



## Children and Mobile Media devices

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### Abstract

**Introduction:** *The mobile phone is a symbol of growing up for children. The use of interactive screen media such as smartphones and tablets by children is increasing rapidly.*

**Aim & Objectives:** *a)To find out the time spent by children on Mobile Media Devices (MMD) b)To Identify their preferences and to review the existing literature and suggest preliminary guidance for parents and families.*

**Study Design:** *cross –sectional study. setting: kannur*

**Materials & Methods:** *A cross sectional study was conducted at Kannur medical college kannur from April 2015 to October 2015 and study includes 300 children, and age group between 3- 10 years, comprising of both girls and boys hailing from rural and urban areas of Kannur district in kerala were interviewed to find out their mobile media device using and their preferences.*

**Results:** *The data was analysed statistically. Results on average children of the present study spent time is about 30-45 minutes per day in children age group between 3-6 years old and 2-3 hours per day in children age group between 7-10 respectively. Most of them 87% are using smartphone handset and surprisingly there is no difference between girls and boys. Apparently urban children spend more time on mobile Media devices than their rural counterparts., their preferences are in the order of while feeding especially during their meals 90% in toddler and Preschool children, followed by calling 45%,send message 50% ,access mobile internet 80% whats up messages 33.6%. songs 21.5%,camera 90%,music players 60%, movies players 70%, Download apps 70%, social net working 50% ,profile set to public 40%, come with new friends on line 15%,parents concern about child mobile use100%,sports 13.7%, serials 12.9% news 9.2% cartoons 6.5% others 0.3%.Parental concerns and mobile safety Concerns about children's privacy is lowest and 83% of parents are "very concerned" or "somewhat concerned" about their children's privacy on mobile phones. 85% of families do not set rules on mobile phone use. Our study age between 5-7 years children only 27% had abnormal behaviour and 4% in age group between 8-10 years. respectively. When compared to children had less sleep in 26.6% between 5-7 years and 8.3%in 8-10 years of age.*

**Conclusion:** *The children of the study spend more time on entertainment programmes. Studies across different parts of the country have shown that children view entertainment programs more than educational and informative ones. The children age group between 3-6 years were using mobile during their meals. A recently published data concurs with the present observation. Our study age between 5-7 years children only 27% had abnormal behaviour and 4% in age group between 8-10 years. respectively. compared to children had less sleep in 26.6% between 5-7 years and 8.3%in 8-10 years of age.*

*Children programm have become synonymous with foriegn cartoon films and educational programm have received set back. Since mobile hand set is considered more than a foster parent using should be viewed seriously. Programms related to children should be introduced to improve their educational and health aspects. Accordingly policy makers should take steps to implement this. Children are viewed as a medium for promoting consumerism. marketing company do not appear to be very concerned about the impact on mobile viewership of children. Highly developed academic bodies in our country hardly pay any attention to children's programme. parents and teachers need to consider it their responsibility to ensure over usage and certain viewing discipline.*

**Keywords:** *preschool children; mobile phones; relationship.*

## Introduction

Children being addicted to their mobile media devices and it seems to be the common complaint of most metropolitan parents in India today. A recent consumer lab research report conducted by Ericsson states that of the 69 million children under the age of 18 residing in urban cities, 30 million have a personal handset and 11 million share it with one of their family members, while 28 million have no access to it. With landline phones all but phased out worldwide, it is no surprise to see toddlers and pre-schoolers being allowed to use (and usually master) their parents' electronic despite the uneven spread of broadband internet in India, the love for smartphones and other hand-held electronic devices has exploded across nearly every sphere of life, and overturned ultimately, the way we behave. Mobile phones have become a widespread phenomenon in the present time. These pocket-sized tools are no less than a mini computer. They can do anything – from a standard phone call to surf the internet. Not just the adults, this technology is affecting the kids as well. Recent suggestions that a limited amount of educational interactive media use may be acceptable for children aged less than 2 years.<sup>[1]</sup> as videophone apps are just as effective as real-life encounters in teaching language to 24 month olds, Mobile devices such as smartphones and tablets are important part in children's lives.<sup>[2]</sup> Depending on how they are used, mobile devices could have both positive and negative impacts on family interactions.<sup>[3]</sup> According to Common Sense Media's nationwide survey, 72% of children ages 0 to 8 years used a mobile device in 2013, up from 38% in 2011. Even more dramatic was the increase in the use by children ,2 years old: 38% in 2013, up from 10% in 2011. Despite an overall increase in access, the 2013 Common Sense Media survey found a large disparity in access to mobile devices and apps among low-income and minority children. research on the use of mobile devices by young children is lagging behind its adoption. The American Academy of Pediatrics' policy recommendation to “discourage

the use of media by children under the age of two”<sup>1</sup> was drafted before the introduction of tablets in 2010.<sup>[4]</sup> the objectives of the study was to examine exposure and use of mobile media devices by young children in an urban, low social economic class family in aspect of Age of first mobile usage, Reasons for getting a mobile devices and their preferences. Parents' concerns over their children's use of mobile phones.

## Methods

### Participants

A total of 300 children including their parents or caregivers were participated in the study but only 200 (N = Total number of participants in the study, n = subset as per gender) were used for analysis due to insufficient data and/or part completed information. All participants were KG and to lower primary school students from a Secondary State High School (n=300). Students' ages ranged from 3 to 10 with a mean age of 7. This High School is located within a low-social economic area within the kannur district, kerala.

## Design

### Data Analysis

Data were analysed through the Statistical Package for the Social Sciences (SPSS) to report on statistical significance. Several descriptive tests were performed to investigate demographic details in terms of saliency. Further correlation analyses was performed to explore how two variables were related and to what extent they explained the direction of the relationship.

## Study Setting and Study Sample

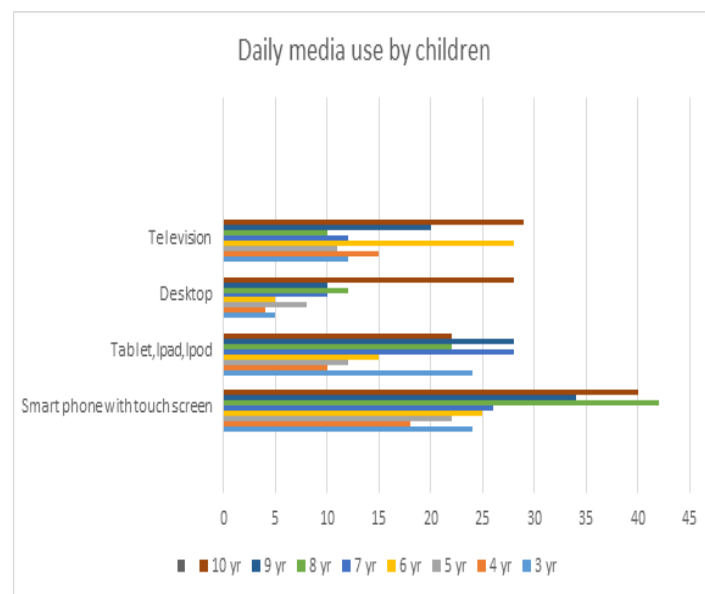
We conducted a cross-sectional study with a convenience sample of parents of children 3 years to 10 years of age who made a well or sick visit between April 2015 to October 2015. To a pediatric outpatient for health check up at kannur medical college hospital,. To the parents of these children a questionnaire was given regarding reason for getting mobile, how many minutes or hours they are spending on mobile devices, what

is their preferences, how they feel after getting mobile, age of first mobile ownership, parent are concern over their children's use of mobile, other questions regarding warning signs of any abnormal behaviour or not able to sleep. Pediatric guidelines specifically regarding mobile device use by young children have not yet been formulated, other than recent suggestions that a limited amount of educational interactive media use may be acceptable for children aged, 2 years<sup>(1)</sup> Promising research suggests that interactive media such as learn-to-read apps and electronic books (e-books) may increase early literacy skills by providing practice with letters, phonics, and word recognition. E-books can be useful in promoting vocabulary development and reading comprehension and could be more engaging for young children via digital scaffolds (eg, oral narration, synchronous text highlighting, and embedded sound effects, animations, or games). However, such extraneous e-book enhancements have also been shown to distract children's attention from the story and to interfere with comprehension.<sup>3</sup> In other words, the visual design, sound effects, and touch screen interface of interactive media can either engage young children or distract them from educational content. A balance between is necessary to facilitate learning. smartphones and tablets are increasingly used to help distract children during anesthesia induction or medical/surgical procedures.<sup>(5)</sup> Parents' use of interactive media also has the potential to distract from parent-child interactions. Parent media use usually involves work, errands, or social or other content requiring significant information processing, which makes it harder to balance attention between devices and managing child behavior.<sup>(6)</sup> Existing research is limited, and many questions remain, such as Mobile and interactive media have great potential to promote learning through joint engagement between caregivers and children, by demonstrating ideas for parent-child activities, or by modeling teaching strategies (eg, dialogic reading, phonetic,

or sound blending skills) with which low-literacy parents may not be familiar.

**Results**

Children and parents were presented with different questionnaires that followed the same themes, allowing for direct comparisons to be drawn on key areas. between 3 to 10 years, and their guardians.65% of all children surveyed currently use a mobile phone; of those, 81% have a new handset. 10 is the most common age for children to get their first mobile phone. 27% of child mobile phone owners have a smartphone. Children's smartphone ownership in India and Indonesia is double that of their parents. Children whose parents own smartphones or feature phones are more likely to have one also. Tablet use is relatively low with only 18% penetration in Egypt and Chile, 7% in Indonesia and between 5–7% in Japan and India.



**1 Observation and Characteristics**

	n	(%)
Day of the week		
Weekday	200	(66.7)
Weekend	100	(50)
Mealtime		
Lunch (11:30 AM – 2:00 PM)	160	(53.3)
Midafternoon (2:00 – 4:00 PM)	40	(13.3)
Dinner (4:00 – 7:00 PM )	100	(33.3)
Estimated child ages 3-5 years	36	(12)
5-7 years	114	(38)
8-10 years	134	(44.6)

Time in mnts	no. of cases	percentage
≤30	140	47
31-60	66	22
61-120	51	17
≥121-300	43	14
Total	300	100

number of messages sent per day	number	Percentage
0	17	6
1 - 5	58	19
6 - 10	55	16
11 - 20	65	22
>20	112	37
Total	300	100.0

time of maximum use	number	percentage
Morning	23	8
Afternoon	12	4
Evening	121	40
Night	144	48
Total	300	100.0

Mode of use	number	percentage
Mode		
Ringing	133	44.4
Vibrating	112	37.3
Silent	54	18
Switch off	1	0.3
Total	300	100.0

time spent on other features	number	percentage
time		
<1 hr	133	44
1-2 hrs	66	22
>2 hrs	24	8
don't use at all	77	26
Total	300	100.0

use at Place/situation	number	percentage
place		
Classroom	2	0.6
Library	162	54
Eating	125	42
Driving	10	3.4
TOTAL	300	100

Abnormal behaviour		
age in years	total number	percentage
3-5	205	68.3
5-7	83	27.6
8-10	12	4
TOTAL	300	100

**Disturbed in sleep**

age in years	total number	percentage
3-5	195	65
5-7	80	26.6
8-10	25	8.3
TOTAL	300	100

Children’s use of mobile phones Initially, children use their mobile phone predominantly for calling; however, as they get older, messaging becomes the preferred choice of communication. Nearly 24% and 20% of children in Indonesia and India respectively, send over 51 messages a day. 54% of all child mobile phone users access the mobile internet; this increases to over 87% when looking exclusively at smartphone users. 70% of all children who use the internet through their phone access it at least once a day. 11% of child mobile phone users surveyed list their handset as their primary device for accessing the internet; this increases to almost 32% among smartphone users. Cameras are the most used pre-installed function on mobiles (75%) followed by music players (60%) and movie players (50%). Apps, social networking and other services Of those children who access the internet via their mobile phone, 57% download or use apps; this is highest in Chile (78%) and lowest in Egypt (44%). Across all countries, entertainment apps are the most popular among children. Entertainment is the only category of apps that children use more than their parents across all countries. Information apps have the greatest increase in use as children get older, starting at 36% use for 8-year-olds and rising to 67% at age 10. Although entertainment apps are the most popular, they are the only app category to decline from 90 to 77% at age 10. 49% of children who access the internet via a mobile phone use it for social networking. 45% of these have their profiles set to public; this is as high as 55% among 10-year olds. 70% of children have met or started to communicate with ‘new friends’ online.

In our study the adverse effects of mobile usage in children age between 3-5 years 68% developed abnormal behaviour in the form of excessive crying and 65 % children had decrease sleep in the night hours

Our study age between 5-7 years children only 27% had abnormal behaviour and 4% in age group between 8-10 years. respectively. When compared to children had less sleep in 26.6%



between 5-7 years and 8.3% in 8-10 years of age. the visual design, sound effects, and touch screen interface of interactive media can either engage young children or distract them from educational content<sup>[5]</sup>

smartphones and tablets are increasingly used to help distract children during anesthesia induction or medical/surgical procedures. the use of mobile media to occupy young children during daily routines such as errands, car rides, and eating out <sup>[6]</sup>

Mostly use phone for

usage	Male	Female	Sum	Total
mostly use phone	<i>N</i>	<i>N</i>	<i>n</i>	%
Calls	38	41	79	26.3
Text	37	34	71	24
Internet/email	6	5	11	4
Video players	12	13	25	8.3
Games	11	18	29	9.6
MP3/music	10	13	23	7.6
Camera	30	32	62	21

The ability of mobile media to effectively distract and entertain young children is also a potential benefit of their use. Indeed, smartphones and tablets are increasingly used to help distract children during anesthesia induction or medical/surgical procedures.<sup>[7]</sup> Parents’ use of interactive media also has the potential to distract from parent-child interactions. Parent media use usually involves work, errands, or social or other content requiring significant information processing, which makes it harder to balance attention between devices and managing child behavior.<sup>[8]</sup> On the other hand, videophone apps may enhance interpersonal connections by allowing children to maintain face-to-face interactions with distant family members.<sup>[9]</sup> Over 70% of parents have concerns about children’s mobile phone use, with viewing inappropriate sites and overuse sharing the highest percentage at around 82%. Parents whose children use social networking sites are no more concerned about privacy than those whose children don’t. 65% of all parents surveyed set rules on their children’s mobile phone use, but there was no common response to rule-breaking across all countries. <sup>[10]</sup>

Over 54% of parents who have access to parental control solutions use them; content filters are the most popular control method at 57%. Almost 67% of parents believe that an adult in the family should educate their children about mobile phone use; this is a consistent preference across all countries.<sup>[11]</sup> Mobile technology and children’s wellbeing Nearly 80% of children surveyed say that having a mobile phone increases their confidence; this is particularly prevalent among children aged 10–13 above 80%. 63% of all children surveyed feel insecure without their mobile phones; this rises significantly in children aged 16–18 (66-71%). Despite the popularity of mobile phones, children still talk face-to-face with their parents more than they call or message them. 90% of children who use social networking services on their mobile phone agree that these services reinforce relationships with close friends. India Mobile phone ownership rate Although only 50% of children exclusively own a mobile phone this increases to 93% when taking shared ownership into account.<sup>[12]</sup> Just 36% of child mobile phone users have smartphones. Use of mobile phones 40% of children and 80% of parents use the calling function only; call frequency is particularly high among children with 74% making six or more calls a day. The use of messaging is popular with 85% of children sending 11 or more messages and nearly 55% of children sending over 50. Mobile internet 88% of child mobile phone users access the internet via mobile phones. Mobile apps use 94% of children with access to handsets use apps; this is higher than their parents usage at 65%. Entertainment apps are used most at 91%, followed by education and learning apps at 80%. Social networking on mobile phones and privacy 66% of all children who access the internet via their mobile use social networking sites. 60% of children who use social networks have their profile set as open to the public while 70% have set their profile as private. Parental concerns and mobile safety Concerns about children’s privacy is lowest and 83% of parents are “very concerned” or “somewhat

concerned” about their children’s privacy on mobile phones. 85% of families do not set rules on mobile phone use.

### Discussion

Mobile media has had a clearly documented impact, both positive and negative, on children. Mobile devices, because of their portability and interactive components, are introducing media into all aspects of children’s experience and deserve serious attention and research<sup>[13]</sup> Until more is known, pediatric providers can offer guidance on preserving quality, connected family interactions, whether through “unplugged time” or a designated family hour, and how to establish healthy childhood media habits from early childhood. Overwhelmingly, the current study showed that children aged between 8 and 10 used their mobile phones most frequently for socialisation with the main use being to stay in contact with friends similar study done by Auter et al ; Boneva et al., ;similar study done by Green & Singleton, Peterson, Most importantly mobiles phones seem to fulfil a fundamental need to communicate and to be connected with peers as most of the participants<sup>[14]</sup>

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Australian Educational Computing, concluded in their study in 2014,. reported that they used their mobile phones to have conversations either as voice calls or more preferably as text messages, with a majority of them occurring over the weekends However, the study did find that both male female participants used their phones more frequently for calling and messaging others, listening to music and as a camera. These findings

confirm the notion stated by Green and Singleton that males and females are likely to use mobile for social purposes as the female participants indicated that they used their mobile phones as a way of sharing and interacting with others rather than a device to make calls on<sup>[15]</sup> In addition, the study found that students often receive their first mobile phone in the primary school years, There is a growing importance to study the use and impact of mobile phone use, particularly older children in order to understand and predict future technology use and perhaps more importantly to understand and assist children understand themselves and their communication and socialisation patterns.

### Mobile Phone Safety For Kids

As a parent, you must take preventive measures to minimize your child’s exposure to the harmful effects of mobile phones. As with mobile, it is crucial to ask how parents decide which technology and content is best for their children and how they monitor and set rules for use.

These include: Do not give cell phone if your child is under 16 years. A child’s brain is too sensitive to withstand the effects of mobile radiation. Do not let your child hold a mobile phone directly up to his head. Use an air-tube headset instead. Do not let your child make calls in buses, trains, cars, and elevators. The mobile phone works harder to get the signal out through the metal, which increases the power level. Do not let your child use cell phone when the signal is weak. It will increase the power to the maximum, as the phone attempts to connect to a new relay antenna. Limit the use of cell phone around children. Make sure that there is no mobile phone mast or network tower near your home or your kid’s school. Do not let children take mobile phones to school. Do not leave mobile phones in your children’s bedroom at night.

### Conclusion

This study found that mobile phone use amongst preschool children are high and widespread. There

is a growing importance to study the use and impact of mobile phone use, particularly amongst schoolgoing children in order to understand and predict future technology use and perhaps more importantly to understand and assist older children understand themselves and their communication and socialisation patterns. As mobile phones become ever more complex (integrating multimedia applications ‘APPS’) the attraction to use them is likely to increase further and this will have an impact on how individuals communicate and socialise not only with others but also with the technology itself. Importantly, it should be noted that mobiles seem to aid or assist in the process of individualisation but it alone cannot explain how children come to the process of self-formation through communication.

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