

A study to assess the effectiveness of a simulation instructional module on knowledge regarding the impact of mobile phone use on health status among second-year management students at the college of management, Bareilly, U.P.

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Abstract- Overall, the text offers an in-depth exploration of the multifaceted implications of mobile phone technology, from its role in communication evolution to its impact on health, education, and society. The presented study aims to assess the impact and effectiveness of an informational guide sheet on enhancing the knowledge of second-year management students regarding the impact of mobile phone use on health status. The study focuses on evaluating the knowledge levels of students, implementing an intervention in the form of an informational guide sheet, and analyzing the resulting changes in knowledge. The study population consists of second-year students at the College of Management, Bareilly, with a sample size of 60 students. A pre-experimental design is employed, utilizing pretest and posttest questionnaires to measure students' knowledge levels before and after the intervention. The data is collected through a self-administered questionnaire and observation. The results reveal that the majority of respondents exhibited inadequate knowledge about the impact of mobile phone use on health status in the pretest. However, after the intervention, there was a significant improvement in knowledge levels, with the majority of respondents demonstrating adequate knowledge in the posttest. The mean pretest knowledge score was notably lower than the mean posttest knowledge score, indicating the effectiveness of the informational guide sheet. The study also explores associations between demographic variables and knowledge scores, revealing significant links with factors such as age, gender, course of study, place of residence, and occupation of the mother. In conclusion, the study highlights the importance of providing informational resources to students to enhance their knowledge regarding the impact of mobile phone use on health status. The findings underscore the role of education and awareness in improving students' understanding of potential health risks associated with mobile phone use. The study recommends further research on a larger scale and suggests implementing similar educational interventions in various contexts to address the knowledge gap concerning mobile phone usage and health effects.

Keywords: Mobile phone, Health impact, health status, Management, Informational guide sheet, Knowledge,

Introduction:

The discourse underscores the inherent sociability of human beings and emphasizes the pivotal function of communication in facilitating the dissemination of perspectives, convictions, and emotions. Subsequently, the discussion transitions to an exploration of the transformative influence wielded by mobile phones on the human milieu, illuminating their evolutionary trajectory from mere instruments of communication to integral constituents of diurnal existence. Particularly salient within the student demographic, mobile phones have orchestrated a paradigm shift in the domains of communication, pedagogy, and recreation, thereby sculpting the contours of their scholarly and personal spheres. Nonetheless, the burgeoning reliance on these devices engenders apprehensions concerning their latent implications for physiological well-being.

As the entrenchment of mobile phone utilization within students' routines ensues, apprehensions regarding its ramifications on their holistic welfare come to the fore. The discourse further elucidates the cardinal role conferred upon technology within the contemporary milieu, notably encapsulated in the realm of mobile gaming. These digital diversions, situated on mobile platforms, evince a propensity to instigate compulsive behavioral patterns that encumber individuals' adeptness in regulating alternate facets of their livelihood. Collectively, the discourse endeavors to anatomize the profound ramifications imparted by mobile phones upon the domains of interpersonal correspondence, erudition, and recreational engagement during recent epochs. It conspicuously accentuates their assimilation into quotidian existence, particularly amid students, while concurrently acknowledging apprehensions regarding potential jeopardies to somatic equilibrium and the cultivation of addictive tendencies in association with technological enablers, including mobile games.

The presented text examines the multifaceted impact of mobile phones on human life and health, highlighting the evolution of communication from simple forms to the revolutionary concept of mobile phones. These devices have become essential tools for global communication, fostering interactions regardless of time or place.

The pervasive influence of mobile phones across societies is discussed, with people from diverse backgrounds embracing this technology. While mobile phones offer convenience, addiction and health risks emerge as key concerns. WHO's classification of mobile phone radiation as a potential carcinogenic hazard underscores the health implications, including the increased risk of brain cancer and Alzheimer's. Moreover, excessive phone usage, particularly among teenagers, exhibits addictive behaviors.

The narrative also covers mobile learning, wherein these devices have transformed education methodologies, especially among university students. The prevalence of smartphones and their utilization for learning purposes is underscored, particularly among young adults. However, concerns about the health consequences of prolonged phone use persist, with potential effects on physical, mental, and social well-being.

The technological revolution driven by mobile phones is highlighted; transforming various aspects of contemporary life. Their integration into daily routines facilitates communication, information access, and entertainment. Despite the benefits, apprehensions about health ramifications loom large, particularly among students whose lives have been fundamentally reshaped by mobile phones. The narrative also touches on the addictive nature of mobile games and their impact on individuals, touching on both therapeutic and adverse effects.

Today the fastest growing group of mobile phone users is the children and young people. This growth is actively encouraged by the professional advertising campaigns from the mobile phone industry in which the indispensability of the phones to their life styles. The conclusion emphasizes the rapid growth of mobile phone users, particularly children and young people, encouraged by strategic advertising campaigns. This societal shift underscores the need for comprehensive understanding and management of the potential health and social consequences of mobile phone usage.

Overall, the text offers an in-depth exploration of the multifaceted implications of mobile phone technology, from its role in communication evolution to its impact on health, education, and society.

Need for the study:

According to statistical predictions, the mobile gaming sector is expected to produce a sizable 34.6 billion in revenue in 2018, which will be the year. According to projections, mobile game income would continue to expand and overtake the market for all games by 2021, with an increase of an expected 106.4 billion rupees. Notably, India already has over 201 million mobile gaming players in the country as of 2016, and by 2022, that figure is expected to rise to almost 370 million. The observed behaviour pattern associated with mobile gaming, according to the World Health Organization (WHO) in 2016, exhibits a level of severity that causes a significant impairment in important domains like personal, family, social, educational, occupational, or other crucial aspects of functioning.

The mobile phone's pivotal role in achieving the Millennium Development Goal is highlighted, falling under the 8th goal of forming global partnerships for trade, aid, and development. Enhanced communication technology access, like mobile phones, offers new opportunities for information sharing. The susceptibility of adolescents and children to mobile phone addiction is discussed, driven by their attraction to these devices. Concerns arise due to children's tender tissues being more vulnerable to the effects of mobile phone use, prompting the recommendation to discourage usage among those less than 16 years. The extensive adoption of mobile phones among adolescents, especially those aged 14-18, is noted. Their continuous daily use, limited awareness of health risks, and usage habits are explored.

The article cites a lack of clear indications of short-term health hazards from epidemiological studies but highlights potential adverse effects based on non-thermal impacts of microwave radiation on biological tissues. Statistics related to the global population and adolescents' demographics, along with mobile phone use statistics, are presented. The rapid growth of mobile subscribers and their impact on tele density in India is outlined. The increasing incidence of brain cancer and potential risks associated with mobile phone use, such as parotid gland tumors, are mentioned.

Instances of excessive mobile phone use among students, including the phenomenon of "thumb-dexterous" syndrome, are discussed. Negative impacts on classroom behavior and potential health risks are noted, raising concerns about the misuse of mobile phones. The emergence of distracted driving due to mobile phone use among American students is highlighted, with their changing attention and perceptions being attributed to increased mobile phone utility.

The imminent enforcement of stringent measures in Bangalore to revoke licenses of repeat offenders caught using cell phones while driving is noted. The article explores a cross-sectional study assessing the impact of mobile phone use on students in Mangalore, revealing predominantly negative effects. The propensity for mobile phone misuse among Bangalore's students is discussed, leading to the government's decision to ban mobile phones on school campuses. The researcher's findings regarding mobile phone addiction's negative impacts on adolescents' physical and psychological health are summarized. Finally, the researcher's intention to evaluate the effectiveness of an information guide sheet on mobile phone use's health impact among students is mentioned.

OBJECTIVES:

- To assess the existing level of knowledge regarding the impact of mobile phone use on health status among students.
- To develop and administer an information guide sheet on knowledge regarding impact of mobile phone use on health status among students.
- To assess the effectiveness of an informational guide sheet on the impact of mobile phone use on health status among students through posttest knowledge scores.
- To determine the association between pretest knowledge of the impact of mobile phone use on health status among students and selected demographic variables.

HYPOTHESIS:

H1: There would be significant difference between the pretest and posttest knowledge scores regarding the impact of mobile phone use on health status among students.

H2: There would be significant association between the mean pretest knowledge scores regarding the impact of mobile phone use on health status among students and selected demographic variables.

ASSUMPTIONS:

- The Simulation Instructional Module can improve knowledge regarding the impact of mobile phone use on health status.
- The information guide sheet may enhance students' knowledge regarding the impact of mobile phone use on health status.
- The instructional content of the Simulation Instructional Module and the informational guide sheet is relevant and comprehensive.

DELIMITATION:

- The setting of the study is limited to the college of management.
- The sample size is constrained to 60 participants
- The study is confined to the Simulation Instructional Module, covering only management students.
- The study solely examines the health impact of mobile phone use, disregarding other potential effects and factors related to such usage.

REVIEW OF LITERATURE:

A review of literature related to the present study is organized under the following headlines:

- Literature related to Incidence of mobile phone use among students.
- Literature related to impact of mobile phone.
- Literature related to the effectiveness of information guide-sheet.

METHODOLOGY:

Research approach:

An approach to the study known as quantitative research was utilised. The goal of the study to assess the effectiveness of a Simulation Instructional Module on Knowledge regarding the Impact of Mobile Phone Use on Health Status Among Second-Year management Students. It is pre-experimental research based to answer a question, satisfy curiosity, solve problem or establish a cause-and-effect relationship.

Research design:

The study utilized a pre-experimental design to evaluate students' knowledge concerning the impact of mobile phone use on health status. This approach aimed to assess the effectiveness of the Information Guide Sheet for students.

Group	Pre-test	Intervention	Post-test
Management students	O ₁	X	O ₂

Key:

O1- Pre-test assessment for knowledge regarding Impact of mobile phone use on health status among students.

X- Self-administered questionnaire on Impact of mobile phone use on health status among students.

O2- Pre-test assessment for knowledge regarding Impact of mobile phone use on health status among students.

Research Variables:

Dependent variable: Knowledge regarding the impact of mobile phone uses on health status among second-year management students.

Independent variables: Informational Guide sheet.

Demographic variables: In this study, demographic variables are used such as Age, Sex, Course of study in the college, Place of resident, Family income, Occupation of the father, Occupation of the mother, Type of mobiles phone, Duration of mobile phone used per day, did you receive any information regarding, Previous source of information.

Setting of the Study:

The study was conducted at college of management

Rationale for Selecting this Setting:

The rationale for selecting this setting for the study was based on the researcher's familiarity with the setting, convenience, expected cooperation from the authorities in obtaining permission, comprehensible language, and considerations of time and economics.

Population:

The target population consists of second-year students at the College of Management in Bareilly.

Sample:

The sample in the present study consisted of 60 students studying in the College of Management in Bareilly.

Sample Size:

The study included a sample size of 60 students from the College of Management in Bareilly.

Sampling Technique:

In this study, a non-probability convenience sampling method was employed.

Sampling Criteria:**Inclusion Criteria:**

- Enrolled students at the college of management
- Students present and accessible during the data collection phase.
- Students capable of reading and writing in English.

Exclusion Criteria:

- Students who opt not to engage in the study.
- Students unavailable during the data collection period.

Development and Description of Tools:**Part-1: Socio-Demographic Data:**

The investigator developed a tool to collect socio-demographic data from the study participants, including various demographic variables.

Part-II: Questionnaire:

The investigator designed a self-administered questionnaire and observation to assess the effectiveness of the informational guide sheet on knowledge regarding the impact of mobile phone use on health status among students.

Scoring Procedure:

For convenience, the level of knowledge of primary school teachers regarding attention deficit hyperactivity disorder was divided into three categories: adequate, moderate, and inadequate. Scoring (correct answer 1 and wrong answer 0 marks) was allotted.

Level of knowledge	Score
Adequate	Above 75%
Moderate	50-75%
Inadequate	Below 50%

Table 1: level of knowledge scoring regarding the Impact of Mobile Phone Use on Health Status

Scoring pattern:

- ✓ Total Maximum score: 30
- ✓ Minimum score: 00
- ✓ Each correct answer scores 1 mark.
- ✓ Each wrong answer scores 0 mark

Criteria Measures: All the items of the tool were analyzed using descriptive statistics (frequency distribution, percentage distribution, and graphs) and inferential statistics (Chi-square).

Content Validity: The content validity of the knowledge questionnaires was determined by experts' opinions. The experts were requested to provide valuable suggestions to develop a more relevant tool for the study. Changes were incorporated based on their suggestions.

Ethical Consideration: To conduct the research study in the College of Management, written permission was obtained from the principal. Confidentiality was assured to all the subjects to secure their formal cooperation All participants provided an informal consent form.

Reliability of the Tool: The reliability of measuring instruments is a major criterion for assessing quality and adequacy. The reliability of instruments refers to the degree of consistency with which they measure the attributes they are designed to measure. $R > 0.93$.

Data Collection: Pretest and posttest questionnaires were administered to the participants.

Plan for Data Analysis: It was decided to analyze the data using both descriptive and inferential statistics based on the objectives and hypotheses of the study. A master data sheet was prepared by the investigator for data analysis. The data will be analyzed in terms of descriptive statistics (mean, percentage, standard deviation) and inferential statistics (i.e., Chi-square).

Descriptive: Frequency, percentage, and means were used for the data analysis of knowledge assessment.

Inferential: The "Chi-square" test was used to determine the association between demographic variables and knowledge scores.

Intervention: Information guide sheet was distributed regarding impact of mobile use on health among students.

RESULTS:

The majority (31%) of respondents belonged to the age groups of 16-19 and 19-22 years. Most respondents (53%) were male, and the majority (38%) were studying B.Sc. A significant proportion (48%) resided at home, with 31% having a family income between Rs. 5001-7000. Furthermore, 31.6% of respondents' fathers were private employees, and 38% of their mothers were housewives. The study revealed that 48% of respondents used basic mobile phones with internet access, while 45% used their mobile phones for less than one hour daily. Approximately 63% of respondents had received information regarding the impact of mobile phone use, with 31.6% obtaining information from family members or relatives.

In the pretest, the majority (83%) of respondents demonstrated inadequate knowledge, while 16% exhibited moderate knowledge, and none possessed adequate knowledge of the impact of mobile phone use on health status among students. In the posttest, a significant improvement was observed, with 73% of respondents demonstrating adequate knowledge and 26% showing moderate knowledge.

The mean pretest knowledge score was 15.98 (SD = 7.68), while the mean posttest knowledge score was 30.77 (SD = 4.61). A t-value of 12.411 at a p-value of 0.001 indicated the effectiveness of the informational guide sheet on the impact of mobile phone use.

Significant associations were observed between knowledge scores on the impact of mobile phone use and demographic variables such as age ($\chi^2 = 8.40$), gender ($\chi^2 = 6.90$), course of study ($\chi^2 = 9.15$), place of residence ($\chi^2 = 8.82$), and occupation of the mother ($\chi^2 = 9.10$), supporting H1.

Nevertheless, no statistically significant correlations were observed between family income ($\chi^2 = 4.64$), father's occupation ($\chi^2 = 2.98$), mobile phone type ($\chi^2 = 1.76$), and information duration ($\chi^2 = 2.07$). As a result, H2 was rejected.

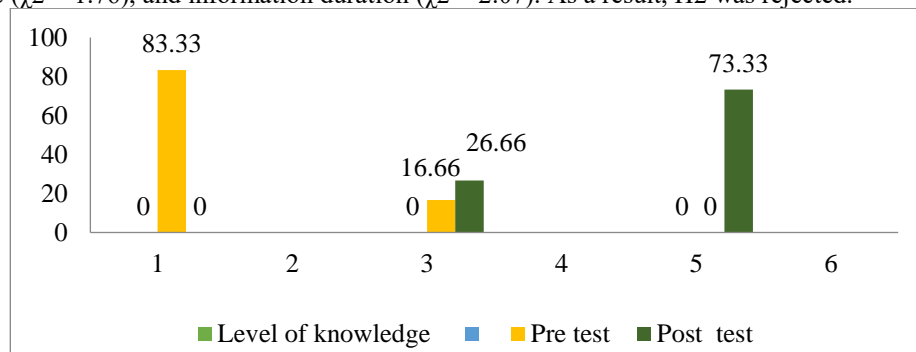


Figure 1: Bar diagram representing the level of knowledge

NURSING IMPLICATION:

Nursing practice:

- The expected role of the professional nurse emphasizes activities that improve knowledge among degree students.
- Nurses plan self-administered questionnaires for degree college students these questionnaires can be used to enhance knowledge regarding the impact of mobile phone use on students' health status.
- The present study has demonstrated the effectiveness of an information guide sheet regarding the impact of mobile phone use on health status among students in a selected management college. The investigator, as a nurse, recognized the need for nurses to act as facilitators for students, aiding in improving their knowledge level to prevent adverse effects of mobile phone use on health status. The nursing approach towards degree students involves a structured teaching program that was helpful in enhancing knowledge regarding the impact of mobile phone use on health status.
- Nurses should organize awareness programs for degree students regarding the information guide sheet.
- In order to adapt to changing trends, nurses should utilize different technological skills to meet the increasing demands of nursing care, employing information guide sheets regarding the impact of mobile phone use on health status.

Nursing Education:

- Nursing education aims to bring about behavioral changes in people, preparing them to effectively fulfill their roles as individuals and responsible citizens.
- As nurse educators, there are abundant opportunities for nursing professionals to educate students. This study emphasizes the significance of short-term in-service education regarding the impact of mobile phone use on health status.

Nursing Administration:

Nursing administration involves organizing and directing human and material resources to achieve desired nursing outcomes.

Nursing administrators can participate in developing protocols for health education programs related to the impact of mobile phone use on health status.

Nursing administrators can mobilize available resources and personnel for the health education of students regarding the impact of mobile phone use on health status.

Nurse administrators should explore their potentials and encourage innovative ideas in preparing appropriate teaching materials. They should also ensure sufficient manpower, funding, and materials for disseminating health information.

Nursing Research:

- Nursing research aims to explore new solutions and remedies to overcome health-related problems.
- This study helps nurse researchers educate students to adopt alternative methods based on their demographic, socio-economic, cultural, and political characteristics.
- Nurses should engage in studies on the impact of mobile phone use from various aspects and publish them for the benefit of the public and youths. Public and private agencies should also encourage research in this field through funding and resources.

RECOMMENDATIONS:

Based on the findings of the study, the following recommendations have been made:

- A similar study could be replicated on a larger sample to generalize the findings. A quasi-experimental study could be undertaken with a control group for an effective comparison of the results.
- A comparative study could be conducted between males and females.
- A similar study could be conducted, focusing on different aspects.
- A study could be carried out to evaluate the efficiency of various teaching strategies, such as SIM, pamphlets, leaflets, and computer-assisted instruction, regarding the impact of mobile phones.
- Consequently, further studies involving larger samples are recommended to generalize the findings. Additionally, more research is needed to raise awareness about the health hazards and effects of mobile phone use.

LIMITATION:

- The study is delimited to selected management college students.
- The timeframe for data collection is restricted to a duration of 30 days.

CONCLUSION:

The main focus of the study was to evaluate the effectiveness of information guide sheet on knowledge regarding impact of mobile phone use on health status among students; data was collected from 60 samples through proportionate stratified random sampling technique. Many studies show that there is a lack of knowledge regarding impact of mobile phone use on health status among students. Information guide sheet is the best method to improve knowledge on impact of mobile phone use on health status among students. The knowledge evaluation yielded insufficient and unfavorable results. In response, an information guide sheet was provided to enhance and sustain adequate knowledge. The investigator successfully achieved the objective of assessing knowledge based on these findings. An informational guide sheet was developed and distributed.

ACKNOWLEDGEMENTS

Authors wish to extend sincere gratitude to all the students in selected college, Bareilly, U.P. for active participation in our study.

FUNDING

The research, writing, and/or publishing of this paper were all done without any financial assistance from the author.

CONFLICTS OF INTEREST

Regarding the publishing of this work, the authors state that they have no conflicts of interest.

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