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Assessing the Knowledge Regarding Health Hazards Due to Mobile Phone Over Use Among Adolescents in a Selected Urban Community, Thrissur with a View to Develop an Information Leaflet

Anu Benny C[1], Crista K Sunil[2], Arpitha Xavier[3]*, Harsha K P[4], Athira M S[5], Mahija Jose[6], Bincy Benny[7] and Asha C G[8]

[7]Fourth year B.sc Nursing, Aswini College of Nursing, Thrissur, Kerala, India
[8]Associate Professor, Aswini College of Nursing, Thrissur, Kerala, India

ABSTRACT

Random expansions and proliferations in mobiles have provided better opportunities for communication, information, and social interaction. The excessive undisciplined usage by individuals has led to the emergence of mobile phone dependence. This will cause various physical, psychological and social health hazards to humans. Hence the study was undertaken to assess the knowledge regarding health hazards due to mobile phone over useamong adolescents in selected communityThrissur, and to prepare a leaflet regarding health hazards due to mobile phone overuse. The objectives of the study were to assess the knowledge regarding health hazards due to mobile phone over use among adolescents, to find out the association between knowledge regarding health hazards due to mobile phone over use among adolescents with their selected demographic variables and to develop an information leaflet regarding health hazards due to mobile phone over use. A descriptive research design was adopted for the study. This study was conducted over 100 adolescents, who were selected by convenience sampling technique. The knowledge was assessed by using a structured knowledge questionnaire on health hazards of mobile phone overuse. The findings revealed that 1% of samples had adequate knowledge, 61% had moderate knowledge and 38% had inadequate knowledge regarding the health hazards of mobile phone overuse. The study also revealed that there were no associations between knowledge regarding health hazards of mobile phone over use among adolescents with their selected demographic variables. The study concluded that the adolescents had moderate knowledge regarding health hazards of mobile phone over use.

KEYWORDS

Adolescents, Health hazards, Knowledge, Mobile phone over use

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INTRODUCTION

"If we continue to develop our technology without wisdom or prudence, our servant may prove to be our executioner." - Omar N Bradley

BACKGROUND OF THE STUDY

The worldwide technology and its changes play a major role in each individual's life. The current trend of the society is to adopt every change in the field of communication technology. The mobile phones are boon to this century. Mobile phone are considered as an important communication tool and have become an integral part of the society; it is not only a communication device but it also a necessary social accessory. People are increasingly using mobile phones rather than the fixed telephones.[1]

A smartphone is a term for distinguishing mobile phones with advanced features from basic feature of phones. The term "Smartphone" first appeared in 1997, when Ericsson described its GS 88 "Penelope" concept as a smartphone. This term was basically introduced in the market for a new class of mobile phones that provides integrated services from communication, computing and mobile sectors such as voice communication, messaging, personal information management applications and wireless communication capability. [2]

When we are dependent much on smartphone for communicating and navigating the streets, we may lose our natural spatial awareness and communicating skills. When smartphone runs out of battery, many people felt totally helpless.Sophisticated, fun and informative: smartphones have a whole lot of potential. They can get us out of tight spots (such as being lost in an unfamiliar city) and they can keep us entertained as well. However, these considerations must be balanced against the costs of using a smartphone as well as against the psychological effects of these devices.[3] Smartphones can be very addictive if we are not careful, and they should never become a substitute for meaningful relationships with other people.

Nowadays, addiction not only refers to drug or substance abuse, but it also refers to gambling, internet, games, or even smartphones. These also fall under the category of behavioral addiction. As the internet is becoming more accessible through smartphone, the addiction pattern associated with smartphone have been shown more routinely and the concerns relating the phenomenon have increased Quick access to the internet and fast distribution of smartphones resulted in a serious behavioral addiction, mostly noticeable in a vulnerable class of people including adolescents.[4]

Addiction is considered by WHO (Word Health Organization) as dependence, as the continuous use of something for the sake of relief, comfort, or stimulation, which often causes cravings when it is absent. The two major categories of addiction involve either substance addiction, e.g. "drugs or alcohol addiction" or "behavioral addiction such as mobile phone addiction."[5]

According to the survey of smartphone addiction completed by the National Information Society Agency in 2012, the percentage of smartphone addiction was 8.4%, which was found to be higher than the internet addiction of 7.7%. The higher figure in teenagers to individuals in their twenties than in those in their thirties to forties implies that this problem may become worse in the future.[4]

Smartphone addiction is increasing in the 21st century as more and more adolescents enjoy exploring their smartphone's in their free hours. Mobile phone usage is so strongly integrated into young people's behavior that symptoms of behavioral addiction, such as cell phone usage interrupting their day–to-day activities.[2]Smart phone is the essential digital gadget that teenagers now a days have. However, despite the convenience it brings to use, sometimes it might have affect daily life in a negative sense. One of the typical example is the over use of smart phones. Smart phone can easily get attention and distract people. People, especially students, therefore are easily over using the smart phone. The distraction lowers the student's productivity and takes their time. It also lowers the quality of work done.[6]

The health hazards of mobile phone over use can be classified into physiological, psychological and social hazards. Over usage of the mobile phone leads to physiological health hazards like headaches, earache, warmth sensation, fatigue, vision problem, ear problems, brain tumor, infertility and musculoskeletal symptoms like Dequervain's syndrome, text neck, digital thumb and wrist problems. The psychological symptoms are anxiety, stress, sleep loss, depression, restlessness, impaired memory and concentration, aggression and obsessive compulsive disease but these are goes unnoticed by others. Then usage of mobile phones during driving is one of the leading causes of accident and poor family interactions are main social hazards.[7]

The safety precautions help to reduce the health problems due to over use of mobile phones. Some safety precautions are reduce mobile phone usage, do not call more than 15 minutes, bring the phone to eye level or slightly lower, do not use phones in dim light, periodically change the position of the phone, use hand free devices as possible, do not use phone while driving, keep the phone away from body to reduce radiation etc.[8]

Mobile phone is a very useful and important device. It helps us in various ways. It entertains and informs us. All we need to do is to use this device smartly and wisely. It should remember that it is mainly a device with purpose of communication, but that does not mean that we keep on wasting hours on chatting or through messaging. Also remember that spending too much time on mobile phones is dangerous as mobile phones emit harmful radiations leading to various diseases.[9]

NEED FOR THE STUDY

Cell phones are being used by each and every one without knowledge of their harmful effect. The astronomical growth in the number of cell phone subscribers in India makes it one of the world's largest growing markets. India is second largest cellphone market behind china. The smart phone was not quite as popular as it has become in the recent past and now that there are millions of people around the world using smart phone. In this year, it is very difficult not to have technology, but with technology progression come certain hazards develop, the only way to beat this is to have corrected and timely information and again better technology. But sadly or rather alarmingly these harmful effects of cell phone have been neglected or have not been given due importance over the years.[10]

According to world statistics, the number of mobile phone users in the world is expected to pass the five billion mark by 2019. In 2016, an estimated 62.9 percent of the population worldwide already owned a mobile phone.[11]

Mobile phone users in India from 2013 to 2019 were estimated, for 2017 the number of mobile phone users in India is expected to rise to 730.7 million. In the same year the number of smartphone users in India is predicted to reach 340 million and could reach almost 468 million by 2021.[12]

Indian teens are currently driving smartphone's market in India. The age groups of 16-18 years using smartphones have shown a rapid rise from 5% in 2012 to 25% in early 2014. Recently in 2013, there were around “51 million” smartphone users in Urban India and rate of rise from year 2012 was 90%.[2]According to survey conducted by Pew Research Center, 78% teenage between12-17 has mobile phone and they are not just using it to call their parents. One in four has access to internet, far more than adults. [13]

New research in US suggests that excessive use of smartphone, increases the risk for severe psychopathologies in adolescents and there is growing evidence of problematic use of smartphone

that impacts both social and health aspects of user's lives. The study of 200 adolescents in Korea have also showed that abnormal users of smartphone had significantly more problematic behaviors, somatic symptoms, attention deficits, and aggression and this study also found that youth were more addicted to smartphone they had more severe psychopathologies.[2]

A review article of physical health hazards of mobile use revealed that mobile phones have both thermal and non-thermal effect on humans. Radiation from mobile phones during communication rise body temperature by as much as 0.1^0c. This rise in cellular, tissue or body temperature is found to have effect on the body.Several studies suggest that there are self-reported non-specific symptoms of mobile telephone uses. These symptoms include headache, cold hands or feet, difficulties in concentration, memory changes, dizziness, depressive symptoms, sleep disturbances.[7]

A quantitative study on impact of excessive mobile phone usage on human conducted to amalgamate the outcomes on excessive usage of mobile phone from the medical practitioners. The study was conducted at Civil Hospital, Jinnah Medical Hospital, and Dow Medical Hospital of Karachi city from November 2015 to February 2016. The questionnaire consist of six questions which cover adequate information regarding mobile phone devices that causes consequence on human body and the diseases induced by them. This questionnaire also contains some additional diseases like Heart diseases, effect on foetus, alzhemier's disease and Parkinson's disease, brain tumor, male infertility and ear impairment. The data were accumulated utilizing the survey questionnaire from the medical doctors and the paramedical staff. One hundred and fifty medical doctors were interviewed about the effects of mobile phone devices on the human health. From the source of patients in their treatment, 97% medical doctors reported positive effects of mobile phone on human health and 3% medical doctors were reported negative effects of mobile phone devices on the human Health.[14]

The Times of India newspaper reported that using mobile phone for 18 to 24 minutes per day is ideal but if it exceeds more than 30 minutes per day – for a period of eight to 10 years – it might lead to severe health effects including increased risk of brain tumor or brain cancer.[15]

A review of literature regarding the current state of scientific knowledge about cell phone addiction/abuse says that, the estimated prevalence ranges from 0-38%. The personality trait most consistently associated with addiction is low self-esteem, through extraversion is associated with more intensive use. Women with low self-esteem are the most vulnerable group, and the most

commonly associated psychopathological symptoms were depression. In short, while the evidence suggests a problem in relation to mobile use, the vagueness of the cell phone addiction concept and the poor quality of the studies make it necessary to define and unify criteria with a view to carrying out quality studies that permit appropriate comparisons.[16]

Researchers had various personal experiences of the over usage of mobile phones for various purposes by all people of community including children. They seem to be unaware of its health hazards. Keeping the golden word "Prevention is better than cure", the researchers were interested to assess the level of knowledge of adolescents regarding health hazards due to mobile phone over use and to prepare a leaflet on the matter keeping in mind "for a good nation, we need healthy individual."

STATEMENT FOR THE PROBLEM

A study to assess the knowledge regarding health hazards due to mobile phone over use among adolescents in a selected urban community, Thrissur with a view to develop an information leaflet.

OBJECTIVES OF THE STUDY

1. To assess the knowledge regarding health hazards due to mobile phone over use among adolescents.
2. To find out the association between knowledge regarding health hazards due to mobile phone over use among adolescents with their selected demographic variables.
3. To develop an information leaflet regarding health hazards due to mobile phone over use.

OPERATIONAL DEFINITIONS

1. **Assess**- In this study assess refers to the way to find out the level on knowledge on health hazards due to mobile phone over use with structured knowledge questionnaire.
2. **Knowledge**- In this study knowledge refers to the correct response of adolescents to a structured knowledge questionnaire regarding health hazards due mobile phone over use.
3. **Health hazards due to mobile phone overuse** -In this study it refers to physical, psychological and social health problems due to continuous use of mobile phone.
4. **Adolescents** –In this study it refers to the individuals of age group between 15- 20 years.
5. **Leaflet** - A printed material containing information related to health hazards due to mobile phone over use.

ASSUMPTIONS

- Adolescents may have some knowledge regarding health hazards due to mobile phone over use.
- Selected demographic variables may have an influence on knowledge regarding health hazards due to mobile phone over use.

HYPOTHESIS

- H_1: There is a significant association between knowledge regarding health hazards due to mobile phone over use among adolescents with their selected demographic variables.

DELIMITATIONS

- The study is confined to only one community
- The study is undertaken only on adolescent age group between 15 – 20 years

METHODOLOGY

RESEARCH APPROACH

In this study, the investigator adopted quantitative research approach to assess the knowledge regarding the health hazards due to mobile phone over use among adolescents.

RESEARCH DESIGN

The research design adopted for this, study was descriptive survey research design.

SETTING OF THE STUDY

The researcher chooses the setting on the basis of convenience and feasibility in terms of availability of subject. Data was collected from the urban areas of Ollukara Block panchayath(Thiruvanikavu, Snehatheram,Kalathode, and Krishnapuram). The Ollukara Block Panchayath is located within a distance around 5 kilometers from the Aswini College of nursing. The Ollukkarablock Panchayath was formed in the year 1956. The total area was 315.72sq.km. According to 2011 census the total population was 1,85,347. The total panchayth under this block was 5. There were around 16 mobile shops were present in this area for purchasing smartphones.

PROCEDURE FOR DATA COLLECTION

It is the most time consuming step of the research process, which involves direct or indirect interaction with respondents to gather information pertaining to the topic under study. It must be carefully planned and implemented. Data collection requires adequate planning, patience, communication, interpersonal relationship, and recording skills. Data could be collected through questioning, interview or observation method.[17] For this study, formal administrative permission was obtained from Block development officer of Ollukara Block Panchayath, Thrissur. The data collection was done from 9-4-2018 to 13-4-2018

STEP 1: SELECTION OF ADOLESCENTS

Based on the survey report of our second year Community Health Nursing posting, we selected samples byconvenience sampling. We visited each houses and identified adolescents. On first day (10-4-2018) of data collection we collected data from 27 samples, on second day (11- 4-2018) 33 samples, on third day(12-4-2018) 30 samples and on fourth day (13 -4-2018) 10 samples.

STEP 2: ADMINISTRATION OF STRUCTURED KNOWLEDGE QUESTIONNAIRE ON HEALTH HAZARDS DUE TO MOBILE PHONE OVER USE TO THE SAMPLES

The investigators visited the homes in Ollukara Block Panchayath and identified the adolescents. The investigators introduced themselves to the samples and explained the purpose of the study. After establishing good rapport with the sample, the investigators explained about the research study and written consent were obtained from the samples. Right to withdraw from the course of the study was assured and human rights were preserved. The investigators explained about the tool which consisted of two sections; demographic profile and structured knowledge questionnaire on health hazards due to mobile phone overuse. After that investigators provided tool for the samples and provided 30 minutes for the completion of the questionnaire on health hazards due to mobile phone overuse.The questionnaires were completed in the presence of the researchers to avoid bias in the collection of data. After that the tool was collected back and provided the leaflet regarding health hazards due to mobile phone overuse. All the samples co-operated well.

PLAN FOR DATA ANALYSIS

The process of analysis involves the difficult task of contrasting and comparing the final data to determine what pattern, themes, or threads emerge.[17]

Data was analysed on the basis of theobjectives of the study by using descriptive and inferential statistics

- Frequency and percentage distribution was used to analyze the demographic variables of the adolescents such as age, gender, religion, education qualification, occupation of the father, occupation of the mother, usage of time duration of mobile phone, purpose of using mobile phone, usage of free handling devices, previous history of attending educational programme and its duration.
- Frequency and percentage distribution was used to describe the level of knowledge on health hazards due to mobile phone over use.
- Chi- square test was used to assess the association between knowledge and health hazards due to mobile phone overuse.

DISCUSSION

SECTION B:DESCRIPTION ON ASSESSMENT OF LEVEL OF KNOWLEDGE OF ADOLESCENTS REGARDING HEALTH HAZARDS DUE TO MOBILE PHONE OVER USE

This section depicts the level of knowledge of adolescents regarding health hazards due to mobile phone over use. It was assessed by structured knowledge questionnaire, which consisted of 30 questions. The structured knowledge questionnaire was based on physical hazards, psychological hazards, social hazards and safety measures to prevent health hazards due to mobile phone over use. For each question, 4 options were given with one correct answer. For each correct answer the score 1 was given and if the answer was wrong the score awarded was 0. The highest score was 30 and least was 0. Based on the percentage gained by the knowledge of adolescents regarding health hazards due to mobile phone over use, the knowledge score was arbitrarily categorized into inadequate knowledge with a score of 0-10, moderate knowledge with a score of 11-20 and adequate knowledge with a score of 21-30.

Table 1 Frequency And Percentage Distribution Adolescents According To Level Of Knowledge Regarding Health Hazards Due To Mobile Phone Over Use **(N =100)**

Sl No.	Level of knowledge	Scoring range	Frequency (n)	Percentage %
1	Adequate knowledge	21 - 30	1	1
2	Moderate knowledge	11 - 20	61	61
3	Inadequate knowledge	0 - 10	38	38

Table (1) summarizes the level of knowledge score of adolescents regarding health hazards due to mobile phone over use. In that majority of the samples 61 (61%) had moderate knowledge, 38 (38%) adolescents had inadequate knowledge and only 1 (1%) sample had adequate knowledge

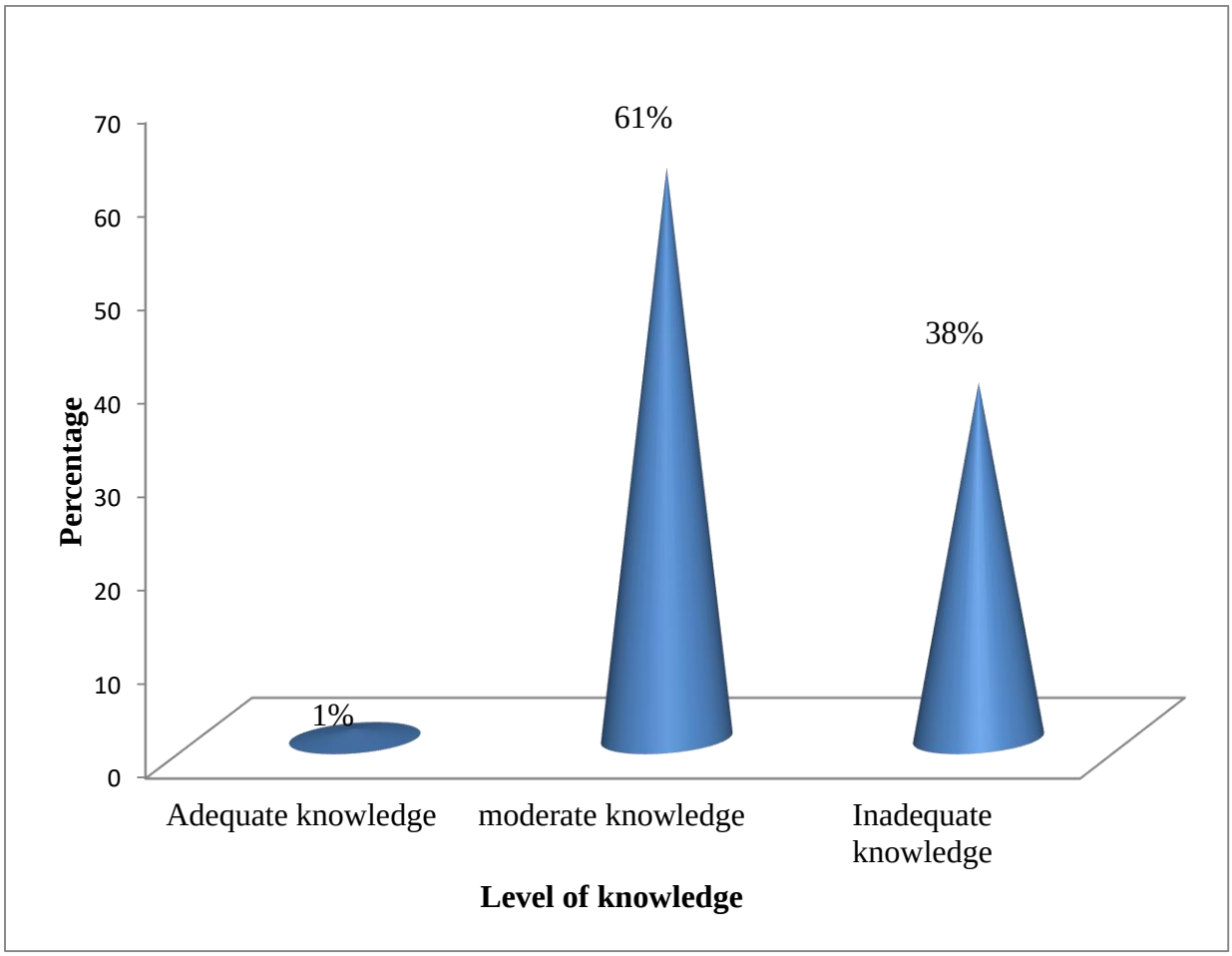

Figure 1 Frequency and distribution of knowledge of adolescents regarding health hazards due to mobile phone over use

Table 2 Percentage Distribution of Adolescents According to Level of Knowledge in Different Areas of Health Hazards Due to Mobile Phone Over Use (n=100)

Sl No	Area	Total score	Score obtained	(%)	41.85
1	general aspect	300	210	70	
2	physical hazards	1300	399	30.69	
3	psychological hazards	400	138	34.5	
4	social hazards	300	92	30.66	
5	safety measures	700	293	41.85	

The above table (2) shows distribution of knowledge in different areas like general aspect, physical hazards, psychological hazards, social hazards and safety measures. The knowledge in 'general aspect' was 70%, in 'physical hazards' was 30.69%,in 'psychological hazards' was

34.55, 'social hazards' was 30.66% and the knowledge in the aspect of 'safety measures' was found to be 41.85%.

SECTION C

DESCRIPTION ON ASSOCIATION BETWEEN THE KNOWLEDGE OF ADOLESCENTS REGARDING HEALTH HAZARDS DUE TOMOBILE PHONE OVER USE WITH THEIR SELECTED DEMOGRAPHIC VARIABLES

This section deals with the association between the knowledge of adolescents regarding health hazards due to mobile phone over use with their selected demographic variables. In order to find out the association between knowledge levels of adolescentsregarding health hazards due to mobile phone over use with their selected demographic variables the following hypotheses were formulated.

H_1: There is a significant association between the levels of knowledge of adolescents regarding health hazards due to mobile phone over use with their selected demographic variables

For statistical analysis the null hypothesis was formulated.

H_{01}: There is no significant association between the knowledge of adolescentsregardinghealth hazards due tomobile phone over usewith their selected demographic variables.

Table 3 Association between the Level of Knowledge of Adolescents Regarding Health Hazards Due Tomobile Phone Over Use with their Selected Demographic Variables **(N=100)**

Sl no	Demographic variable	Chi square value	Table value
1	Age	2.086	5.99^{ns}
2	Gender	1.048	3.84^{ns}
3	Education	1.034	5.99^{ns}
4	Purpose of using mobile phone	0.109	5.99^{ns}
5	Previous history of attending educational programme	0.096	3.84^{ns}

ns: Not significant at 0.05

Table (3) depicts the association between the level of knowledge of adolescents regarding health hazards due tomobile phone over use with their selected demographic variables such as age, gender, education, purpose of using mobile phone and previous history of attending educational programme.

Study findings revealed that Chi- square value obtained for age was 2.086 and the table value was 5.99 which was not- significant at 0.05 levels. Hence the researcher accepted the null hypothesis and rejected the research hypothesis. There is no association between ages of the adolescents with level of knowledge regarding health hazards due tomobile phone over use.

Study findings revealed that Chi- square value obtained for gender was 1.048 and the table value was 3.84, which was not-significant at 0.05 levels. Hence the researcher accepted the null hypothesis and rejected the research hypothesis. There is no association between genders of the adolescents with level of knowledge regarding health hazards due tomobile phone over use.

Study findings revealed that Chi- square value obtained for education was 1.034 and the table value was 5.99, which was not-significant at 0.05 levels. Hence the researcher accepted the null hypothesis and rejected the research hypothesis. There is no association between educations of the adolescents with level of knowledge regarding health hazards due tomobile phone over use.

Study findings revealed that Chi- square value obtained for purpose of using mobile phone was 0.109 and the table value was 7.82, which was not-significant at 0.05 levels. Hence the researcher accepted the null hypothesis and rejected the research hypothesis. There is no association between purposes of using mobile phones with level of knowledge regarding health hazards due tomobile phone over use.

Study findings revealed that Chi- square value obtained for previous history of attending educational programme was 0.096 and the table value was 3.84, which was not-significant at 0.05 levels. Hence the researcher accepted the null hypothesis and rejected the research hypothesis. There is no association between previous history of attending educational programme with level of knowledge regarding health hazards due tomobile phone over use

SUMMARY

Mobile phone overuse is common in adolescent in now a day. Most of the adolescents were not aware about all the health hazards due to mobile phone overuse and safety precaution to prevent health hazards. Awareness should be given to the community, based on their existing knowledge level. Hence the investigator is tried to assess the knowledge regarding health hazards due to mobile phone overuse among adolescents. Total 100 samples were selected by convenience sampling method and provided structured knowledge questionnaire to assess the knowledge regarding health hazards due to mobile phone over use. The results showed that most of the adolescent (61%) had moderate knowledge regarding health hazards due to mobile phone over use and there is no association between the levels of knowledge regarding health hazards due to mobile phone over use with selected demographic variable, which was non-significant at 0.05

level. Based on knowledge level, the researcher prepared a leaflet regarding health hazards due to mobile phone and safety precautions.

Major findings of the study

✓ Out of 60 samples, the results were,

- In relation to age, most of the samples, 40% belongs to the age group of 15 -16 years, 33% of samples were in the age group of 19 – 20 years, and 27% belongs to the age group of 17 – 18 years.
- With reference to the gender majority of samples 54% were males and 46% were females.
- In accordance with religion, majority of the samples 40% were belongs to Hindu religion, 38% of samples belong to Muslim religion, and22% of samples belong to Christian religion.
- Based on the educational qualification, majority 38% of adolescents had higher secondary education, 32% had the high school education, 23% had degree education and 7% had diploma education
- With reference to the occupation status of father, 62% of fathers are the nonprofessional, 32% belongs to the daily wager, 4% belongs to the unemployed and 2% belongs to the professionals.
- In relation to the occupation status of the mother, 73% belongs to home maker, 16% belongs to nonprofessional, 4% belongs to daily wager and unemployed and only 3% belongs to the professionals.
- Based on the monthly family income, majority 34% of samples had the monthly income <Rs10,000, 29% had Rs10,001 – 15,000, 23% had Rs15,001 – 25,000, 9% hadRs. 25,001 – 50,000 and 5% had > Rs.50,001
- With reference to ownership of mobile phone 58% had their own mobile phone and 42% had no their own mobile phone
- In relation to purpose of using mobile phone 50% used for purpose of social networks, 33% used for communication purpose and 17% used for study purpose
- In relation with time spend with mobile phone majority of sample 41% use mobile phone 1 -3 hours, 33% samples use <1 hour and 26% samples spend 4 -6 hours with mobile phone.
- With reference to usage of hand free devices 36% of samples rarely use hand free devices 27% samples use only if necessary, 24% samples not at all use hand free devices and 13% samples always use hand free devices While using mobile phones.

- Majority of samples 52% not had the previous history of attending the educational programme and 48% were had the previous history of attending the educational programme on health hazards due to mobile phone over use.
- Out of this 48 samples, 42% of samples were attended the educational programme< 6 month and 58% of samples attended educational programme>6 month before.

✓ The study revealed that among 100 samples, only 1% of the samples had adequate knowledge, 61% had moderate knowledge and remaining 38% had inadequate knowledge regarding health hazards due to mobile phone over use

✓ The result also revealed that among 100 samples, the knowledge in 'general aspect' was 70%, 'physical hazards' was 30.69%, 'psychological hazards' was 34.55%, 'social hazards' was 30.66% and the knowledge in the aspect of 'safety measures' was found to be 41.85%.

✓ The study also showed that there is no association between the knowledge of adolescents regarding health hazards due to mobile phone over use with their selected demographic variables such as age, gender, education, purpose of using mobile phone and previous history of attending educational programme. It showed that calculated value less than table value so null hypothesis were accepted.

CONCLUSION

Mobile phones are inevitable part of the life. But the middle and late adolescents had inadequate knowledge about Mobile phone over use. So awareness regarding health hazards due to mobile phone over use and safety measures among the adolescent is important to prevent the health hazards. The knowledge of the health hazards due to mobile phone overuse was moderate and the researchers suggests the need for strong emphasis on public education to increase awareness on health hazards due to mobile phone overuse and its preventive measures.

NURSING IMPLICATION

The investigator has drawn the following implications from the study which is of vital concern to the field of nursing practice, nursing education, nursing service, nursing administration and nursing research.

NURSING PRACTICE

➢ Information leaflet is a guiding resource for all nurses while providing education regarding health hazards due to mobile phone over use.

- The community health nurses can provide incidental education to public during the home visit.
- The nurses can provide information to ASHA workers and anganwadi workers regarding health hazards due to mobile phone over use, for educating the people during their home visits.
- The school health nurses can provide education to the school children regarding health hazards due to mobile phone over use as a part of heath promotion.
- Information leaflet was distributed to the adolescents for improving their knowledge regarding health hazards of mobile phone over use.

NURSING EDUCATION

- Detail description regarding health hazard due to mobile phone overuse can be included in nursing curriculum.
- Student nurses can be encouraged to conduct workshops and conferences regarding health hazards and its preventive measures of mobile phone over use.
- Awareness regarding health hazards due to mobile phone over use can broadcast to the public by Medias with the help of the Block Panchayath.
- Community health nursing students can organize mass health education programmes regardinghealth hazards due to mobile phone over use.

NURSING ADMINISTRATION.

- The nurse administrators can encourage their subordinates to become an active member in the support groups for educating public about the health hazards due to mobile phone overuse.

NURSING RESEARCH

- Findings of this study are a guiding source of nurse researcher to conduct other interventional studies regarding health hazards due to mobile phone overuse.
- A cross sectional descriptive survey can be conducted to identify the health hazard of mobile phone over use.
- The present study can be presented in international, national and state level conferences.
- The contents in the leaflet on health hazards due to mobile phone overuse and safety precautions are a reference material for developing tool for other researchers

LIMITATIONS

- The generalization of the study result is limited because of small sample size.
- The study period was limited to one week.

- The tool of study used for assessing the knowledge was structured , thus free response was restricted

RECOMMENDATIONS

Based on the finding of present study and keeping of all limitation in mind, few recommendation where offered by the investigator for further research.

- A comparative study can be conducted in different age groups in urban and rural area.
- A qualitative study can be done among mobile phone overuses
- Experimental study can be conducted by using different teaching methods to improve the knowledge, based on their existing knowledge level.
- Follow up study can be done to assess the effectiveness of the leaflet regarding health hazards due to mobile phone over use.

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