

A study to assess the effectiveness of information guide sheet on knowledge regarding impact of mobile phone use on health status among students in selected degree college at Chengalpattu District

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OBJECTIVES:

1. To assess the level of knowledge regarding impact of mobile phone use on health status among students.
2. To develop and administer a information guide sheet on knowledge regarding impact of mobile phone use on health status among students.
3. To assess the effectiveness of information guide sheet on impact of mobile phone use on health status among students by the posttest knowledge score.
4. To find out the association between the pre test knowledge regarding impact of mobile phone use on health status among students with selected demographic variables such as age, gender, educational status, religion, place of resident, family income, owns a mobile, type of mobile, duration and frequency of use, and sources of information.

HYPOTHESIS:

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

H2- There is significant association between the mean pretest knowledge scores regarding impact of mobile phone use on health status among students with selected demographic variables.

METHODOLOGY: An Evaluative survey approach was considered as the best way to assess the effectiveness of information guide sheet on knowledge regarding impact of mobile phone use on health status among students. Pre experimental design was used in this study.

Part-I Socio-Demographic Data The investigator constructed the tool to collect the Socio - demographic data of the study subjects. It consists of demographic variables.

Part-II Investigator prepared self-administered questionnaire containing 35 knowledge questions regarding Impact of mobile phone use on health status. The data gathered was analyzed and interpreted interns of

objectives of the study. The mean, SD, Mean Percentage, percentage of knowledge were analyzed by using descriptive and inferential statistics.

RESULTS: Majority (31%) of the respondents belongs to the age group of 16-19 years & 19-22 years. Majority (53%) of the respondents are male and. Majority (38%) of the respondents are studying B.Sc. Majority (48%) of the respondents are residing at home. Majority (31%) of the respondents belongs to the family income group of Rs.5001- 7000. Majority (31.6%) of the respondent's father are Private Employees. Majority (38%) of the respondents mothers are House Wife. Majority (48%) of the respondents are using Basic set with internet. Majority (45%) of the respondents are using mobile phone less than 1 hr duration per day. Majority (63%) of the respondents received Information regarding Impact of mobile phone use. Majority (31.6%) of the respondents have received information from family members/relatives. In Pre-test Majority 50(83%) of the respondents had Inadequate Knowledge, 10(16%) of the respondents had moderate knowledge and none of them had adequate Knowledge in pre test knowledge level on impact of mobile phone use on health status among students. In Post-test Majority 44(73%) of the respondents had adequate knowledge, 16(26%) of the respondents had moderate Knowledge and none of them had inadequate knowledge in post test knowledge level on impact of mobile phone use on health status among students. Mean of the pre-test knowledge score is 15.98 with standard deviation 7.68 and Mean of the post test knowledge score is 30.77 with standard deviation 4.61. t-value 12.411 at p value 0,001 it computed to determine the effectiveness of information guide sheet on impact of mobile phone. There was significant association between knowledge score on impact of mobile phone use among students and the selected demographic variable such as age ($\chi^2=8.40$), gender ($\chi^2=6.90$), course of study ($\chi^2=9.15$), Place of resident ($\chi^2=8.82$), and occupation of the mother ($\chi^2=9.10$) was found. Hence H1 accepted. There was no significant association between Family income ($\chi^2=4.64$), occupation of the father ($\chi^2=2.98$), Types of mobile phone ($\chi^2=1.76$), Duration of mobile phone use per day ($\chi^2=3.26$), Information received ($\chi^2=5.01$), and Source of Information ($\chi^2=2.07$). Hence H1 is rejected.

CONCLUSION AND RECOMMENDATION: The overall findings of the study clearly showed that students had inadequate knowledge on Impact of mobile phone use on health status. Thus, to conclude the investigator has achieved the objective for assessing knowledge based on the study finding. Information guide sheet has been developed and distributed. Therefore, a similar study can be replicated on a large sample to generalize the findings and further more studies are required to provide awareness about health hazards of mobile phone use or effects of mobile phone

INTRODUCTION

Human being is a social animal. To socialize with others, we need to share over views, beliefs, feelings etc. This sharing is facilitated by communication. Communication is the transfer of information from person to person. This may be in form of sound transmission such as human speech, the beating of the drum, or even the bird's call. It can also be in a form that requires sight like writing, pictures, and signals, gestures and a form that requires the utilization of other senses. Mobile phone is a small, portable communication device that enables people to make phone calls whenever where they are. Signal transmission is the very basic concept for mobile phone. The convenience of mobile phone is allowing

people to communicate with one another without the limitation of regions and time. Mobile phone is a device providing two-way communication.

RESEARCH METHODOLOGY

Research Methodology is the way of solving the problem. It explains the various steps that are generally adopted by a researcher in studying the research problem along with the logic behind it. Methodological research is the research designed to develop or refine procedures for obtaining, organizing data. It includes research approach, research design, variables setting of the study, and population, inclusive and exclusive criteria for selection of the sample, sampling technique, sample size, description of tool, scoring, structured teaching programme, content validity, pilot study, and procedure for data collection and plan for data analysis.

Research Approach The selection of research is the basic procedure for the research of enquiry. The research approach helps the researcher to determine what data to collect and how to analysis it. It also suggests possible conclusions to be accomplished comparative study with evaluative approach were considered as an appropriate one.

Evaluative research approach is generally an applied research that involves the findings out of how well a programme: practice, procedure or policy is working. The major aim of evaluative research is to achieve, some practical goal, that is, to have major emphasis on utility. Hence, this approach is most widely used when the primary objective is to determine the extent to which given procedures achieve some desired result. With a view of accomplishing the objectives, in developing and evaluating the Information Guide Sheet, Evaluative survey approach was considered to be most appropriate.

RESEARCH DESIGN: The term —research design|| refers to the plan of organization of a scientific investigation. Research design helps the researcher in the selection of subjects, identification of variables, their manipulation and control, observations to be made and types of statistical analysis to be used to interpret the data. The research design selected for the study was one group pre-post test design (01 X 02), which belongs to Pre-experimental design, was adopted to this study. Pretest was done followed by administration of self-administered questionnaire and then conducted post test for the same group after 7 days. Pre-experimental design was used in the study to assess the knowledge of Students on Impact of mobile phone use on health status among students to test the effectiveness of Information Guide Sheet for students.

Group	Pre-test	Intervention	Post-test
Degree college students	administration of selfadministered questionnaire on day 1	self-administered questionnaire on day 1	administration of self-administered questionnaire on day 8
	O1	×	O2

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.

Setting

The study was conducted in Annai Theresa Arts and Science College at Thirukalukundram in Chengalpattu District.

- Feasibility of conducting the study
- Availability of sample
- **VARIABLES UNDER INVESTIGATION:** Variable is a quality of an organism, group or situation that takes on different values. Research Variable are concepts at various levels of abstraction that are measured, Manipulated and controlled in a study.

Independent variables: The variables which can be purposely manipulated and controlled in a study. In the present study the independent variable is the Information guide sheet.

Dependent variable: it refers to the Knowledge regarding impact of mobile phone use on health status among students.

EXTRANEOUS VARIABLE: (Demographic variable): Independent variables that are not related to the purpose of the study, but may affect the dependent variable are termed as extraneous variable. In the present study the selected demographic variables include age, gender, educational status, religion, place of resident, family income, type of mobile, owns a mobile, duration and frequency of use, and source of information.

Population: Population is a group whose member possesses specific attributes that a researcher is interested in study. The target population for the present study were degree college students' in Annai Theresa Arts and Science College at Thirukalukundram in Chengalpattu District.

Sampling:

Sampling is a process of selecting a group of people, events, behaviour or other elements with which to conduct a study.

Sample: The sample study was 60 students who all are studying in Annai Theresa Arts and Science College at Thirukalukundram in Chengalpattu District.

Sampling Technique: The Sample technique will be adapted for the study is proportionate stratified random sampling.

Sample Criteria:

I. Inclusion Criteria

1. Boys and girls those who have age between 18 to 22 years.
2. Students who give consent for the study.
3. Students who are available at the time of study.
4. Students who can read and write English.

II. Exclusion criteria

1. Students who are not willing to participate in the study.
2. Students who are not available during data collection.

Development of criteria rating scale:

Criteria rating scale for validation of tool was developed.

Part-I- Comprised of demographic data.

Part-II- Comprised of self-administered questionnaire on Impact of mobile phone use on health status among students Which had very relevant, relevant, needs modification, not relevant and remarks of experts.

Description of tool. The tool for the data collection consists of two sections.

Section A: Socio-demographic variables It deals with demographic variables which include age, gender, educational status, religion. Place of resident, family income, owns a mobile, type of mobile, duration and frequency of use, and source of information.

Section B: Knowledge regarding Knowledge regarding impact of mobile phone use on health status among students. This part consists of 35 multiple choice questions which include the following selected aspects on impact of mobile phone use on health status among students.

1. Basic concepts of knowledge regarding mobile phone
2. Effects of mobile phone
3. Effects of mobile phone on health
4. Effect of mobile phone on behaviour
5. Mobile phone addiction

6. Precautions

ASPECT WISE KNOWLEDGE SCORES REGARDING IMPACT OF MOBILE PHONE USE:**Table 1: Aspect wise mean, S.D and mean % score for the pre test knowledge level**

Sl.no	Knowledge variables	No.of items	Max score	Mean	Mean %	SD
1.	Basic concepts of knowledge regarding mobile phone	3	3	1.51	50.53	0.67
2.	Effects of mobile phone	6	6	2.55	42.5	1.03
3.	Effects of mobile phone on health	10	10	4.31	43.1	2.09
4.	Effect of mobile phone on behavior	7	7	3.1	44.28	1.75
5.	Mobile phone addiction	3	3	1.51	50.33	0.89
6.	Precautions	6	6	3	50	1.55
7.	OVERALL	35	35	15.98	45.67	7.98

The above table and diagram shows that the maximum mean knowledge score is 50.53% with SD 0.67 in the aspect of basic concepts regarding mobile phone use, the mean knowledge score is 50.33% with SD 0.89 in the aspect of mobile phone addiction, the mean knowledge score is 50% with SD 1.55 in the aspect of Precautions, the mean knowledge score is 44.28% with SD 1.75 in the aspect of effect of mobile phone on behavior, the mean knowledge score is 42.5% with SD 1.03 in the aspect of effects of mobile phone, and the lowest mean knowledge score is 43.1% with SD 2.09 in the aspect of effects of mobile phone on health,. The overall Pre-test Knowledge score regarding Impact of mobile phone use on health status among students is 46.67% and SD is 7.98.

Table 2: Aspect wise mean, S.D and mean % score for the post test knowledge level

Sl.no	Knowledge variables	No.of items	Max score	Mean	Mean %	SD
1.	Basic concepts of knowledge regarding mobile phone	3	3	2.91	97	0.27
2.	Effects of mobile phone	6	6	5.25	87.5	0.87
3.	Effects of mobile phone on health	10	10	8.65	86.5	1.41
4.	Effect of mobile phone on behavior	7	7	6.03	86.14	1.07
5.	Mobile phone addiction	3	3	2.8	93.33	0.4
6.	Precautions	6	6	5.13	85.5	0.87
7.	OVERALL	35	35	30.77	87.91	4.617

The above table(no 13) and diagram shows that the maximum mean knowledge score is 97% with SD 0.27 in the aspect of basic concepts regarding mobile phone use, the mean knowledge score is 93.33% with SD 0.40 in the aspect of mobile phone addiction, the mean knowledge score is 87.5% with SD 0.87 in the aspect of effects of mobile phone, the mean knowledge score is 86.14% with SD 1.07 in the aspect of effect of mobile phone on behavior, the mean knowledge score is 86.5%% with SD 1.41 in the aspect of effects of mobile phone on health, and the lowest mean knowledge score is 85.5% with SD 0.87 in the aspect of Precautions. The overall Post-test Knowledge score regarding Impact of mobile phone use on health status among students is 87.91% and SD is 4.61.

Table 3: Effectiveness of information guide sheet on impact of mobile phone use:

Sl.no	Knowledge variables	PRETEST	POSTTEST	tVALUE	PVALUE
1.	Basic concepts of knowledge regarding mobile phone	1.51±0.67	2.91±0.27	14.77277	<0.001*
2.	Effects of mobile phone	2.55±1.035	5.25±0.87	15.45003	<0.001*
3.	Effects of mobile phone on health	4.31±2.09	8.65±1.41	13.32827	<0.001*
4.	Effect of mobile phone on behavior	3.1±1.75	6.03±1.07	11.05617	<0.001*
5.	Mobile phone addiction	1.51±0.89	2.8±0.40	10.22764	<0.001*
6.	Precautions	3±1.55	5.13±0.87	9.277129	<0.001*
7.	OVERALL	15.98±7.98	30.77±4.61	12.411	<0.001*

Significance at 5% level: t value is computed to determine the effectiveness of information guide sheet on impact of mobile phone use. The following research hypothesis is stated. H1- There was a significant difference between the pretest and posttest knowledge scores regarding impact of mobile phone use on health status among students. The above table and diagram shows that the mean post test knowledge score 30.77 is higher than the mean Pre-test score 15.98. The mean difference between pre-test and Post test score (14.79) of knowledge is significant at 0.05% level as t-test value 12.411 at P value 0.001. Hence, the research hypothesis H1 is accepted. This indicates that the information guide sheet is effective in increasing the knowledge regarding impact of mobile phone use on health status among students.

Implications of the Study The findings of the study have implications in the field of nursing practice, nursing education, nursing administration and nursing research.

1. Nursing Practice: The expected role of the professional nurse emphasizes those activities, which improves the knowledge among degree students. Nurses plan self-administered questionnaire for degree college students, selfadministered questionnaire can be used to improve knowledge regarding impact of mobile phone use on health status among students. The present study has proved the effectiveness of information guide sheet regarding impact of mobile phone use on health status among students in selected degree college at Thirukalukundram in Chengalpattu District. The investigator as a nurse felt the need that nurses should act as facilitator for students to improve the knowledge level to prevent adverse effects of

mobile phone use on health status among students. Nursing approach towards the degree students through structured teaching programme which was helpful on to improve the knowledge regarding impact of mobile phone use on health status. Nurses should organize awareness programme for degree students regarding information guide sheet. In order to compact the changing trends, nurses should use different technologies skill and to fulfill the increasing demands of nursing care by using information guide sheet regarding impact of mobile phone use on health status.

2.Nursing Education: Nursing education is to bring changes in the behavior of people so as to prepare them to play their roles effectively as an individual and as a good responsible citizen. As a nurse educator, there are abundant opportunities for nursing professionals to educate the students. The study emphasizes significance of short term in service education regarding impact of mobile phone use on health status.

3. Nursing Administration: Nursing administration is to organize and direct human and material resources to achieve desired nursing outcomes. The nursing administrator can mobilize the available resource personnel towards the health education of students regarding impact of mobile phone use on health status. The nurse administrators should explore their potentials and encourage innovative ideas in the preparation of appropriate teaching material. She should organize sufficient manpower; money and material for disseminating health information.

4. Nursing Research: Nursing research is to explore new solutions and remedies for overcome the health related problems. This study helps nurse researchers to educate the students to participate in adopting this alternative method according to their demographic, socioeconomic, cultural and political characteristics. Nurses should come forward to carryout studies on Impact of mobile phone use in different aspect and publish them for the benefit of public and youths. Limitations of the Study The study is delimited to selected degree college students at Data collection period is limited to 30 days.

Recommendations:

On the basis of the findings of the study following recommendations have been made: A similar study can be replicated on a large sample to generalize the findings. A comparative study can be conducted between male and female.

- A similar study can be done with different aspects.
- A study can be carried out to evaluate the efficiency of various teaching strategies like SIM, pamphlets, leaflets and computer-assisted instruction on Impact of mobile phone

REFERENCES

1. Jeanie Stecher. The Importance of Mobile Cell Phone in Communication. 2011.Available from; <http://www.squidoo.com/the-importance-of-mobile-cell-phone-incommunication>.
2. Latchoumi, T. P., Kalusuraman, G., Banu, J. F., Yookesh, T. L., Ezhilarasi, T. P., & Balamurugan, K. (2021, November). Enhancement in manufacturing systems using Grey-Fuzzy and LK-SVM approach. In 2021 IEEE International Conference on Intelligent Systems, Smart and Green Technologies (ICISSGT) (pp. 72-78). IEEE.

3. Dr. Abdullah AlOrainy. Inst of Electronics Research. KACST.P. O. Box: 230471.Riyadh 11321. Saudi Arabia. Available from: alorainy@kacst.edu.sa.
4. Mandira S. Indian health ministry commissions study on health hazards of cellphones in Karnataka. 2008. Available from:http://www.cellphonebeat.com/entry/indias-health-ministry_commissions-study-on_health-hazards-of-cell_phones.
5. My Mobile. May 15- June 14 2007 "First Calll Pankaj Mohindroo.
6. Telecommunications Statistics in India. From Wikipedia.the free encyclopedia.2011. Available fromhttp://en.wikipedia.org/wiki/Telecommunications_Statistics_in_India.
7. Global Mobile Phone Subscribers, 2008. Available from <http://www.cellularnews.com/story/29824>.
8. Wikipedia. 2011. Available from <http://ezinearticles.com/?expert=Jeanette-pollock>.
9. Taraka Serrano. EMF Radiation and Your Brain. 2006.<http://www.buzzle.com/articles/emf-radiation-brain.html>.
- 10.The latest teen obsession: Is your child a cell phone junkie? [Online] 2006.Available from; [URL:http://www.drugrehabtreatmentcom/teen-cell-phone-addiction.html](http://www.drugrehabtreatmentcom/teen-cell-phone-addiction.html).
11. Thomas Edison. No more mobile in class: The Times of India. 2007 Oct 4.
12. John Traxler, Mobile phone and millennium development goals, Footsteps71June, 2007, p.10.
13. United Nations Population Fund. (2000). Adolescents in India: A Profile. NewDelhi.p. 6.
- 14 .Ezhilarasi, T. P., Sudheer Kumar, N., Latchoumi, T. P., &Balayesu, N. (2021). A secure data sharing using IDSS CP-ABE in cloud storage. In *Advances in Industrial Automation and Smart Manufacturing* (pp. 1073-1085). Springer, Singapore.
- 15 .Latchoumi, T. P., & Parthiban, L. (2021). Quasi oppositional dragonfly algorithm for load balancing in cloud computing environment. *Wireless Personal Communications*, 1-18.
- 16 . Latchoumi, T. P., Swathi, R., Vidyasri, P., & Balamurugan, K. (2022, March). Develop New Algorithm To Improve Safety On WMSN In Health Disease Monitoring. In *2022 International Mobile and Embedded Technology Conference (MECON)* (pp. 357-362). IEEE.
- 17 Pavan, V. M., Balamurugan, K., &Latchoumi, T. P. (2021). PLA-Cu reinforced composite filament: Preparation and flexural property printed at different machining conditions. *Advanced composite materials*.