A STUDY TO ASSESS THE EFFECTIVENESS OF INFORMATION EDUCATION AND COMMUNICTION ON KNOWLEDGE REGARDING HEALTH HAZARDS OF SMART PHONE USAGE AMONG SELECTED COLLEGE STUDENTS AT COIMBATORE

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ABSTRACT
A study aims to find out the adequate Knowledge regarding health hazards of smart phone usage among college students. Smart phone are one of advanced device that are almost used by every adolescent for maximum period of time the young generation with the age of 12-25 years is more incline to smart phone use as compare to the older generation. Adolescents age people are more flexible and susceptible the changing trends and style making them more technology dependent. The study design used was non experimental research design and samples for the study consisted of 30 selected nursing college students. An oral interview was conducted and questionnaire was used to collect information. After that Pre-test structured questionnaire was given to college students by purposive sampling technique. After seventh day post test was done among college students. The finding of the study was effective on in to the knowledge regarding health hazards of smart phone usage among selected college students.

KEYWORDS
Information education communication, Knowledge, Health hazards of smartphone and College students.

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INTRODUCTION
Adolescence is the life between childhood and adulthood, from ages 10-19 years. It is unique stage of human development and an important time for beginning the foundation of good health. Adolescents experience rapid physical, cognitive, psycho-social growth. This affects how they fall, think, make decisions and interact with the world around them WHO (2012). There are around 1.24 Crore boys and girls in the 10-19 age group and nearly 1.26 Crore youngsters in Tamilnadu state and

253 million adolescents are there in India (https:/www.mhm.gov.in).

A term adolescent comes from the Latin word "adolescere" which means to grow or to grow towards maturity. It emerges from the later childhood stage and merges into adulthood during which the child develops into man (or) women (2021). The fast growth of technology has developed device such as smart phones that the function does not limit only for messaging but this device allows long distance communication. Smart phone can be called as minicomputer as the features and functions provided are like computer in its mini form and its handy. The smart phone era began in 1993 with the introduction of Simon smart phone from international business machine. Smart phone is a mobile phone that has the ability of a computer. This device provides user with advance communication and computing ability than the traditional mobile phone which occupied with internet access, cameras with high quality and management tools. The capability of running features rich applications (apps) on smart phones made smart phone a more powerful device replacing many devices such as alarm clocks, calculator, laptop, GPS navigation and digital camera. (Miller 2012) Smart phone radio frequency radiation which connects them to cell towers that provide coverage the signal that smart phone emit is called EMF (electromagnetic frequency). This EMF covers other type of radiations, such as heat and microwaves, which are emitted on by products when smart phones are used. When we place our mobile phones close to our ears, the radio waves are passed on directly into our brains. This has a huge impact on our overall heath. According to WHO there is a strong link between smart phone use and increases risk of cancer and other harmful effects are stress, sleep loss, Accidents, Anxiety, vision problem, obesity, phobia, genotoxic effect.

STATEMENT OF THE PROBLEM

A study to assess the information education and communication on knowledge regarding health hazards of smart phone usage among selected college students at Coimbatore.

Objectives of the study

To assess the pre-test knowledge regarding health hazards of smart phone usage among college students.

To assess the effectiveness of information education communication regarding health hazards of smart phone usage among college students.

To determine the association between the information education and communication on knowledge regarding the health hazards of smart phone usage among selected college students with their selected demographic variables.

Hypothesis

There is significant difference between pretest and post test knowledge score regarding health hazards of smart phone usage among college students.

REVIEW OF LITERATURE

Ramu K *et al*, (2019) conducted a study to assess the effectiveness of knowledge regarding the hazards of using mobile phones among high school students in selected school at Bangalore, Karnataka. The sample selected at age group of 13-14 years. The study results revealed that students got information on hazards and side effects of mobile phones from friends 10(33.3%) most of the students 18(60%) where not having knowledge regarding the side effects of the mobile phone. The mean pre-test knowledge score was inadequate (70%). The mean post-test knowledge score was improved and it was found (70%). Arpith (2021), conducted a study on effectiveness of structural teaching method on knowledge regarding the health hazards of mobile phone usage to Kempe Gowda College of nursing, Bangalore. Data collected from 130 students using structured teaching method. The study result revealed that pre-test knowledge score was found to be 34.20% and post-test knowledge score was 66.55%. Enhancement in the mean percentage knowledge score was found to be significant at 5% level. (p<0.05) and remaining variables were not associated with their post-test level of knowledge.

Anu Varma, Shivani Thakur (2022)[1] conducted a study was pre experimental study to assess the effectiveness of video Assisted Teaching Programme on knowledge regarding health hazards of using

mobile phone among school going children. A quantitative research approach and pre-experimental research design was adopted to conduct study. The non-probability purposive sampling technique were used to select 60 school going children of District Kangra, Himachal Pradesh. A self structured knowledge questionnaire was used to assess knowledge score. The study result revealed that the mean pre-test knowledge score was 14.53 where 70% school going children were having moderately adequate knowledge, 25% were having in adequate knowledge and only 5% were having adequate knowledge. Whereas the mean post-test knowledge score was 20.77, where 55% having adequate knowledge, 43.33% were having moderately adequate knowledge, only 1.67% having inadequate knowledge. Hence, the post test knowledge score (20.77) was significantly higher than pre-test (14.53) and p<0.001 level of significance.

MATERIAL AND METHODS
The basic aim of this was evaluate the effectiveness of information, education, communication on knowledge regarding health hazards of smart phone usage among college students in Annai Meenakshi College of Nursing at Coimbatore. The study was conducted by using non probability convenient sampling technique. Samples were selected from college students in Annai Meenakshi College of Nursing. The sample size was 30. The structured self-administered questionnaire was used to assess the demographic variables among adolescents. The standardized Likert scale was used to assess the level of knowledge. The response was analyzed by using descriptive statistics and inferential statistics (paired t -test and chi square test) discussions on the findings were arranged based on the objectives of the study.

RESULTS AND DISCUSSION
The study revealed that during pre-test 0 adolescents had 0% adequate knowledge, 8 adolescents had 26.7% moderately adequate, 22 adolescents had 73.3% inadequate knowledge. During post-test 21 adolescents had 70% adequate knowledge, 9 adolescents had 30% moderately adequate, 0 adolescents had 0% in adequate knowledge. The pre-

test mean was 9.3 and standard deviation 1.71. During post-test the mean was 16.7 and standard deviation 1.62. The mean difference was -7.4. The obtained t value 4.17 was significant at $p < 0.05$ level. Thus, the stated hypothesis is accepted. The study revealed that video teaching method is effective in improving knowledge regarding health hazards of smart phone usage among college students. The study revealed that there is no significant association between selected demographic variables such as age, sex, joining of institution, parent education, parent occupation and place of living.

Table No.1: Frequency and percentage distribution of data on demographic variables

S.No	Demographic variables	Frequency	%
	Age		
1	17-18	1	3.3%
	18-19	7	23.3%
	19-20	17	56.7%
	20 Above	5	16.7%
	Sex		
2	Male	10	33.3%
	Female	20	66.7%
	Other	0	0 %
	Year of joining at institution		
3	2019 - 23	0	0 %
	2020 - 24	0	0 %
	2021 - 25	30	100 %
	2022 – 26	0	0 %
	Religion		
4	Hindu	17	56.7%
	Muslim	3	10 %
	Christian	10	33.3%
	Others	0	0 %
	Parents occupation		
5	Agriculture	7	23.3%
	Business	7	23.3%
	Driver	1	3.3%
	Other	15	50%
	Parents education		
6	Graduation	6	20%
	Higher secondary	15	50%
	Middle school	7	23.3%
	Illiteracy	2	6.7%
	Place of living		
7	Rural	17	56.7%
	Urban	13	43.3%

Data on knowledge regarding health hazards of smart phone usage among college students

Table No.2: Level of knowledge regarding frequency and percentage distribution of pre-test and Post-test towards health hazards of smart phone usage among college students

S.No	Level of Knowledge	Pre-test		Post-Test	
		Frequency	Percentage%	Frequency	Percentage%
1	Adequate	0	0%	21	70%
2	Moderately adequate	8	26.7%	9	30%
3	Inadequate	22	73.3%	0	0%

Table No.3: Data on association of information, education, communication on knowledge regarding health hazards of smart phone usage among college students

S.No	Demographic Variables	Inadequate Knowledge		Moderately Knowledge		Adequate knowledge		Chi-square value	'P' Value
		f	%	f	%	f	%		
Age									
1	17-18	0	0%	0	0%	2	6.7%	1.130	1.6354 NS
2	18-19	0	0%	3	10%	5	16.7%		
3	19-20	0	0%	5	16.7%	11	36.7%		
4	20 above	0	0%	1	3.3%	3	10%		
Sex									
5	Male	0	0%	5	16.7%	2	6.7%	7.4621	0.7107 NS
6	Female	0	0%	4	13.3%	19	63.3%		
7	Others	0	0%	0	0%	0	0%		
Year of joining									
8	2019-2023	0	0%	0	0%	0	0%	0	1.6354 NS
9	2020-2024	0	0%	0	0%	0	0%		
10	2021-2025	0	0	9	30%	21	70%		
11	2022-2026	0	0%	0	0%	0	0%		
Religion									
12	Hindu	0	0%	5	16.7%	15	50%	0.7141	1.6354 NS
13	Muslim	0	0%	0	0%	0	0%		
14	Christian	0	0%	4	13.3%	6	20%		
15	Others	0	0%	0	0%	0	0%		
Parents occupation									
16	Agriculture	0	0%	1	3.3%	5	16.7%	2.5195	1.6354 NS
17	Business	0	0%	3	10%	3	10%		
18	Driver	0	0%	0	0%	2	6.7%		
19	Others	0	0%	5	16.7%	11	36.7%		
Parents education									
20	Graduation	0	0%	1	3.3%	2	6.7%	8.0156	1.6354 NS
21	Higher Secondary	0	0%	4	13.3%	16	53.3%		
22	Middle School	0	0%	1	3.3%	3	10%		
23	Illiteracy	0	0%	3	10%	0	0%		
Place of Living									
24	Rural	0	0%	7	23.3%	11	36.7%	1.6929	0.1026 NS
25	Urban	0	0%	2	6.7%	10	33.3%		

NS – Non Significant, S* - Significant

MAJOR STUDY FINDINGS

There is a statistical association between the level of knowledge and parent occupation at level of p <0.05 But there is no statistical association found between level of knowledge and selected demo-graphical variables like age, sex, religion, parents 'education, parents' occupation, place of living. Hence the investigation rejects the stated null hypothesis.

CONCLUSION

The main conclusion drawn from the present study most of the students had moderately adequate and inadequate knowledge in pre-test, moderately adequate and adequate knowledge in post-test. No one had inadequate knowledge in post-test. This shows that the study was effective on into the knowledge regarding health hazards of smart phone usage among selected college students.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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