

A Study to Assess the Effectiveness of Awareness Programme on Knowledge Regarding Health Problems Related to Smart Phone Addiction Among Adolescents Studying in a Selected School, Bangalore, Karnataka

Kavita Reddy^{1*}, Sijo Koshy²

Abstract

Aim: This study assesses the effectiveness of an awareness program on adolescents' knowledge of health problems related to smartphone addiction. **Objectives:** (1) Evaluate adolescents' understanding of health issues linked to smartphone addiction. (2) Measure the impact of the awareness program on their knowledge by comparing pre-test and post-test scores. (3) Investigate correlations between pre-test knowledge and sociodemographic variables. **Method:** A quantitative evaluative approach was used. The one-group pre-test post-test research design involved 60 adolescents (aged 13–16) from a school in Bangalore. Non-probability convenient sampling was employed, and data was collected via a structured questionnaire. Analysis was conducted using Excel. **Results:** Most participants (50%) were aged 15–16 years, and the majority (60%) of them were female. Half (50%) were in the 10th grade, and 80% belonged to nuclear families. About 60% of fathers had completed graduation, while 40% of mothers had finished secondary education. Most fathers (60%) were non-government employees, and the same percentage of mothers were non-government employees. Half (50%) of the subjects had a family income exceeding 30,000 rupees/month. Over half (67%) spent less than 2 hours daily on smartphones. A majority (85%) did not own smartphones, and 60% received information from family and friends. In the pre-test, 70% had average knowledge, while 30% had poor knowledge, and none had good knowledge. In the post-test, 73% had good knowledge, 27% had average knowledge, and none had poor knowledge. The pre-test knowledge score was 12.93, while the mean post-test knowledge score was 21.7. The 't' value (17.97) was higher than the table value at the 0.05 level of significance. The average knowledge score increased by 8.77 points. **Conclusion:** The awareness program significantly improved students' understanding of health issues related to smartphone addiction, indicating that it was effective and feasible.

*Author for Correspondence

Kavita Reddy
E-mail: kavired999@gmail.com

¹Professor/Hod, Department of Pediatric Nursing, Aditya College of Nursing, # 12 Kogilu Main Road, Yelahanka Bangalore, Karnataka, India

²Professor/Principal, Maruti Institute of Nursing, Village Danitola, Tehsil Balod, Chhattisgarh, India

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INTRODUCTION

There are many accounts of individuals displaying complicated smart phone violence habits with possibly adverse effects on their family, work and personal life after becoming accustomed to smart phones in developed nations such as the US and UK [1].

Studies have shown that, smart phone addiction is associated with insomnia, depression and other

mental disorders. Apart from mental health, it has also been linked with physical wellbeing. For example, prolonged smartphone usage, characterized by the small screen size, touch screen interface, and the act of holding it for extended periods, can elevate the likelihood of eye-related issues, finger dysfunction, neck discomfort, and various musculoskeletal problems. Additionally, excessive smartphone usage can result in disruptions in daily activities, leading to distractions, distorted time perception, reduced productivity, and adverse effects on personal relationships. It also consumes valuable time that could have been utilized more productively and is linked to other unhealthy lifestyle behaviours like physical inactivity [2].

A cross-sectional study was undertaken among adolescent students attending schools in Davangere, Karnataka, India. The study included the participation of 253 adolescents. Information on mobile phone usage patterns and mobile phone dependency was gathered through a questionnaire. Data analysis was performed with the assistance of SPSS software, and the analysis involved the application of pertinent statistical tests, including Chi-Square and Fischer Exact test.

The findings indicated that the mean age of the participants was 14.65 years. The majority of participants owned a smartphone, comprising 205 out of 253 participants (81%). On average, they spent 101 min daily on their mobile phones, with a mean usage duration of 3.26 years. The study revealed a prevalence of mobile phone dependency among 170 participants (67.2%). Almost half of the students, 125 of them (49%), reported experiencing a false perception of their mobile phone ringing, and 88 students (34.8%) mentioned that they stayed up late due to mobile phone usage. In conclusion, the study highlighted that mobile phone dependency is an emerging public health concern, especially due to its adverse effects on younger individuals. However, mobile phones can also be beneficial when used wisely. Therefore, adolescents require proper guidance and motivation for the responsible and advantageous use of mobile phones [3, 4].

Students have the potential to cause disruptions to others through their ringtones and can also misuse the camera feature on their cell phones. They use their cell phones for various purposes, including sending text messages, sharing digital photos, and exchanging short digital video clips, alongside making calls. Many of these activities can become unsuitable and unwanted within middle and high school classrooms. Regrettably, some students go to the extent of sending threatening and offensive messages to teachers. The growing prevalence of mobile phone usage has elevated the range of possible health hazards for users [5–8].

OBJECTIVES

1. Evaluate the current understanding of health issues associated with smartphone addiction among adolescents.
2. Determine the impact of an awareness program focused on health problems related to smartphone addiction among adolescents by comparing their pre-test and post-test knowledge scores.
3. Investigate the potential correlations between the pre-test knowledge levels regarding smartphone addiction-related health problems and various socio-demographic variables among adolescents.

MATERIAL AND METHODS

An evaluative survey approach was considered as the best way to assess the effectiveness of awareness programme on knowledge regarding health problem related to smart phone addictions among adolescent students. A quantitative evaluative approach is considered as appropriate. This study employed a pre-experimental design, specifically a single-group pre-test post-test research design. A total of 60 adolescent students' age group of 13–16 years in a selected school, Bangalore, Karnataka was considered as population, non-probability convenient sampling technique was used in this study. A carefully designed and conducted questionnaire was employed to gather responses. The collected

data were analysed with the help of descriptive and inferential formula to draw meaningful inferences and conclusion which was obtained using excel.

MAJOR FINDINGS OF THE STUDY

Evaluating the Pre-test and Post-test Knowledge Scores of Adolescents Concerning Health Issues Related to Smartphone Addiction

In pretest, majority, 42 (70%) of the respondents have average knowledge, 18 (30%) of the respondents have poor knowledge and none of them have good knowledge; whereas in post-test, majority, 44 (73%) of the respondents have good knowledge, 16 (27%) of the respondents have average knowledge and none of them have poor knowledge level on health problem of smart phone addiction among students.

Area wise Pre-test and Post-test Knowledge Score of Adolescents Regarding Health Problem on Smart Phone Addiction

The findings of the current study indicate that the highest mean percentage for the pretest knowledge score is 57% with a standard deviation (SD) of 1.147 in the aspect of smartphone prevalence, the mean percentage knowledge score is 46.88% with SD 1.348 in the aspect of health effect on misuse of smart phone, the mean knowledge score is 43.75% with SD 0.836 in the aspect of symptoms of smart phone addiction, the mean knowledge score 35.66% with SD 1.783 in the aspect of precaution and the lowest mean knowledge score of 35% with SD 1.634 in the aspect of management of smart phone addiction [9].

In post-tests, the maximum mean percentage post-test knowledge score is 80.6% with SD 0.663 in the aspect of prevalence of smart phone, the mean percentage knowledge score is 76.25% with SD 0.746 in the aspect of symptoms of smart phone addiction, the mean knowledge score 73.6% with SD 0.701 in the aspect of precaution, the mean knowledge score 70.03% with SD 0.936 in the aspect of health effect on misuse of smart phone and the lowest mean knowledge score of 66% with SD 1.059 in the aspect of management of smart phone addiction.

Analysis of the Effectiveness of Awareness Programme Among the Adolescents Regarding Health Problem on Smart Phone Addiction

The finding of the study shows that overall mean pretest knowledge score of the students was 12.93 and mean post-test knowledge score was 21.7 and calculated 't' value (17.97) was greater than the table value at 0.05 level of significance. The average variance between pretest and post-test knowledge scores was 8.77. The finding reveals that there was effectiveness of awareness program among the adolescents regarding health problem on smart phone addiction.

Correlation Between the Pre-test Knowledge Score and Chosen Demographic Factors

The computed χ^2 value of the adolescent's knowledge regarding health problem on smart addiction was not significant with all the socio demographic variables viz. age, gender, educational status, types of family, education of fathers, occupation of parents, family income per month, availability of mobile, sources of information at $p > 0.05$ level [10].

NURSING IMPLICATIONS

Nursing students must possess extensive knowledge on ill effects of smart phone misuse and the awareness to be taken. Nurse educators should motivate the students to take up evaluative studies regarding health problems related to smart phone addiction.

Nursing Education

Nursing students must possess extensive knowledge on ill effects of smart phone misuse and the awareness to be taken. Nurse educators should motivate the students to take up evaluative studies regarding health problems related to smart phone addiction.

Nursing Practice

The nurses have a vital role in educating the students regarding adverse effects of smart phone misuse and its ill effect on the health. Nurses can play an instrumental role in identification of prevalence of smart phone use in students. Recognizing improper smartphone use among school students presents a challenge to healthcare experts. The nursing professionals working in the school setting will find an opportunity to teach and improve the knowledge of school students, their parents and teachers regarding health problems of smart phone addiction.

Nursing Administration

Planning and organizing such work require efficient team spirit, planning for manpower, money, material, method, time and good will to conduct successful education programme. They can initiate policy making at the school and community settings to develop public awareness programme regarding health problems of smart phone addiction. Nurse administrators need to organize in-service educational programs regarding awareness of health problem of smart phone misuse in school.

Nursing Research

The study will serve as a valuable reference material for future investigators. Subsequent research investigations can be carried out building upon the findings of this current study. Research should be continued on newer practices and methods of teaching focusing on effective interventions.

CONCLUSION

Awareness program implemented during the study had equipped the students with better knowledge regarding health problems related to smart phone addictions. Hence the awareness program regarding health problems related to smart phone addictions among adolescents was instructionally effective, appropriate and feasible.

Recommendations

Based on the findings of the study, following recommendations are stated:

1. Similar study may be undertaken with a larger sample to have a better generalization.
2. The same study can be conducted with an experimental research approach having a control group with larger samples.
3. A study to assess the knowledge of parents regarding health problems of smart phone misuse by their children.
4. A study can be done in young children to know the prevalence rate of smart phone misuse.
5. A study can be done to identify the influencing factors of smart phone misuse among school students.
6. A prospective study can be conducted to assess the effect of periodical awareness programme regarding health problems of smart phone misuse.
7. A study can be done to identify the predisposing factors of problems of smart phone misuse.
8. A comparative study can be done between urban school children and rural school children regarding health problems of smart phone misuse.

Limitations

- The adolescent student studying in Aditya National public school, Bangalore.
- Students who are willing to participate in study
- 60 high school students.

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