Scholars Journal of Applied Medical Sciences
Abbreviated Key Title: Sch J App Med Sci
ISSN 2347-954X (Print) | ISSN 2320-6691 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Nursing Sciences

A Cross Sectional Study to Assess the Knowledge and Attitude on Ill-Effects of Cell-Phone Usage among Post-Metric Students of Selected Hostels at Bagalkot with a View to Develop an Information Booklet on Prevention of Ill-Effects of Cell-Phone Usage

Ms. Aishwarya Chatter[1], Mr. Chetan Chavaj[1], Mr. Harish Madli[1], Mr. Mallikarjun Gangal[1], Ms. Shweta Kolhar[1], Prof, Jayashri G. Itti[2*]

[1]B.Sc Nursing Students of B.V.V. Sangha's Shri B.V.V.S. Institute of Nursing Sciences, Bagalkot (587101), Karnataka, India
[2]The Principal, HOD, Department of Community Health Nursing, B.V.V. Sangha's Shri B.V.V.S. Institute of Nursing Sciences, Bagalkot (587101), Karnataka, India

DOI: https://doi.org/10.36347/sjams.2025.v13i03.011 | **Received:** 26.01.2025 | **Accepted:** 06.03.2025 | **Published:** 08.03.2025

***Corresponding author:** Prof, Jayashri G. Itti
The Principal, HOD, Department of Community Health Nursing, B.V.V. Sangha's Shri B.V.V.S. Institute of Nursing Sciences, Bagalkot (587101), Karnataka, India

Abstract **Original Research Article**

***Background*:** Now a days, information technology most important in day to day life. Many of the items we can use today as the result of technology is advanced also have drawbacks. Cell-phones are a vast improvement over the telecommunication technology of the past, and are daily becoming a key of life. The aim of study was to assess the level of knowledge and attitude on ill effects of cell phone usage among post matric hostel students. To find the association between knowledge and attitude of hostel students regarding ill effects of cell phones and selected demographical variables such as age, gender, education, use and source of information regarding ill effects of cell phone. To develop and distribute an information booklet regarding prevention of ill effects of cell phones among post matric hostel students. ***Methods*:** Non experimental descriptive survey design, a descriptive survey approach was used to find out the knowledge and attitude of ill effects of cell phones among post matric hostel students. A descriptive survey approach was used for this study. The sample consisting of 100 post matric hostel students. They were chosen by non probability convenient sampling technique. The study was conducted in the selected hostels of bagalkot. The data was collected after the by a structured questionnaires. ***Result*:** A total of 100 Post-matric hostel students were included in the study. Analysis of the data revealed that 2% of Post-matric hostel had poor knowledge, 95% had average and 3% had good knowledge, and also Assessment of levels of attitude among post metric hostel students reveals that, majority of post metric hostel students (97%) had high attitude, (3%) of the them had moderate attitude, and on any low attitude students were found. Association between level of knowledge and the demographic variables is found significant with variables such as educational status of post matric hostel students (χ^2= 9.97; P<0.05), and how long they have been using mobile phone (χ^2= 23.25; P<0.05).and level of attitude and the demographic variables was found that there is no significant association between level of attitude and the demographic variables of Post-matric hostel students was statistically tested by Chi square test. ***Conclusion*:** A significant number of post matric hostel students had poor knowledge and attitude on ill effects of cell phone usage, so researcher felt that various awareness programmes regarding ill effects of cell phone usage should be emphasized.

Keywords: Ill-effects, Cell-phones, Information Booklet, Hostel students.

INTODUCTION

Now a days, information technology most important in day to day life. Many of the items we can use today as the result of technology is advanced also have drawbacks. Cell-phones are a vast improvement over the telecommunication technology of the past, and are daily becoming a key of life. Many smart phone users can regulate the amount of time they spend staring at the screen. They are still able to engage in social situations and pay attention to their surrounding without the urge to check their phones. However, some users have become addicted to their cell phone [1].

During the previous two decades, the usage of digital information has exploded. Mobile phones generate radiofrequency (RF) radiation when in use, and no preceding generation has been exposed to this kind of radiation throughout infancy and adolescence. Because brain tumors, other malignancies, and neurological illnesses (neurodegenerative diseases) typically take decades to manifest, the whole scope and severity of protracted health hazards are not yet known. The creation of digital goods for newborns, toddlers, preschoolers, and older children has exploded in recent years. Mobile digital gadgets are quickly becoming cultural instruments at home, church, work, in the community, and children will grow up with them at ease [2].

In 2002, the total number of mobile (cellular) phones in use worldwide exceeded the number of landlines. Current projections suggest that the world will continue to add mobile lines faster than fixed lines; indeed, the next billion new phone users will use primarily mobiles. Both the developed world and the developing world are participating in this boom, but in different ways [3].

Evidence of addictive use is shown for example through surveys from 2002 conducted with Korean college students where 73% of respondents reported that without access to mobile telephone, they feel uncomfortable and irritated (Lee, 2002) – indicating a sign of a withdrawal symptom of addiction. A similar study has been conducted in America where people have developed an "obsession" for carrying their mobile phone everywhere (Wikle, 2001), and show signs of heavy dependence on the use of mobile phones (Licoppe and Heurtin, 2001) [4].

The usage of mobile internet has seen a more than threefold increase since 2010, which has reached 6.319 billion in April 2019.The rapid upheaval of technology and storming fast internet has led to an enormous growth in the number of smart phone users in India. India ranks second in terms of telecommunication, subscription, internet subscribers and application downloads globally. Out of 830 million young people who are online, 320 million (39%) are in India and China. Mobile phone excessive use has been found to be associated with health problems such as impaired concentration, headache, dizziness, fatigue, thermal sensations in and around ear, facial dermatitis, stress, sleep disturbances owing to night time use, and frustration [5].

Considering the enormous use of smartphone by adolescents which is the most vulnerable group on account of the time they spend on smartphones and its effects on health, it is important to study smartphone use in this subset of population. Were is a paucity of research on smartphone addiction and to the best of our knowledge, this is a wrst study of its kind in our region. We objectives of the present study were to estimate the prevalence of smartphone addiction, understand pattern of smartphone use, and to determine the association of smartphone addiction with pattern of use and personality dimensions among medical students.

While smart phone use has been increasing across all sectors, university students have been seen as the largest consumer group of smart phone services. A smart phone survey reported that 25.5% of adolescents were in an addicted risk group, which was about two to nine times higher than adults. Considering the enormous use of smart phone by adolescents which is the most vulnerable group on account of the time they spend on Smartphone and its effects on health, it is important to study Smartphone use in this subset of population [6].

INSTRUMENTS:

Structured scale of level of knowledge assessment tool:

The Structured questionnaire scale of level of knowledge assessment tool was used to assess the level of knowledge on ill-effect of cell-phone usage among post-metric students. There are 15 items for knowledge assessment tool score the scores are as follows: 1: option 'a'; 2: option 'b'; 3: option 'c'; and 4: options 'd', And range of scores includes, Poor knowledge (< 20), Average knowledge (21-40), Good knowledge (41-60). Assess the level of knowledge on ill-effect of cell-phone usage among post-metric students by the test (r= 0.9877) and was found to be equally reliable.

Structured scale of level of attitude assessment tool:

The Structured questionnaire scale to assess the level of attitude on ill-effect of cell-phone usage among post-metric students. There are 15 items for attitude scoring, as follows: 1: Yes; 2: No, and range of scores includes, Low attitude (<10), Moderate attitude (11-20), High attitude (21-30).

Description of socio demographic variables

Socio-demographic Variables in this study includes age, gender, religion, educational status, type of family, father's educational status, mother's educational status, father's occupation, mother's occupation, family income, type of mobiles, how long have you been using mobile phone, time spend in average a day, money spend per month, how often do you change your mobile phone.

DATA COLLECTION PROCESS:

Data collection is gathering information needed to address the research problem. Prior to actual data collection, the investigator obtained permission from Principal, Shri BVVS Institute of Nursing Sciences, Bagalkot and respective Hostel wardens' of the selected hostels of urban Bagalkot. The main study was conducted on 08/09/24 among 100 post metric hostel students who are selected by Stratified proportionate random sampling technique.

DATA ANALYSIS:

The data obtained were analyzed according to the research objectives using descriptive and infer entail statistics. The main data was prepared based on the participants' responses. Frequency and percentage statistical analysis, feature select and select different populations in words and pictures.

ETHICAL CLEARANCE:

Ethical clearance was obtained from the Institutional Ethics Committee of Shri BVVS Sajjalashree Institute of Nursing Sciences, Bagalkot.

RESULTS

A: Sample characteristics

- The Percentage wise distribution of sample according their age depicts that, majority of post matric hostel students (52%) were belonging to 19-21 years of age, 22% of them were belonging to 17-18years of age, and 26% of them were belonging to 22 above years of age.
- The percentage wise distribution of sample according to their gender describes that, most of the post matric hostel students (47%) were males and 53% of them were females.
- The percentage wise distribution of sample according to their year of study shows that 21% of the post matric hostel students were studying in PUC class, 67% of them were under graduates (UG), and 12% of them were post graduates (PG).
- The Percentage wise distribution of sample according to their type of family shows that, (35%) of adolescents were from joint family, (65%) of them were from nuclear family.
- The percentage wise distribution of sample according to their religion shows that, majority of post matric hostel students (77%) were belonging to Hindu religion, 14% of them were belonging to Muslim community and 6% of them were belonging to Christianity and remaining 3% of them were belonging to others.
- The percentage wise distribution of sample according to their Father's Education Status illustrates that, majority of post matric hostel student's fathers,(23%) of them were no formal education, (14%) had primary education, (24%) of them had secondary education, (20%) of them were PUCs, (19%)of them were graduation and above.
- The percentage wise distribution of sample according to their Mother's Education Status illustrates that, majority post matric hostel student's mothers (28%) had primary education, (22%) of them were, no formal education (31%) of them had secondary education and (10%) of them were PUC,(09%) of them were ,graduates and above.
- The Percentage wise distribution of sample according to their Father's Occupation illustrate that, (40%) of them were agricultural workers, (15%) of them were labors, (16%) of them were business man, (17%) of them were private Employees, (12%) of them were Govt. employees.
- Percentage wise distribution of sample according to their Mother's Occupation illustrate that, (57%) of mothers were house wives, (15%) of them were agricultural workers, (07%) of them were doing labor work, (12%) of them private employee, and (09%) of them were Govt. employees.
- The Percentage wise distribution of sample according to their family income reveals that, most (26%) of the post matric hostel student's family monthly income was less than Rs.10,000, (28%) of them were having family income between Rs.10,001-20,000, (27%) of them were having family income between Rs.20,001-30,000 and (14%) of them were having family income between Rs.30,001 – 40,000 , and (05%) of them had the family income more than Rs. 40,000.
- The Percentage wise distribution of sample according to their type of Mobile user shows that, (08%) of them were keypad users, (85%) of them were smart phone users, (07%) of them were TAB users.
- The Percentage wise distribution of sample according to how long you been using mobile phone? Shows that, (06%) of them were less than 3 months, (14%) of them were between 3-6 months, (20%) of them were between 6-12 months, (12%) of them were between more than 12 months, (42%) of them were 2 or more years.
- The percentage wise distribution of sample according to how much time they spend on their mobile phone on an average a day phone; and it shows that, (06%) of them were use less than 30minutes, (16%) of them were use 30min-1hour, (18%) of them were use 1-2 hours, (27%) of them were use 2-3 hours, (18%) of them were use 3-4 hours, (09%) of them were use more than 4 hours.
- The percentage wise distribution of sample according to amount of money spend on your mobile service per month, show that, (13%) of them were spend less than Rs.50, (08%) of them were spend between Rs.50-100, (12%) of them were spend Rs.100-200, (49%) of them were spend Rs.300-400, (13%) of them were spend Rs.400-500.(5%) of them were spend more than Rs.500.
- The percentage wise distribution of sample according to hoe often they change their mobile phone; and it shows that, (08%) of them were change less than 6 month, (11%) of them were

change 6month-1year, (12%) of them were change 1-2 years, (25%) of them were change2-3 years, (44%) of them were change more than 3 years.

Table 1: Description of percentage of frequency distribution of level of knowledge on ill effects cell phone usage among post matric hostel students, N=100

Levels of knowledge	Range of Score	No of respondents	Percentage
Poor level of knowledge	1 to 20	02	02%
Average level of knowledge	21 to 40	95	95%
Good level of knowledge	Above 41	03	03%

Assessment of levels of Knowledge on ill-effects of cell-phone usage among post-matric hostel students reveals that, the majority of students (95%) had average knowledge, and remaining (03%) of them had good knowledge, and least (02%) students had poor level of knowledge (Table 1).

Table-2: Area wise mean, SD and mean percentage of level of knowledge score, N=100

Area	Maximum Score	Mean	S. D	Mean percentage
Level of knowledge	60	31.96	4.604291	53.25%

The mean, SD and mean percentage of level of knowledge score of post metric hostel students reveal that, the total mean percentage of level of knowledge score of them was 53.25% with mean and SD 31.96±4.604291 (Table-5.3)**.**

Table 3: Description of percentage of frequency distribution of level of attitude on ill effects of cell phone usage among post matric hostel students, N=100

Level of Attitude	Range of score	No of respondents	Percentage
Low	00 to 10	00	00%
Moderate	11 to 20	03	03%
High	21 and above	97	97%

Assessment of levels of attitude among post metric hostel students reveals that, majority of post metric hostel students (97%) had high attitude, (3%) of the them had moderate attitude, and on any low attitude students were found (Table 3).

Table-4: Area wise Mean, SD and mean percentage of level of attitude score, N=100

Area	Maximum score	Mean	SD	Mean%
Level of attitude	30	23.29	1.8818838	77.63%

The mean, SD and mean percentage of level of attitude score of post metric hostel students illustrate that, The total mean percentage of attitude score of them was 77.63% with mean and SD 23.29±1.881838 (Table-4).

Table 5: Association of the levels of knowledge on ill effects of cell phone usage of post- matric hostel students with their selected socio demographic variables, N=100

Sl. No	Socio-demographic variables	Df	Chi-square value	P value	Level of significance
1.	Age	04	2.95	0.5662	P<0.05 NS
2.	Gender	04	5.7	0.2227	P<0.05 NS
3.	Educational status	**04**	**9.97 ***	**0.0409**	**P<0.05 * S**
4.	Type of family	02	5.05	0.0801	P<0.05 NS
5.	Religion	06	1.32	0.9750	P<0.05 NS
6.	Education of father	08	5.13	0.7436	P<0.05 NS
7.	Occupation of father	08	10.91	0.2069	P<0.05 NS
8.	Education of mother	08	4.62	0.7973	P<0.05 NS
9.	Occupation of mother	08	12.66	0.1241	P<0.05 NS
10.	Family income	08	9.88	0.2735	P<0.05 NS
11	Type of mobile	04	1.53	0.8213	P<0.05 NS
12	How long they have been using mobile phone	**08**	**23.25 ***	**0.0031**	**P<0.05 * S**
13	Time spend in average a day	08	6.83	0.5551	P<0.05 NS
14	Money spend per month	08	15.03	0.0586	P<0.05 NS
15	How often they change mobile phones	08	7.82	0.4512	P<0.05 NS

DF = degrees of freedom, NS = Not significant, * S=Significant (P < 0.05)

The findings regarding association of the levels of knowledge of post metric hostel students with their selected socio-demographic variables shows that, significant association was found between the level of knowledge and educational status of post matric hostel students (χ^2= 9.97; P<0.05), and how long they have been using mobile phone (χ^2= 23.25; P<0.05) (Table no-05).

Table 6: Association of the levels of attitude on ill effects of cell phone usage among post-matric hostel students with their selected socio-demographic variables, N=100

Sl. No	Socio-demographic variables	Df	Chi-square value	P Value	Level of significance
1.	Age	04	1.11	0.8927	P<0.05 NS
2.	Gender	04	2.74	0.6022	P<0.05 NS
3.	Educational status	04	3.97	0.4101	P<0.05 NS
4.	Type of family	02	0.48	0.7866	P<0.05 NS
5.	Religion	06	1.15	0.9793	P<0.05 NS
6.	Education of father	08	6.51	0.5903	P<0.05 NS
7.	Occupation of father	08	4.5	0.8094	P<0.05 NS
8.	Education of mother	08	3.43	0.9046	P<0.05 NS
9.	Occupation of mother	08	3.49	0.9	P<0.05 NS
10.	Family income	08	0.73	0.9994	P<0.05 NS
11	Type of mobile	04	0.79	0.9398	P<0.05 NS
12	How long they have been using mobile phone	08	2.2	0.9743	P<0.05 NS
13	Time spend in average a day	08	4.61	0.8424	P<0.05 NS
14	Money spend per month	08	2.3	0.9704	P<0.05 NS
15	How often they change mobile phones	08	5.5	0.7086	P<0.05 NS

Df = degrees of freedom, NS = Not significant

No significant association was found between attitude levels of post matric hostel students with their any of the socio-demographic variables (Table-5.7). Thus the **H_2** stated rejected for all the socio demographic variables (Table 6).

Table 7: Correlation between level of knowledge and attitude on ill effects of cell phone usage among post metric hostel students, N=100

Correlation between level of knowledge and attitude	
Correlation co-efficient(r)	**0.9877**

Findings regarding correlation between level of knowledge and attitude among post metric hostel students reveal that, Correlation coefficient (r) value of knowledge and attitude of post metric hostel students is r= 0.9877 (Table-5).

Hence as per the calculated value of correlation coefficient, there exist a positive correlation between level of knowledge and attitude. Thus research hypothesis **H_3** stated "there will be a positive correlation between level of knowledge and attitude among post metric hostel students" is accepted.

DISCUSSION

In the present study the distribution of post-matric hostel students according to their age shows that majority 52% were in the age group of 19-21 years and least were 22% in the age group of 17-18yr. Gender wise distribution of the subjects shows that 47% were male and 53% were female. Distribution of hostelites according to their education shows that majority 67% were in UG, 21% were PUC and least 12% PG. The finding of this study is consistent with the survey conducted among 100 Post-matric hostel students, to assess the level of knowledge and attitude of ill-effects of cell phone usage.

Assessment of levels of attitude on ill effects of cell phone usage among post-matric hostel students reveals that, majority of post metric hostel students (97%) had high attitude, (3%) of the them had moderate attitude, and on any low attitude students were found.

The findings of the present study are consistent with the study conducted by IOSR Journals and corresponding author Jeen Pragash, L (2018). The Descriptive study was conducted to assess the level of addiction and attitude towards mobile phone use among students of a selected college – Chennai. The results showed that majority of college had moderate attitude [7].

Assessment of levels of Knowledge on ill-effects of cell-phone usage among post-matric hostel students reveals that, the majority of students (95%) had average knowledge, and remaining (03%) of them had good knowledge, and least (02%) students had poor level of knowledge.

The Findings of the present study are consistent with study was conducted by Mr. Amogh Bibra, Dr. Yogesh Yadav to determine the correlation between level of knowledge on ill effects of cell phone usage among adolescent in selected urban community of Jaipur. The results showed that most of the adolescents had moderate levels of knowledge [1].

Findings regarding correlation between levels of knowledge and attitude on ill effects cell phone usage of among post metric hostel students reveal that, Correlation coefficient (r) value of levels of knowledge and attitude of post metric hostel students is r=0.9877. Hence as per the calculated value of correlation coefficient, there exist a positive correlation between levels of knowledge and attitude on ill effects cell phone usage of among post metric hostel students.

The findings of the present study are consistent with the study conducted by Singh N, Chaturvedi P, Chaubey N. (2024) to find out the relationship between the Knowledge and Attitude Regarding Mobile Phone Addiction & Preventive Measures Among Undergraduate Hosteller Students of Selected Colleges, Saharanpur. The results showed that, a negative correlation exist between the Knowledge and Attitude [8].

The findings regarding association of the levels of knowledge on ill effects cell phone usage of among post metric hostel students with their selected socio-demographic variables shows that, significant association was found between the levels of knowledge and educational status of post matric hostel students (χ^2= 9.97; P<0.05), and how long they have been using mobile phone (χ^2= 23.25; P<0.05).

The findings of the present study are consistent with the study conducted by Renuga S, Alfred Sam D, Dinesh J, (2011) to assess the Level of Knowledge on Ill Effects of Mobile Usage among Adolescents in Selected College at Kancheepuram District, Tamilnadu, India. The results showed that, the Level of Knowledge scores were significantly associated with number of mobile phone is found to be significant [9].

CONCLUSION

On the basis of findings conclusions were drawn-The Information Booklet was found to be an effective strategy for providing information on prevention of ill effects of cell phones for improving the knowledge and attitude of post-matric hostel students. It was well appreciated and accepted by the hostelites. This research not only plays an important role in nursing practice but also in field of Nursing administration, Nursing education and Nursing Research. This study will find better outcome for community.

Future prospective:

Participation in good behavior is the participation not only of the person being helped, but also of the person helping others. This study shows that engaging in behavior can improve health and life satisfaction. It is important to educate students on developing beneficial behaviors.

ACKNOWLEDGEMENT

We thank the anonymous referees for their constructive comments. Our heart is filled with gratitude to those who have reached out to help, and no words can express our true gratitude.

CONTRIBUTION OF AUTHORS:

Research concept: Prof Jayashri G Itti
Research design: Descriptive research design
Supervision: Prof, Jayashri G. Itti
Data collection: All researchers
Data analysis and interpretation: All researchers
Literature search: All researchers
Writing article: All researchers
Critical review: Prof, Jayashri G. Itti
Article editing: Prof, Jayashri G. Itti

BIBLIOGRAPHY

1. Bibra, A., & Yadav, Y. A study to assess the knowledge on ill effects of cell phones among adolescents in selected urban community of jaipur with a view to develop an information booklet on prevention of ill effects of cell phones. 12AD May; 4(1), 307–312.
2. Bhalerao, M. A. S., & Devi, M. L. S. (2023). A descriptive study to assess the knowledge of influence of smart phones on behavioural changes of preschoolers among the mothers at OPD in selected hospitals of Pune City. *Lat. Am. J. Pharm*, *42*, 6. Available from: https://www.researchgate.net/publication/375061088_A_descriptive_study_to_assess_the_knowledge_of_influence_of_smart_phones_on_behavioural_changes_of_preschoolers_among_the_mothers_at_OPD_in_selected_hospitals_of_Pune_City.
3. Li, L., Wang, L., & Wang, X. (2022). Effect of smartphone use before bedtime on smartphone addiction behaviors among Chinese college students. *Frontiers in psychology*, *13*, 1023245. Available: https://doi.org/10.3389/fpsyg.2022.1023245
   Beckhusen B. Mobile Apps and the ultimate addiction to the Smartphone. 2016 May;8–9. Available from: https://www.diva-portal.orgpdf
4. Beckhusen, B. (2016). Mobile Apps and the ultimate addiction to the Smartphone. 2016 May; 8–9. Available from: https://www.diva-portal.orgpdf
5. Sinha, S., & Patil, M. S. (2019). Mobile phone usage pattern and its health effects among medical students in north Karnataka: an observational study.

International Journal of Community Medicine and Public Health, *6*(10), 4305.

6. Jain, P., Gedam, S. R., & Patil, P. S. (2019). Study of smartphone addiction: prevalence, pattern of use, and personality dimensions among medical students from rural region of central India. *Open Journal of Psychiatry & Allied Sciences*, *10*(2), 132-138.
7. IOSR Journals. A Study to Assess the Level of Addiction and Attitude to Mobile Phone Use among Students of a Selected College – Chennai [Internet]. Academia.edu. 2018 [cited 2025 Jan31]. Available from: https://www.academia.edu/37186017/A_Study_to_Assess_the_Level_of_Addiction_and_Attitude_to_Mobile_Phone_Use_among_Students_of_a_Selected_College_Chennai
8. Singh, N., Chaturvedi, P., & Chaubey, N. (2024). A Study to Assess the Knowledge and Attitude Regarding Mobile Phone Addiction & Preventive Measures Among Undergraduate Hosteller Students of Selected Colleges, Saharanpur, 6(5), 2582–2160. Available from: www.ijfmr.com.
9. Thivya, N. (2020). A Study to Assess the Level of Knowledge on Ill Effects of Mobile Usage among Adolescents in Selected College at Kancheepuram District, Tamilnadu, India. *Medico-Legal Update*, *20*(3), 1-3.