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A study on the effectiveness of IEC package on knowledge regarding adverse effects of excessive usage of mobile phones among young adult (Females) of Shimla nursing college, Annandale, Shimla

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Abstract

There is increase in the mobile phone subscription from 12.4 million to 6 billion, penetrating about 87% of the global population and reaching the bottom of the economic pyramid. Excessive use of mobile phone leads to abnormal behavior which causes negative consequences to its users. It causes various side effects like teen tendonitis, increased stress, social disconnection etc. The objective of the study is to assess the existing knowledge of excessive use of mobile phone among young adults (females) and the effectiveness of IEC package and after the administration of IEC package other one is to compare the knowledge of excessive use of mobile phone among young adult (females) of B.Sc. (N) 2nd year or 3rd year (40 students) of Shimla Nursing College, Annandale, Shimla. Quantitative Research approach is used with pre experimental one group pre-test and post-test design and samples are selected by non-probability convenient sampling technique. The result of study shows the pre-test mean knowledge score of pre-experimental group is 16.2 and of post-test is 22.65. 't' test value of pre-experimental group is 9.08 which is considered to be significant of knowledge. So improvement happens in knowledge regarding excessive use of mobile phone among young adult (females).

Keywords: Effectiveness, knowledge, IEC package, adverse effects, excessive use of mobile phone, B.Sc. (N) 2nd year and 3rd year

Introduction

The cell phone is the latest invention of the 21st century. It is still a new device in many countries. People do not leave their homes without their cell phones. For many people, it's a convenient way to communicate. Many parents provide their children with cell phones for safety reasons. Cellular phones have impacted society. They have left an ever-lasting impression on our culture [3].

Mobile phones have become common phenomena amongst teenagers according to Campbell (2006:196). The extent to which it can be used to connect and bring information to people is astronomical. As mobile technology becomes a more prominent aspect of everyday life, people are realizing the true power when it comes to the use of mobile devices. These mobile devices allow for the enhancement and ease of access to social and business functions (Lu *et al.*, 2003:206) [4]

The cell phone today is a lifeline for many. It is estimated that around 4.5 billion people use the cell phone worldwide. And it comes as no surprise that a huge chunk of this quantity consists of the youth. The cell phone is more of a necessity for them than a luxury. Mobile phones use Electromagnetic Radiation in the Microwave range (450-2100MHz). Other Digital Wireless system such as data communication networks, produce similar radiation [6]. Adolescents are the majority of cell phone users in the world. An extensive use of mobile phone by teenagers gives rise to many serious diseases at early age. Adolescent constitute 21.8% of the Indian population. Adolescent belongs to the stage of life with great energy, creativity and enthusiasm. If given right degree of support and opportunity, they are great resource for the present and future of all societies [7].

So the prevention of various side effects is essential among young adult. Therefore by providing ICE package to the adult (females), investigators make them aware about excessive usage of mobile phones and increase the knowledge regarding adverse effects of excessive mobile phone.

Need of Study

The cell phone today is a lifeline for many. It is estimated that around 4.5 billion people use the cell phone worldwide. And it comes as no surprise that a huge chunk of this quantity consists of the youth. The cell phone is more of a necessity for them than a luxury. Mobile phones use Electromagnetic Radiation in the Microwave range (450-2100MHz). Other Digital Wireless system such as data communication networks, produce similar radiation [6].

With the change of life/ time, now a day's every person hand is equipped with latest mobile model. There is no doubt that the mobile phones have made life more easy and comfortable. With the help of mobile phone everyone is in touch with their family, friends and other known. Mobile phone provides a big help in emergency.

As mobile phones are easy and comfortable for individuals, it becomes addiction for adolescents. Due to excessive use of mobile phones, various adverse effects are shown by adolescents. The individuals are not using mobile phones adequately. The adolescents have less knowledge related to adverse effects of excessive use of mobile phones.

Like every coin have two sides, mobile phones providing a lot of advantages, also shows few of disadvantages. It's all depending on its uses. Mobile phones leaving a harmful impact on every aspect of health like physical, social and psychological etc. National Institute of Technology (NIT), Calicut, Kerala, has reported headache, dizziness, numbness in the thighs, heaviness in the chest among mobile phone users. The results indicated an increase in the both parameters when mobile phones kept close to chest and a decrease when kept close to head. Mobile phones has caused changes in heart rate variability indices and the change varied with its position [20].

PGIMER, Chandigarh, has conducted a study (Panda *et al.* 2010) and reported long term and intensive mobile phone use may cause inner ear damage [21].

Over usage of mobile phones leads to physiological health hazards like headaches, earache, warmth sensations, fatigue and musculoskeletal symptoms. A parts from the various benefits of cell phone, its over uses leads to mobile phone addiction. It is one of the biggest non drug addictions in the world on 31st may 2011, the world health organization confirmed that mobile phone use may represent along term health risk, classifying mobile phone radiations as a "carcinogenic hazard" and "possibly carcinogenic to human" after a team of scientists reviewed peer review studies on cell phones. 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 [24].

Recent studies have shown that the statistical value of cell phone usage is 87% world wide, 78.29% in India and 92% in Karnataka state. About 40% of young adults using their cell phones for more than 4 hours a day. Eighty percentage of human own a mobile phone, out of the 5 billion mobile.²⁵ So researchers concluded the recent review regarding the cell phones and its usage has proven the impact of cell phone among the adolescent specially psychosocial and

physical hazards. The investigators had number of friends who were staying with us during our BSc. nursing course, who were totally addicted to mobile phones and few of them were even spending six to seven hour per day with mobiles. During researcher's extensive search for the related review of literature, the investigator became more aware about the cell phones and its impacts. The investigator also found that there is a lack of inferential statistics regarding adverse effects of excessive use of mobile phone among adolescent girls. Even the expert's opinion also motivated the investigators to undertake the following study.

Objectives

- To assess the existing knowledge of adverse effects of excessive use of mobile phones among young adult (females).
- To administer the IEC package on adverse effects of excessive use of mobile phones among young adult (females).
- To assess the effectiveness of IEC package on adverse effects of excessive use of mobile phones among young adult (females).
- To assess and compare the pre-test and post-test knowledge score on adverse effects of excessive use of mobile phones among young adult (females).

Research Methodology

Research Approach

Quantitative Research Approach was applied for present study.

Research Design

Research design selected for the study was pre experimental-one group pre- test post-test design. This study fulfills the criteria such as only manipulation, no control group and there is no randomization. Sample was selected by non-probability convenience sampling technique.

Pre-test	Treatment	Post-test
O ₁	X	O ₂

O₁: Assess the existing level of knowledge and attitude regarding memory loss.

X: IEC package regarding memory loss.

O₂: Assess the post-test level of knowledge and attitude regarding memory loss.

Setting of the Study

Study was done at Shimla nursing college, Annandale Institute is run by RCS Associates Charitable Trust, established in 2010. It located at Rajendra complex, Annandale, Shimla, H.P. Its infrastructure comprises of five-storey building. College has best faculty members in the region. It has well equipped labs of fundamentals of nursing, Midwifery, anatomy & physiology, Nutrition, microbiology, computer lab. It has adequate transportation facilities and have well equipped library with 2842 books and journals (22). It was started with GNM diploma course and B.Sc (N) program.

Study Population

Nursing students of Shimla Nursing College include: B.Sc (N) Students i.e. 40

Sample Population

Students of B.Sc (N) 2nd year & 3rd year.

Sample Size

40 young adult (females)

Sampling Technique

The non-probability convenience sampling technique was used for data collection.

Development and Description of Tools

With the extensive review of literature and discussion with the experts and with the investigator personal and professional experience a Structured questionnaire on adverse effects of excessive use of mobile phones was developed to assess the effectiveness of IEC package on knowledge regarding adverse effects of excessive usage of mobile phone. The tool for the data collection consists of three sections.

Section A

This section deals with demographic variables like age, gender, marital status, educational status, and educational status of father, educational status of mother, occupational status, and family monthly income, type of family, residential area.

Section B

Structured questionnaire to assess the knowledge of the young adult (females) regarding adverse effects of excessive usage of mobile phone. Total 32 questions were formulated under separate sub heading.

Scoring key

Total questions: 32

Score	Level of knowledge
<50%	Inadequate
50-75%	Moderate
>75%	Adequate

Section C: IEC Package on adverse effects of excessive use of mobile phone.

Data Collection Procedure

Investigators had collected data in 2 sections i.e. pre-test and post-test. Before data collection formal written permission was taken from the principal, Guide, Class teacher for conducting the study in the classroom of the college. The investigators personally met the principal and explain about the study to ensure maximum cooperation.

Research data was collected in the classroom of students. Self introduction and introduction regarding research study was given to the young adult (females) studying in B.sc (N) 2nd year and 3rd year of Shimla nursing college. The purpose of study was explained to the study subjects and was assured about the confidentiality of responses. Pre-test was conducted on 22nd July, 2016 among students of B.Sc (N) 2nd year and 3rd year and analyzed the scores for pre test. After conducting pre-test, knowledge was provided to the students through IEC Package. Teaching was provided to the student on 23rd July, 2016. After giving teaching, post test was taken on 25th July, in order to assess the effectiveness of IEC in enhancing knowledge of young adult (females) regarding adverse effects of excessive use of mobile phones.

Ethical Consideration

- ✓ Written permission was obtained from the head of nursing college.
- ✓ The purpose and details of the study was explained to the subjects.
- ✓ Assurance was given regarding the confidentiality of the data collected.
- ✓ Verbal consent was taken from the study subject.

Plan of Data Analysis

Descriptive and inferential statistics were employed to analyze the obtained data as shown below:

Descriptive statistics

- a) Frequency and percentage distribution to describe demographic variables.
- b) Mean, median and standard deviation.

Inferential statistics

- a) Paired 't'- test to assess and compare the pre-test and post-test knowledge scores among young adult (females).

Result

a) To assess the pre-test level of knowledge

Table 1 depicts the frequency and percentage distribution of pretest level of knowledge on Different aspects of adverse effects of excessive usage of mobile phone among young adults.

A majority of 21 (52.5%) had inadequate knowledge regarding excessive usage of mobile phone, a majority of 14 (35%) had moderate knowledge regarding excessive usage of mobile phone. a majority of 5 (12.5%) had adequate knowledge regarding excessive usage of mobile phone.

Table 1: Depicts frequency and percentage distribution of pretest knowledge score among young adult (females) N=40

Knowledge score	No.	%
Inadequate (<50%)	21	52.5
Moderate (50-75%)	14	35
Adequate (>75%)	5	12.5

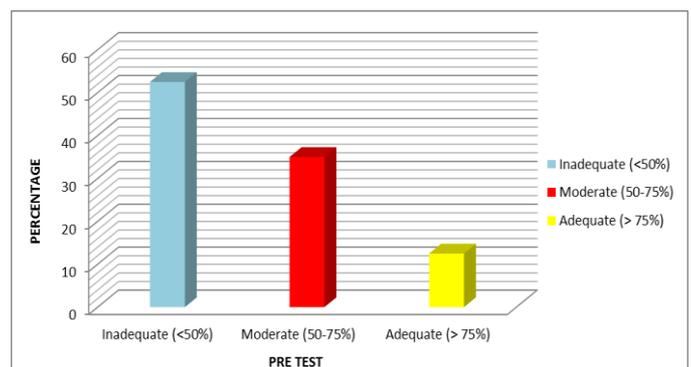


Fig 1: Frequency and distribution of study subjects as per pre-test knowledge score.

b) To assess the post-test level of knowledge

A majority of 0 (0%) had inadequate knowledge regarding excessive usage of mobile phone, a majority of 34 (85%) had moderate knowledge regarding excessive usage of mobile phone. A majority of 7 (17.5%) had adequate knowledge regarding excessive usage of mobile phone.

Table 2: Depicts frequency and percentage distribution of post-test knowledge score among young adult (females). N=40

Knowledge Score	No.	%
Inadequate (<50%)	0	0
Moderate (50-75%)	34	85
Adequate (> 75%)	7	17.5

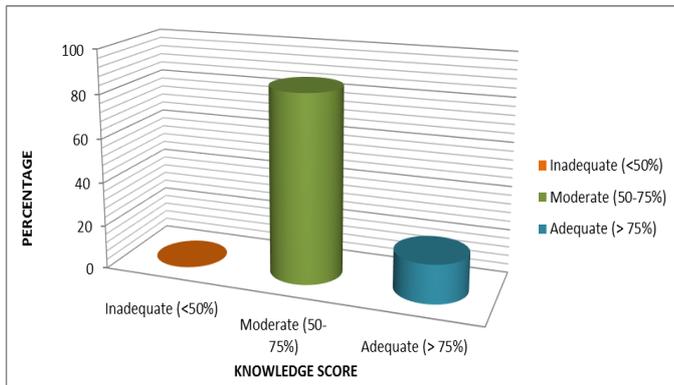


Fig 2: Frequency and percentage distribution of study subjects as per post-test knowledge score.

c) To compare the pre-test and post-test knowledge score:

Table 3: Depicts Comparison of the pretest and post-test knowledge score on the effectiveness of IEC package. N=40

Test	Mean	S.D	't' Value
Pretest	16.2	4.45	9.08
Posttest	22.65	2.33	

*** $p < 0.05$, S – Significant

Table 5 shows that, the mean pre-test knowledge score was 16.2, standard deviation was 4.45 and the mean post-test knowledge score was 22.65 standard deviation was 2.33. The obtained 't' value is 9.08. It was statistically significant at $p < 0.05$ level. Based on the 't' test result, the null hypothesis NH_1 "There is no significant difference in the pre and post-test knowledge score among the young adults (females), was rejected.

- On analyzing the collected data, it reveals that 'IEC package' was effective on increasing knowledge regarding the adverse effects of excessive use of mobile phone among young adult (females).

Discussion

This chapter is concentrating on the findings derived from the statistical analysis. The objectives of study were

a) To assess the pre-test level of knowledge:

The pre-test score was 16.2 and it revealed a majority of 21 (52.5%) had inadequate knowledge regarding excessive usage of mobile phone, a majority of 14 (35%) had moderate knowledge regarding excessive usage of mobile phone. a majority of 5 (12.5%) had adequate knowledge regarding excessive usage of mobile phone.

The present study finding is supported by Aditya (2008) who conducted a comparative study regarding mobile phone usage among students and staffs of universities between two countries among 50 each pre university students. This study concluded that most of the adolescents were having lack of knowledge regarding the impacts of cell phones.

b) To assess the post-test level of knowledge

The post-test score was 22.65 and it revealed that the knowledge level of young adult (females) is improved regarding adverse effects of excessive use of mobile phones after providing them IEC package. that majority of 0 (0%) had inadequate knowledge regarding excessive usage of mobile phone, a majority of 34 (85%) had moderate knowledge regarding excessive usage of mobile phone. a majority of 7 (17.5%) had adequate knowledge regarding excessive usage of mobile phone.

The present study finding is supported by Ahmed Ishfaq, *et al* (2011) who conducted a pre-experimental study on Mobile phone to youngsters: necessity or addiction among youngsters in Pakistan. This study concluded that youngsters use their cell phones under reasonable limits and do not tend towards extreme behaviours leading towards addictive cell phone usage.

c) To compare the pre-test and post-test knowledge score

After conducting pre-test and post-test there is significantly improvement in the result. The pre-test score was 16.2 and the post-test score was 22.65. The knowledge of the young adult (females) is significantly improved to some extent regarding adverse effects of excessive use of mobile phones.

Summary

The cell phone is the latest invention of the 21st century. It is still a new device in many countries. People do not leave their homes without their cell phones. For many people, it's a convenient way to communicate. Many parents provide their children with cell phones for safety reasons. Cellular phones have impacted society. They have left an everlasting impression on our culture. With the advent of new technology the way of communication also changed, in very early days of history pigeons were used as means of communication².

By providing IEC package related to adverse effects of excessive use of mobile phone to the young adult (female), the investigators felt that it would be possible to enhance the knowledge among young adult. Keeping this in view the present study to assess and describe the effectiveness of IEC package among young adult (female) at Shimla nursing college was undertaken.

Conclusion

The findings of the study revealed that there was a significant improvement in the knowledge among young adult (female) after providing the IEC package.

Acknowledgement

Words are often too less to reveal ones deep regards. An understanding of the work like this is never the outcome of the efforts of single person. I take this opportunity to express my profound sense of gratitude and respect to all those who helped me to complete this thesis successfully.

It is God Almighty, the Holy Spirit who blessed us with the courage to accomplish the task that we started in an attempt for not only to enhance the knowledge but also to modify the behavior

We indebted to our parents whose great support and blessing encourage us to perform better in each and every field. Their humble and motivating were always there to boost up.

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