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### A pre-experimental study to assess the effectiveness of structured teaching programme on knowledge regarding health hazards of using mobile phone among college students at selected colleges of Distt. Kangra

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#### Abstract

Mobile phone addiction is the commonest among all adolescent. Now a day's adults are facing the health hazards due to excessive mobile abuse. The emission from a cell phone can be extremely harmful, causing tumors, memory loss, and increased blood pressure and weakening the immune system. The main aim of the study was to enhance the knowledge regarding health hazards of using mobile phone among college students. The quantitative pre-experimental survey approach was used in the present study which includes 60 students of selected colleges of Distt Kangra. Data was collected by socio-demographic variables and self-structured knowledge questionnaire. Collected data was analyzed by inferential and descriptive statistics. Tables and bar diagrams were used to depict the findings. In the result pre-test knowledge scores showed that 73.4% students had average knowledge while 21.6% students had below average and only 3.4% students had good knowledge. However, 1.6% students had poor knowledge score regarding health hazards of using mobile phones. And post-test knowledge scores showed that more than half of the students had average knowledge score i.e. (51.6%) while other students had good knowledge score i.e. (48.4%). However no students had below average and poor knowledge score regarding health hazards of using mobile phones. "t" test was applied to assess the effectiveness of structured teaching programme and chi-square test was applied to find out the relationship between the knowledge regarding health hazards of using mobile phones and socio-demographic variables.

**Keywords:** Knowledge, health hazards, mobile phones, college students

#### Introduction

"Happiness is not something readymade. It comes from your own action."

-Dalai Lama

Mobile phone is a small portable communication device that enables people to make phone calls whenever where they are. Signal transmission is very basic concept for mobile phone. The convenience of the mobile phone is allowing people to communicate with one another without the limitation of region and time. Mobile phone is a device providing two way communications. The technology influencing on mobile phone back in the mid twentieth century the very first mobile telephony service was in Sweden <sup>[1]</sup>.

The whole world is gripped by the mobile craze, whether it is a student, house wife, shopkeeper, rickshaw driver, and milkman professional, rich or poor almost everyone carries a cell phone in his/ her hand. A mobile phone must have item for many average teenagers. Many people spend more than six hours a day on their phones in talking, texting and playing games. The extensive use of cell phone is making us addict of this small device. Just like every medicine has its side effect, cell phone also has its drawbacks. The increased

usage of mobile phone has increased magnitude of potential health risk among its users <sup>[2]</sup>.

A survey was conducted regarding the statistics of use of mobile phones by teenagers and survey report (2008) revealed that 88% of teenagers regularly communicate via SMS, 76% teens use the internet to instant message, 71% use their mobile as a portable MP3 player, 70% teenagers take photos and videos and 64% play games <sup>[3]</sup>.

It was examined that the health effects of cell phones usage among students pursuing professional courses in colleges. College students of both sexes in age group 17-23 years from urban and rural background were selected at random result showed that headache was to be the commonest symptom followed by irritability. Other common mental symptom included lack of concentration and poor academic performance, insomnia, anxiety etc. Among physical symptoms – body aches, eye strain <sup>[4]</sup>.

Various studies indicate that the emission from a cell phone can be extremely harmful, causing tumors, memory loss, and increased blood pressure and weakening the immune system. The electromagnetic radiation from mobile phones does have a potential link to cancer. The fact that this radiation is invisible, intangible enters and leaves our bodies without our knowledge make it even more intimidating. On 31<sup>st</sup> May 2011, WHO confirmed that mobile phone use may

represent a long term health risk, classifying mobile phones radiation as a “carcinogenic hazards” possibly “carcinogenic to human” [5].

The world has become so small because of mobile phone communication. It has played a major role in these phenomena. But it is important that the younger generations who are using these devices are made aware of their potential harmful effect and how to prevent these effects.

As every Innovation and technology has pros and cons, mobile use also has advantages and disadvantages. And ignorance of the disadvantages among people has lead to a long way of health hazards.

So it is best to educate them regarding the health hazards due to the excessive phone usage and prevent them from the various problem which are arises in further life by using a planned structure teaching method. Thus investigator finds the study which plays a vital role in preventing the health hazards due to usage of mobile phones.

### Objectives

1. To assess the pre-test knowledge regarding health hazards of using mobile phones among college students.
2. To assess the post-test knowledge regarding health hazards of using mobile phones among college students.
3. To compare the pre-test and post-test knowledge score.
4. To find out the association between post-test knowledge regarding health hazards of using mobile phones among college students with selected socio-demographic variables.

### Hypotheses

H<sub>1</sub>: there was a significant difference between the pre-test and post-test knowledge score regarding health hazards of using mobile phones among college students.

H<sub>2</sub>: there was a significant association between post- test knowledge scores with socio-demographic variables.

### Material and Methods

**Research Design:** Pre-experimental research design

**Research Settings:** Tara College of Education, Bassa Waziran, Kangra H.P.

**Population:** College students at selected colleges of Distt. Kangra.

**Target Population:** Students of B.Ed. 2<sup>nd</sup> year studying in Tara College of Education, Bassa Waziran, Distt. Kangra.

**Sample Size and sampling Technique:** 60 Students of B.Ed. 2<sup>nd</sup> year selected by Purposive sampling technique.

### Tool and Method of Data Collection

Part A:- Socio-demographic variables

Part B: - Structured teaching programme

Part C:- Self structured knowledge questionnaire

### Criteria for Sample selection

#### Inclusion criteria

Students who were-

- Willing to participate in the study.
- Studying in B.Ed 2<sup>nd</sup> year
- Present at the time of data collection

#### Exclusion criteria

- Students who were absent on the day of data collection
- Students who were not willing to participating in the study.

#### Variables

- **Independent variable:** Structured Teaching Programme
- **Dependent variable:** Knowledge regarding health hazards of using mobile phones.
- **Research variable:** Age, Gender, Family income, No. of Mobile Phones, No. of Sim Card, Duration of Using Mobile Phones, Source of Information.

#### Selection and development of the tool

A tool is a vehicle that could obtain data pertinent to the study and at the same time as to the body of general knowledge in the discipline. Development of tool was based on the objectives of the study. Structured Teaching Programme and questionnaire related to Knowledge regarding health hazards of using mobile phones was prepared for data collection. Content was prepared on the basis of review of literature, internet, searching book and experts, opinion.

#### Description of tool

##### Part-I Socio demographic variables

It consist of 7 items i.e. age, gender, family income, no. of sim cards, no. of mobile phones, duration of using mobile phones, source of information regarding health hazards of using mobile phones.

##### Part-II Questionnaire on knowledge regarding health hazards of using mobile phones

It consists of multiple choice questions to test the knowledge of college students regarding health hazards of using mobile phones. The test consist of 26 questions have 4 choice in which one is correct answer. Each correct response carried “1” score and incorrect response carried “0” score. The maximum score is 26 and minimum score is 0.

**Criterion Measures:** The criterion measures include Knowledge regarding health hazards of using mobile phones

**Table 1:** criterion measure for level for knowledge

Level of knowledge	Score	Percentage (%)
Good	≥20	75%
Average	13-19	50-74%
Below average	8-12	25-49%
Poor	≤7	24%

Maximum score=26

Minimum score=0

#### Part- III

**Lesson Plan:** This part based on definition, purposes, uses, role, advantages, disadvantages, health hazards, prevention and precautions of health hazards of using mobile phone.

**Pilot Study:** Prior to commencing the task of data collection written permission was taken from Principal of Kamakshi Institute of Nursing and formal permission was obtained from the Principal of Govt. Degree College Indora, Kangra (H.P.). Pilot study was conducted to ensure the feasibility of the study. It was conducted from 10/2/2018 to 16/02/2018 with selection of 6 students of Govt. Degree College Indora, Kangra (H.P.). Researcher first introduces herself to the respondent and explained study purpose and procedure. Consent was obtained from the students. A pre-experimental research design was used and the tool was distributed to study subject and their pre-test was taken for 15-20 min. and then structured teaching programme was given for 60min. After 7 days posttest was taken from the subjects.

### Reliability of Tool

Reliability refers to the accuracy and consistency to measure tool. Reliability of tool was computed and calculated by split half technique. The reliability of tool was calculated to be  $r = 0.9$  for health hazards of using mobile phones questionnaire. Hence the tool was reliable.

**Data collection procedure:** The data collection procedure of the study was carried out February from 21/02/2018 to 28/02/2018 with selection of 60 students of Tara College of Education Kangra (H.P.). A formal permission was obtained from the principal of the college. The written consent was taken from each study subject. The researcher introduced herself to respondents and explained the purpose of gathering information. They were assured that their responses would be kept confidential and used only for research purpose. A pre-experimental research design was used and the tool was distributed to study subject and their pre-test was taken for 15-20 min. and then structured teaching programme was given for 60min. After 7 days posttest was taken from the subjects.

### Ethical consideration

1. Written permission was taken from the Principal of Kamakshi Institute of Nursing, Bassa-Waziran, Nurpur.
2. Ethical clearance was taken from the Ethical Clearance Committee of Kamakshi Institute of Nursing, Bassa-Waziran, Nurpur.
3. Written permission was taken from Principal of selected Colleges of Distt. Kangra (H.P.).
4. Written informed consent was taken from each study sample.
5. Confidentiality and anonymity of each sample was maintained throughout the study.

### Plan of Data Analysis

Analysis of data was done in accordance with the objectives of the study. Analysis was done by descriptive and inferential statistics. Descriptive statistics used was frequency, mean percentage and mean and S.D. inferential statistics were calculated by t-test and chi square. The level of significance chosen was  $p < 0.05$ . Table, bar and pie diagrams were used to depict the findings.

### Major Findings

- According to age majority of subjects i.e. 58.4% were comes under 22-23 years and 1.6% of them were comes

under <20 years.

- In accordance to gender majority of subjects i.e. 90% were females and only 10% subjects were males.
- According to family income majority of subjects i.e. 38.4% subjects had more than 25000 family income and 16.6% subjects had less than 15000 family income.
- As per number of mobile phone 86.6% subjects had one mobile phone and 13.4% subjects had more than one mobile phone.
- According to number of sim cards 60% subjects had one sim card and 40% subjects had more than one sim card.
- According to duration of mobile phone use (in hours) majority of subjects i.e. 88.4% were using mobile phone less than 5 hrs and no subject was using mobile phones more than 10 hrs.
- About 41.6% subjects had information regarding health hazards of using mobile phone from mass media and 18.4% subjects had information from family and peers.
- According to assessment of pre-test knowledge score majority of subjects i.e. 73.4% students had average knowledge score while 21.6% students had below average knowledge score and only 3.4% students had good knowledge score. However, 1.6% students had poor knowledge score regarding health hazards of using mobile phones
- According to assessment of post-test knowledge score more than half of the subjects had average knowledge score i.e. (51.6%) while other students had good post test knowledge score i.e. (48.4%). However no students had below average and poor knowledge score regarding health hazards of using mobile phones.
- According to comparison of pre-test and post-test knowledge score, the pre-test, mean score was 14.4 (SD=3.06) which increased to 19.71 (SD=2.42) in post-test and standard error is 0.50. Hence, it is concluded that the structured teaching programme was effective in improving knowledge of the students.

### Association

- There was statistically significant association of between post-test knowledge regarding health hazards of using mobile phones with family income (monthly).
- There was statistically non-significant association between post-test knowledge regarding health hazards of using mobile phones with selected socio demographic variables like age, gender, no. of mobile phones, no. of sim cards, duration of mobile phone use and source of information.

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