Parents’ Perception on Mobile Phone Usage of Their Children and Knowledge on Its Hazards in Selected Hospital, Mangalore

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Abstract

Introduction  Cell phones have achieved a milestone in modern technology where they have become handy to everyone. Advancement taken place in mobile phone technology has enabled its use in online purchasing as well as communication. On one hand, it is a helping tool for faster communication; on other hand, we cannot deny the fact of its harmful effects. The young teens are the age group who have been addicted to the mobiles. It is only the parents who can mould child's behavior and personality. In this regard, parents can play an important role in enhancing the sense of responsibility in vigilant use of mobile at the early age.

Materials and Methods  A quantitative descriptive research design was used in this study to collect data from 340 parents of 12 to 20 years age group who are visiting all the outpatient departments of selected Medical College Hospital, Mangaluru. Data was collected by administering demographic proforma, self-prepared perception checklist, and knowledge questionnaire on hazards of mobile phone usage.

Results  Majority 230 (67.6%) parents had generally perceived that their children were spending too much of time on mobile phone and also 187(55%) parents perceived that children use mobile with earphones while traveling and 200(58.8%) parents perceived that their children have become lazy and lost interest in studies too. A total of 210 (61.8%) of parents had inadequate knowledge and 130 (38.2%) of them had adequate knowledge on hazards of mobile usage. There was association between knowledge on hazards of mobile phone usage and selected demographic variables as the p-value computed was found to be significant at 0.05 level of significance. There was no association found between knowledge and gender (0.052).

Conclusion  As per the study findings, it was very clear that parents were observing some of the behavioral and emotional changes that were happening in their children. Hence, parents need to be educated and made aware of the possible hazards of mobile usage that may help them to tackle all the childhood issues and help in child’s overall development.

Keywords
► hazards of mobile phone usage
► knowledge
► parents
► perception

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Parents’ Perception on Mobile Phone Usage and Knowledge on its Hazards

Introduction

Advances in technology have made lives easier today.1 Everyone today, irrespective of any age group they belong to, are aware about these technologies and its uses. Advancement taken place in mobile phone technology has enabled its use in online purchasing as well as communication.2 It is difficult in today’s world to live without mobile. Cell phones have achieved a milestone in modern technology where they have become handy to everyone and most of the works are done at one setting.3

On one hand, it is a helping tool for faster communication; on other hand, we cannot deny the fact of its harmful effects.2 To get connected with each other, the mobile phone uses radiations with frequency, which ranges from 3 kHz to 300 GHz. And these radiations can contribute to many harmful diseases. Radiations can also cause headache, sleep disruption, tiredness, and DNA damage.4

The young teens are the age group who have been addicted to the mobiles. As cell phones are available at affordable price, the teens are addicted to it very easily. They depend completely on mobile phones and may experience behavioral issues and may also encounter with brain development problems.5 A study reveals that the teenagers are the most vulnerable group of mobile phone users who may utilize mobile for the good and bad purpose. It was found that among them the age group between 15 and 22 years is the one who were having more craze toward mobile phone.6

Parents play important role in upbringing of their children. Children may grow physically, mentally, and become an independent human being in society, but the role of parents has become much stronger. It’s only the parents who can mould child’s behavior and personality. So, parents should be vigilant to observe any deviation of child’s normal behavior and help in motivating the children behavior and also in helping them to come out of difficulties they face. They can be a best teacher by observing their children by taking efforts to guide them.7

A cross-sectional analytical study was conducted aiming the impact of smart phone usage among 115 college students at Chennai between the age group of 17 to 25 years in December 2016. Results depicted that 74% of the participants were females, and 65% were using smart phones for 3 to 5 years. Seventy-seven percent of the subjects were using it for more than 5 hours daily, 66% had habit of checking the smart phone while sleeping, and 72% of them used it for the educational purpose. Seventy-nine percent of students complained about headache, 51% had anxiety, 47% had lack of concentration, 35% had sleeplessness, and 43% had neck and arm pain due to continued mobile usage.8

The above literature supports the fact that adolescents are more into the mobile usage and were certainly experiencing some health issues. The investigators have come across many young teens using the mobiles in college, while traveling and many other occasions with ignorance of immediate surroundings. Hence, there is a need to identify these issues and find out a way that can help in limited and cautious use of mobile. In this regard, parents can play an important role in enhancing the sense of responsibility in vigilant use of mobile at the early age.

Materials and Methods

Sample calculation formula:

\[ n = \frac{z^2 \times p(1-p)}{e^2} \]

Following values can be used for estimating the sample size \( p = 0.67 \).9

\[ n_0 = \frac{(1.96)^2 \times 0.67(1-0.67)}{(0.05)^2} = 339.75 \]

Total sample size = 340.

Methods

A quantitative descriptive research design was used in this study to collect data from 340 parents of 12 to 20 years age group who are visiting all the outpatient departments of selected Medical College Hospital, Mangaluru. In this study, the children age group is considered between 12 and 20 years because review suggests that the above-mentioned age group is showing more addiction toward mobile phone. Permission obtained from the Institutional Ethics Committee and the hospital authority. Using purposive sampling technique parents were selected and gathered in the outpatient department classroom. Investigators introduced themselves and voluntary informed consent was taken. Data was collected by administering demographic proforma, self-prepared perception checklist, and knowledge questionnaire on hazards of mobile phone usage. At the end of data collection, parents were thanked for their whole hearted cooperation. The collected data was kept confidential and coded for further analysis. The average time taken to complete the perception checklist and knowledge questionnaire was ~10 to 20 minutes.

Pretesting and content validity was done by administering the tool to seven experts from different specialties of nursing field. The reliability of the tool for perception checklist and knowledge questionnaire was calculated using Cronbach’s \( \alpha \) with \( r \) value 0.762 and 0.739, respectively. Participants who scored more than 50% in the knowledge questionnaire were considered to have adequate knowledge and participants with score of ≤50% were considered to have inadequate knowledge. Parents’ perception was depicted as frequency and percentage.

Results

The data were analyzed using SPSS version 16.

►Table 1 depicts that 187 (55%) were female parents, 106 (31.2%) had secondary school education, 209 (61.5%) belonged to nuclear family, and 131 (38.5%) were self-employed. A total of 185 (54.4%) parents heard information on hazards about mobile phone usage through mass media. A total of 139 (40.9%) parents were using the mobile for ≤ 30 minutes.
The data in Table 2 shows that majority of (230 [67.6%]) parents had generally perceived that their children are spending too much of time on mobile phone and also 187 (55%) parents perceived that children use mobile with earphones while traveling and 200 (58.8%) parents perceived that their children have become lazy and lost interest in studies too. On other hand, 181 (53.2%) parents feel that mobile usage till late night is not observed in their children. Also, it was noted that 185 (54.4%) parents stated saying that their children use mobile only for school projects. Also, it was noted that 175 (51.5%) parents perceived that their children are alert and responsive to commands, whereas 185 (54.4%) parents observed that using mobile early in the morning for a long time is not observed. Also, 121 (35.6%) parents observed that children use phone while the phone is plugged for charging.

The data in Table 3 and Fig. 1 depicts that majority 210 (61.8%) of parents had inadequate knowledge and 130 (38.2%) of them had adequate knowledge on hazards of mobile usage.

Table 4 shows the overall mean percentage of knowledge score was 47.75% with mean and standard deviation of 3.82 ± 2.02. This suggests that the level of knowledge is not adequate or need to be improved.

H0: There will be no significant association between the knowledge on hazards of mobile phone usage and selected demographic variables.

The data presented in Table 5 reveal that there is association between knowledge on hazards of mobile phone usage and selected demographic variables as the p-value computed between knowledge score on hazards of mobile usage and academic qualification (0.005), type of family (0.008), occupation (0.001), knowledge on hazards of mobile phone usage (0.010), and time spent on mobile at home (0.014) was found to be significant at 0.05 level of significance. There was no association found between knowledge and gender (0.052). Hence, null hypothesis rejected for all the variables, except for gender.

Discussion

Mobile phone usage is increasing nowadays in teen including children. Parents are aware about the fact, but are ignorant about the consequences what the children may face in the future. Here in the study, it shows that majority of parents had perceived about the ill effects of mobile, but the depth of knowledge was lacking. The knowledge of the parents also highlights about the lack of information on hazards of mobile usage.

Present study shows 187 (55%) were female parents, 106 (31.2%) had secondary school education at the time of data collection, whereas similar study findings shows that 164 (86%) were female parents and 46 (24%) had high school education. Family group of 209 parents was nuclear (61.5%), while 131 (38.5%) parents were self-employed. The total number of parents who heard about hazards of mobile phone usage through mass media were 185 (54.4%). On the other hand, 139 (40.9%) parents found that time duration spent by them on mobile phone use was ≤ 30 minutes.

A similar study conducted at Coimbatore shows that among 30 adolescents, 17 (56.7%) had inadequate knowledge, 13 (43.3%) had moderate knowledge, and none had adequate knowledge on electronic gadgets. Whereas the present study results say that majority, 210 (61.8%), of parents had inadequate knowledge and 130 (38.2%) of them had adequate knowledge on hazards of mobile usage.
The present study reveals that out of 340 parents, 230 (67.6%) parents agree that their kids spend a lot of time using cell phone. At the same time, 185 (54.45%) parents say that phone use is restricted only to complete their academic assignments. In this study, 159 (46.8%) parents perceived that their children use mobile till late night, whereas 160 (47.1%) agree that children will take long time to finish their food as they chat over the phone while having their lunch or dinner. One of the descriptive study findings show that 34.5% of parents (children age group: 6–12 years) who work at deemed university perceive that children show less interest while handling food. 12 Also, 155 (45.6%) parents say that early morning at least for half an hour their children use phone before they come out of their bed. The above findings suggest that these behaviors may have influence on child’s health. Exposing to ear phone use while traveling was one of the perceptions that was observed by 187 parents (55%). A similar study was conducted among 85 parents of preschool children (3–6 years) who opined that smart phone use may cause physical and mental problem specially making the child introvert and feel isolated and slowly withdraws child from society. Also, use of mobile phone exposes the child to harmful radiation. 13

Use of mobile phone makes their children lazy that is affecting to lose their interest in studies was one of the perceptions identified by 200 (58.8) parents. Whereas a contradictory review says that learning and attention span has no significant difference with the phone usage ($r = 0.07$, $p = 0.47$). 14

There was significant association between knowledge on hazards of mobile phone usage and selected demographic variables: academic qualification ($p = 0.005$), type of family ($p = 0.008$), occupation ($p = 0.001$), knowledge on hazards of mobile phone usage ($p = 0.010$), and time spent on mobile at home ($p = 0.014$).

### Conclusion

Parents play a key role in upbringing of their children and they are the perfect people to mould them. As per the study findings, it is very clear that parents are observing some of the behavioral and emotional changes that are happening in their children. Many of the reviews say these changes may

<table>
<thead>
<tr>
<th>S. no.</th>
<th>Statements</th>
<th>Yes</th>
<th>%</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I feel my child is spending too much time using cell phone</td>
<td>230</td>
<td>67.6</td>
<td>110</td>
<td>32.4</td>
</tr>
<tr>
<td>2.</td>
<td>My child uses mobile till late-night</td>
<td>159</td>
<td>46.8</td>
<td>181</td>
<td>53.2</td>
</tr>
<tr>
<td>3.</td>
<td>My child takes long time to finish his food because of continuous chatting in mobile</td>
<td>160</td>
<td>47.1</td>
<td>180</td>
<td>52.9</td>
</tr>
<tr>
<td>4.</td>
<td>My child uses mobile phone only to complete the school/college project and assignment.</td>
<td>185</td>
<td>54.4</td>
<td>155</td>
<td>45.6</td>
</tr>
<tr>
<td>5.</td>
<td>Most of the time and also while traveling my child uses mobile with the earphone</td>
<td>187</td>
<td>55</td>
<td>153</td>
<td>45</td>
</tr>
<tr>
<td>6.</td>
<td>My child is so deep in use of mobile that he will not respond to my commands</td>
<td>165</td>
<td>48.5</td>
<td>175</td>
<td>51.5</td>
</tr>
<tr>
<td>7.</td>
<td>My child will not come out of bed in the morning unless uses mobile at least for half an hour</td>
<td>155</td>
<td>45.6</td>
<td>185</td>
<td>54.4</td>
</tr>
<tr>
<td>8.</td>
<td>My child is addicted to mobile to an extent where he/she uses it with charging point on</td>
<td>121</td>
<td>35.6</td>
<td>219</td>
<td>64.4</td>
</tr>
<tr>
<td>9.</td>
<td>My child is become lazy because of continuous mobile usage</td>
<td>200</td>
<td>58.8</td>
<td>140</td>
<td>41.2</td>
</tr>
<tr>
<td>10.</td>
<td>After using mobile phone my child is lost interest in studies</td>
<td>200</td>
<td>58.8</td>
<td>140</td>
<td>41.2</td>
</tr>
</tbody>
</table>
have an effect on physical, emotional, behavioral, and cognitive level of a child. Hence, parents need to be educated and made aware of the possible hazards of mobile usage that may help them to tackle all the childhood issues and help in child’s overall development.

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**Conflict of Interest**
None declared.

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<table>
<thead>
<tr>
<th>Table 4</th>
<th>Range, mean, standard deviation, and mean percentage of knowledge score, $n = 340$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>Item</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Total knowledge score</td>
<td>8</td>
</tr>
</tbody>
</table>

Abbreviation: SD, standard deviation.

<table>
<thead>
<tr>
<th>Table 5</th>
<th>Association between knowledge and selected baseline variables, $n = 340$</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. no.</td>
<td>Variables</td>
</tr>
<tr>
<td>1</td>
<td>Gender</td>
</tr>
<tr>
<td></td>
<td>a. Male</td>
</tr>
<tr>
<td></td>
<td>b. Female</td>
</tr>
<tr>
<td>2</td>
<td>Academic qualification</td>
</tr>
<tr>
<td></td>
<td>a. No formal education</td>
</tr>
<tr>
<td></td>
<td>b. Primary school education</td>
</tr>
<tr>
<td></td>
<td>c. Secondary school education</td>
</tr>
<tr>
<td></td>
<td>d. Preuniversity course</td>
</tr>
<tr>
<td></td>
<td>e. Graduation and above</td>
</tr>
<tr>
<td>3</td>
<td>Type of family</td>
</tr>
<tr>
<td></td>
<td>a. Nuclear</td>
</tr>
<tr>
<td></td>
<td>b. Joint</td>
</tr>
<tr>
<td></td>
<td>c. Single parent family</td>
</tr>
<tr>
<td>4</td>
<td>Occupation</td>
</tr>
<tr>
<td></td>
<td>a. Professional</td>
</tr>
<tr>
<td></td>
<td>b. Skilled</td>
</tr>
<tr>
<td></td>
<td>c. Unskilled</td>
</tr>
<tr>
<td></td>
<td>d. Self-employed</td>
</tr>
<tr>
<td></td>
<td>e. Unemployed</td>
</tr>
<tr>
<td>5</td>
<td>Knowledge on hazards of mobile phone usage</td>
</tr>
<tr>
<td></td>
<td>a. No information</td>
</tr>
<tr>
<td></td>
<td>b. Mass media</td>
</tr>
<tr>
<td></td>
<td>c. Relatives/friends</td>
</tr>
<tr>
<td></td>
<td>d. Health workers If any, mention</td>
</tr>
<tr>
<td>6</td>
<td>How much time do you spend in mobile at home?</td>
</tr>
<tr>
<td></td>
<td>a. Less than or equal to 30 minutes</td>
</tr>
<tr>
<td></td>
<td>b. 30 minutes to 1 hour</td>
</tr>
<tr>
<td></td>
<td>c. More than 1 hour</td>
</tr>
</tbody>
</table>

Note: $p<0.05$.

*Significant.
conduct the study. We thank the experts for their guidance and also participants of the study for their whole-hearted participation.

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