessive screen time were significantly more likely to have poor psychosocial well-being. Preschool children with behavioral problems should be evaluated for excessive screen time.[6]

The research revealed that obesity, inadequate sleep, and smart phone addiction were each independently associated with high blood pressure. Among the surveyed junior high school students in China, the rate of hypertension was found to be quite high. These results suggest that smart phone addiction could be an emerging risk factor for increased blood pressure in adolescents.[7]

Insufficient sleep has been associated with an increased likelihood of developing depression, diabetes, and heart-related diseases.[8]

A longitudinal study was conducted in Japan by Hosokawa on 2018. The objective of the study is to assess the time that children spend using digital devices is increasing rapidly with the development of new portable and instantly accessible technology, such as smart phones and digital tablet. Sample size 1642 by using the Likert scale. Data was collected by using the self-report questionnaires. The result showed that regarding mobile device use and emotional/behavioral problems and participant characteristics. Children's average age was 6.88 years ($SD = 0.35$), and 51.2% were males ($n = 841$) and 48.8% females ($n = 801$). The study concluded that Excessive use of mobile devices, including smart phones and tablets, might interface with children's development in relation to social adjustment.[9]

MATERIALS AND METHOD

The study employed a pre-experimental design, specifically a one-group pre-test post-test design without a control group, to assess the effectiveness of STP on knowledge regarding health hazards of smart phone addiction among school going students. The participants were 100 School going students at selected schools of Bagalkot. Data collection involved a structured

questionnaire, and the results were analyzed using both descriptive and inferential statistical methods.

Study Design: The study design adopted for this study was pre-experimental design.

Setting of the Study:

Setting' is the Physical location and conditions in which data collection will occur. The present study is conducted in Shri Kalidasa international public school vidyagiri Bagalkot, BIPS international school vidyagiri Bagalkot, B.V.V.S Primary and high school Bagalkot, Dr. A.P.J Abdul kalam residential school Navanagar Bagalkot.

PARTICIPANTS:

A sample consists of subject of units that comprise the population for the present study. In this study sample size is ($n=100$) School going students.

INSTUMENTS:

The study was conducted using a self-structured questionnaires with items related to socio demographic data of school going students and knowledge questionnaires related to assess effectiveness of STP on knowledge regarding health hazards of smart phone addiction among school going students.

Description of data collection instruments

Part I: Description of respondents according to their socio demographic characteristics.

Part II: Assessment of knowledge level of school going students regarding health hazards of smart phone addiction.

Part III: Assessment of the effectiveness of Structured Teaching Programme on knowledge regarding health hazards of smart phone addiction among school going students at selected schools of Bagalkot.

Section I: Comparison of pre- test and post-test level of knowledge scores of school going students.

Section II: Effectiveness of STP on knowledge scores regarding health hazards of smart phone addiction among school going students.

Part IV: Association between pre-test level of knowledge scores of school going students regarding health hazards of smart phone addiction with their selected socio-demographic variables.

Data Collection Procedures: The main study was conducted for a period of 4 weeks between 4/7/2025 to 5/0/2025 at selected schools of Bagalkot. Data was collected from school going students by explaining the purpose of this study. Written consent was obtained from the study participants. According to the convenience of school going students.

Variables of the Study:

Variables are a content that has measurable changing attributes. Variables are qualities, properties, or

characteristics of persons, things, or situation that change or vary.

The variables studied in the present study are;

Independent variable: Structured Teaching Programme on knowledge regarding the health hazards of smart phone addiction.

Dependent variable: Knowledge regarding health hazards of smart phone addiction among school going students.

Socio demographic variable: Socio demographic characteristics of school going students such as Age, Gender, Educational status, Occupational status, Mother education, Mother occupation, Father education, Father occupation, Type of family, Family size, Area of residence, Standard of living and Source of information.

STATISTICAL ANALYSIS

The data was analyzed using SPSS 18 statistical package. Numerical data obtained from the sample, was organized and summarized with the help of descriptive statistics like percentage mean, and standard deviation. Association between posttest knowledge score of school going students at attending the selected schools of Bagalkot and Chi square test were used to analyze

Association between pre-test level of knowledge scores of school going students regarding health hazards of smart phone addiction with their selected socio-demographic variables.

Ethical Clearance: A certificate of ethical permission was obtained from ethical committee of the institution and written consent was taken from each participant.

RESULTS

Part 01: Description of Socio- demographic variables

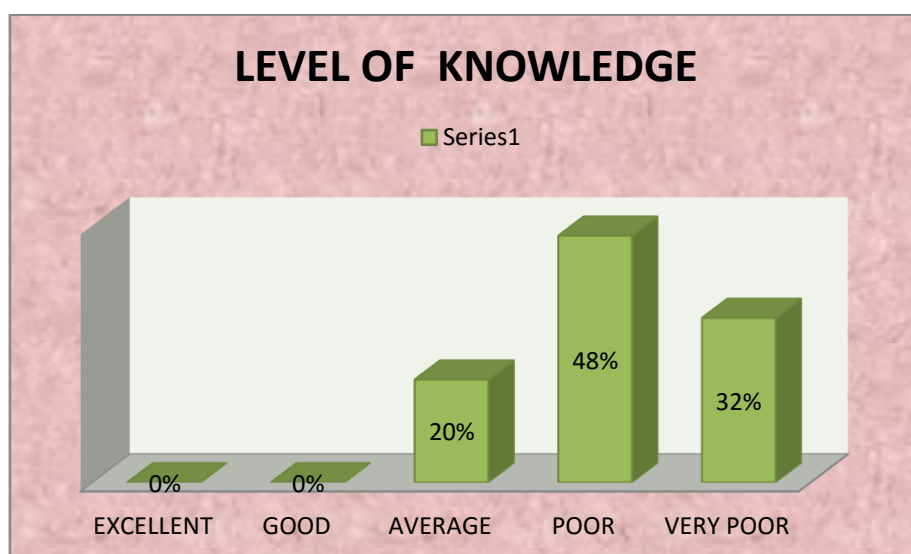
Table 01: Percentage wise distribution of School going students according to their socio demographic characteristics N=100

	Socio demographic variables	No of respondents	Percentage (%)
01	Age in Years		
A	6-8 Years	10	10%
B	9-11 Years	38	38%
C	12-14 Years	52	52%
02	Gender		
A	Male	48	48%
B	Female	52	52%
03	Type of Family		
A	Nuclear	78	78%
B	Joint	22	22%
C	Extended	00	00
d	Single Parent	00	00
04	Occupation of Mother		
A	Private employee	16	16%
B	Government employee	20	20%
C	Home	46	46%
d	Other	18	18%
05	Educational status of the mother		
2''''''	Primary Education	64	64%
B	Secondary Education	18	18%
C	Degree	12	12%
D	Other	06	6%
06	Occupation of Father		
A	Private Employee	38	38%
B	Government Employee	22	22%
C	Former	18	18%
D	Other Work	22	22%
07	Educational status of the Father		
A	Primary Education	22	22%
B	Secondary Education	18	18%
C	Degree	37	37%
D	Illiterate	23	23%

08	Family monthly income		
A	Below 10,000/-	20	20%
B	10,000-20,000	45	45%
C	20,000-30,000	24	24%
D	More than 30,000	11	11%
09	Residential Area		
A	Rural	25	25%
B	Urban	65	65%
C	Semi-urban	08	08%
D	Slum	02	02%
10	Standard of studying		
A	4 th standard	00	00
B	5 th standard	00	00
C	6 th standard	46	46%
D	7 th standard	54	54%

Table 02: Percentage wise distribution of study School going students according to their level of knowledge in pre-test n = 100

Test	Level Of Knowledge	Number	Frequency
PRE TEST	Excellent	00	0%
	Good	00	0%
	Average	20	20%
	Poor	48	48%
	Very poor	32	32%
	TOTAL	100	100



Graph 01: Percentage wise distribution of study School going students according to their level of knowledge in pre-test

Table 02 shows Percentage distribution of school going students in pre-test reveals that out of 100 school going students' highest percentage 48% of school going students were having poor knowledge, followed by 32% subjects with very poor knowledge, lowest percentage 20% of having average knowledge and 0%

had a good and excellent knowledge regarding good health hazards of smart phone addiction. It shows that majority of school going students had poor knowledge in the pre-test regarding health hazards of smart phone addiction.

Table 03: Percentage wise distribution of study School going students according to their level of knowledge in post-test n = 100

Test	Level O Knowledge	Number	Percentage
POST TEST	Excellent	23	23%
	Good	25	25%
	Average	49	49%
	Poor	03	03%
	Very poor	00	00%
	TOTAL	100	100

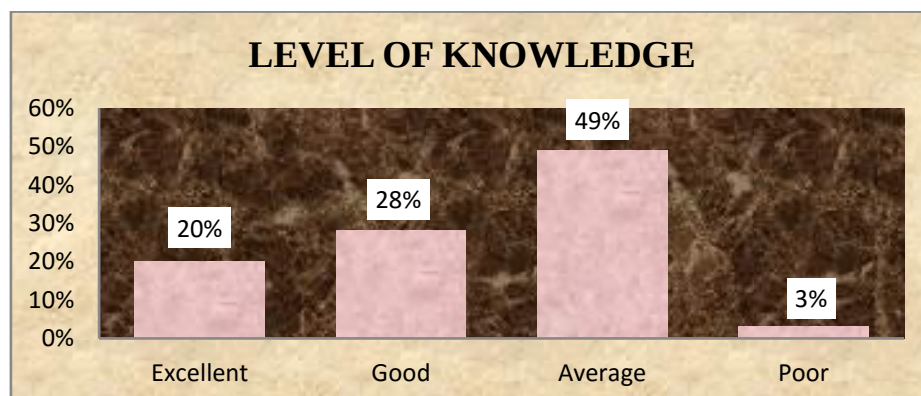
**Graph 02: Percentage wise distribution of study School going students according to their level of knowledge in post-test**

Table 04 shows Percentage distribution of school going students in post-test reveals that out of 100 school going students' highest percentage 49% of school going students were having average knowledge, followed by 25% subjects with good knowledge, 23% of school going students were having excellent knowledge,

lowest percentage 3% of having poor knowledge and 0% had very poor knowledge regarding health hazards of smart phone addiction among school going students. It shows that majority of school going students had average knowledge in the post-test regarding health hazards of smart phone addiction

Table 05: Mean, S.D and Mean percentage of the knowledge scores in pre-test and post-test n = 100

Level of knowledge	Maximum scores	Pre test		Post test		Effectiveness (O2-O1)	
		Mean±SD	Mean%	Mean±SD	Mean%	Mean± SD	Mean%
Knowledge regarding Health hazards of Smart phone addiction.	30	7.96±1.98	26.5%	17.7±1.73	59.0%	9.74±0.25	32.5%

The Comparison of mean and standard deviation of the knowledge scores of pre-tests and post-test reveals an increase in the mean knowledge scores of the school going students after STP.

The overall findings revealed that the school going students gain more knowledge in post-test score (17.7±1.73) which was 59.0 % of total score was more

when compared to be the pre-test knowledge score (7.96± 1.9) which was 26.5 % of the total score. The effectiveness of STP on Health hazards of smart phone addiction was of 9.74 with SD ± 0.25 which was 32.5 % of total score. Hence it indicates that the STP was effectiveness in enhancing the knowledge of school going students.

Table 06: Significance difference between the pre-test and post-test knowledge scores of Schools going students n = 100

Test	Mean	Mean Difference	Standard Difference	Paired T Test	Table Value
Pretest (O ₁)	7.96	9.74	2.57	37.90	1.96
Post test (O ₂)	17.7				

As the calculated t value (37.90) was much higher than 't' value (1.96) for Degree of Freedom 99 and at 5% level of significance, the Hypothesis is accepted. Finding revealing the presence of significant difference between pre-test and post-test knowledge scores, hence the Structured Teaching Programme is proved to be effective (Table 6.6).

H₁: There is a significant difference between the pre-test knowledge and post-test knowledge scores of school going students regarding Health hazards of smart phone addiction.

Table 07: Percentage wise Association between pre-test knowledge scores with their selected socio demographic variables n=3

Sl no	Socio demographic variables	Df	Chi square test	Table value	Level of significance	Association
1	Age in years	1	0.3052	0.989475	0.05	Not significant
2	Gender	1	1.4107	0.703019	0.05	Not significant
3	Type of family	1	8.8319	0.031611	0.05	Significant
4	Occupation of mother	1	5.29	0.506194	0.05	Not significant
5	Educational status of mother	1	0.5719	0.902838	0.05	Not significant
6	Occupation of father	1	0.3139	0.957393	0.05	Not significant
7	Educational status of father	1	0.0883	0.956817	0.05	Not significant
8	Family monthly income	1	0.0444	0.978059	0.05	Not significant
9	Residential area	1	0.6051	0.895255	0.05	Not significant
10	Standard of studying	1	3.4606	0.325911	0.05	Not significant

Table 6.7 shows that, there was significant association between pre test knowledge scores of school going students with their socio demographic variables, Type of family ($\chi^2=0.031611$, $P=0.05$). Hence, the Hypothesis is accepted for type of family and is significance and rejected for other socio demographic variables and there was no significant association between knowledge scores and other socio demographic variables.

Hence, **H₂:** state is accepted for only Type of family of school going students and rejected other socio demographic variables.

DISCUSSION

This discusses the major findings of the study and reviews them in relation to findings from the results of the studies. The present study was conducted to find out the effectiveness of structured teaching programme on knowledge regarding health hazards of smart phone addiction among school going students at selected schools of Bagalkot, in order to achieve the objectives of the study Pre-experimental design with one group pre – test, post – test without control group design was adopted in the study sample size is 100 school going students are selected with the help of non- probability convenient sampling technique.

The Percentage distribution of school going students in pre-test reveals that out of 100 school going students highest percentage 48% of school going students were having poor knowledge, followed by 32% subjects with very poor knowledge, lowest percentage 20% of having average knowledge and 0% had a good and excellent knowledge regarding good health hazards of smart phone addiction. It shows that majority of

school going students had poor knowledge in the pre-test regarding health hazards of smart phone addiction.

The Percentage distribution of school going students in post-test reveals that out of 100 school going students' highest percentage 49% of school going students were having average knowledge, followed by 25% subjects with good knowledge, 23% of school going students were having excellent knowledge, lowest percentage 3% of having poor knowledge and 0% had very poor knowledge regarding health hazards of smart phone addiction among school going students. It shows that majority of school going students had average knowledge in the post-test regarding health hazards of smart phone addiction.

The Comparison of mean and standard deviation of the knowledge scores of pre-tests and post-test reveals an increase in the mean knowledge scores of the school going students after STP.

The overall findings revealed that the school going students gain more knowledge in post-test score (17.7 ± 1.73) which was 59.0 % of total score was more when compared to be the pre-test knowledge score (7.96 ± 1.9) which was 26.5 % of the total score. The effectiveness of STP on Health hazards of smart phone addiction was of 9.74 with $SD \pm 0.25$ which was 32.5 % of total score. Hence it indicates that the STP was effectiveness in enhancing the knowledge of school going students.

A Quasi experimental study was conducted by Deeksha Sharma in shimla, Himachal Pradesh on 2022. The Objective of the study to assess the effectiveness of structured teaching programme on

knowledge regarding health hazards of mobile phone addiction among students. Sample size 100 students (50 for experimental group and 50 control group) by using the Non-probability Convenient Sampling Technique. Data collected by Questionnaire method. This study shows that the comparison within experimental group, mean post-test knowledge score 23.44 was significantly higher than the pre-test knowledge 16.58 as evident from 't' value 35.39 significant at 0.05 level of significance, the showed that, Structured Teaching Programme was effective in improving knowledge of students in experimental group. This study concluded that Authors strongly recommend undertaking health education and health awareness activities regarding the ill health effects of mobile phone usage in the community. (02 October 2022)

Hence, there was significant association between pretest knowledge scores of school going students with their socio demographic variables, Type of family ($\chi^2=0.031611$, $P=0.05$), Hence, the Hypothesis is accepted for type of family and is significance and rejected for other socio demographic variables and there was no significant association between knowledge scores and other socio demographic variables.

Hence, **H₂**: state is accepted for only Type of family of school going students and rejected other socio demographic variables.

LIMITATIONS:

The study is delimited to:

- The students are aged between 6 to 13 years.
- Sample size is 100 students of school.
- The students attending selected schools of Bagalkot.
- Structured teaching programme will be administered only once in school going students.

CONCLUSION

The research aimed to evaluate the impact of a Structured Teaching Program on understanding the health risks associated with smart phone addiction among school-going students. The findings offered valuable insights into the program's effectiveness in addressing this critical issue, providing a deeper understanding of its influence on students' awareness of smart phone addiction-related health hazards.

Declaration by Authors

Ethical Approval: Institutional ethical clearance has been approved.

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Conflict of Interest: The authors declare there is no conflict of interest.

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