



A CROSS SECTIONAL STUDY ON SMART PHONE USING PATTERNS IN CHILDREN LESS THAN 5 YEARS IN A RURAL TERTIARY CARE CENTER, MANDYA, KARNATAKA.

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ABSTRACT **Introduction:** With this widespread use of digital media it has become a necessary evil for a person to have a smart phone. Most of the families will have at least one smart phone with them. Hence there will be increased chances of children being exposed to smart phones. **Methodology:** This study was conducted in Adichunchanagiri Institute of Medical Sciences, B.G.Nagara, Mandya, Karnataka from September 2020 to August 2021, with the objective to study the circumstances that lead to use smart phone among under five children and to study the screen time duration among under five children. **Results:** Out of 214 children, 115 (53.7%) were males, 118 (55.1%) children were less than 2 years of age, all 214 (100%) of our study subjects were using smart phones, among them 70.3% of less than 2 year children had supervised screen time and 62.5% of 2 to 5 year old children had supervised screen time. Most common reasons for parents to offer smart phone was to calm the child and to feed the child in both the age groups. Most common reason for using smart phone was to watch videos. **Conclusion:** Parental education regarding the advantages and disadvantages is required.

KEYWORDS : Smart phone, Screen time, Mobile media, Video call.

INTRODUCTION

India is in era of digitalization where we have witnessed changes from postal letters to emails and SMS, from voice call to video call, regular cinema hall to OTT platforms, paper currency to digital currency, physical games to video games and so on. With this widespread use of digital media it has become a necessary evil for a person to have a smart phone. Due to advances in technology and market competition a wide variety of these gadgets are available at an affordable price. Most of the families will have at least one smart phone with them. Hence there will be increased chances of children being exposed to smart phones. Mobile devices are becoming the preferred media choice for children because of their screen size, mobility and interactive capability and decreasing costs.¹ Often, parents know that excessive use of media devices by children is harmful to their physical and mental health, despite that they offer these devices to children for one or the other reason. These devices have replaced the ordinary toys, outdoor play activities and habit of reading books by children. This study tried to look at the factors and circumstances which lead to usage of smart phone in under five children.

METHODS

This study was conducted in Adichunchanagiri Institute of Medical Sciences, B.G.Nagara, Mandya, Karnataka from September 2020 to August 2021.

Objectives

- To study the circumstances that lead to the use smart phone among under five children.
- To study the screen time duration among under five children.

Inclusion Criteria

All the under five children visiting Adichunchanagiri Institute of Medical Sciences hospital who had history of smart phone usage were included in study.

Exclusion Criteria

- Age > 5 years.
- Children who did not have Smart phone usage history.

Method of data collection

We studied circumstances which lead to usage of smart phone in under five children and screen time duration in children who met the inclusion criteria. Data for the study was collected from patients visiting OPD and admitted in IPD who met the inclusion criteria. Data regarding age, sex, birth order, maternal education, occupation, socioeconomic status, screen time duration, circumstances leading to usage of smart phones and predominant content used in smart phone were noted on a predesigned proforma.

Statistical Analysis

Data thus obtained was compiled and entered in MS Excel spread sheet; descriptive statistics was applied, cross tables were constructed, data was expressed in terms of frequency and percentage.

RESULTS:

A total of 214 children (Table 1) were enrolled in the study, among them 115 (53.7%) were males and 99 (46.3%) were females, 118 (55.1%) children were less than 2 years of age and 96 (44.9%) were between 2 years to 5 years of age. Among 214 study subjects 133 (62.1%) were first born child, 47 (22%) belonged to nuclear family. Majority of the study subjects mothers 78(36.5%) had education till intermediate which was followed by high school (32.2%). Most of the mothers of our study subjects 71 (33.2%) were agriculturist by occupation which was followed by homemakers 63 (29.4%). Majority of our study subjects 109 (51%) belonged to Class 3 modified B.G. Prasad classification which was followed by class 2, 60 (28%) subjects.

Table 1: Socio-demographic profile of the study population

PARAMETER	Number (214)
Age	
< 2 years	118 (55.1%)
2- 5 years	96 (44.9%)
Gender	
Male	115 (53.7%)
Female	99 (46.3%)
First child	
Yes	133 (62.1%)
No	81 (37.9%)
Type of family	
Nuclear family	47 (22%)
Joint family	167 (78%)
Maternal education	
Primary school	9 (4.2%)
Middle school	16 (7.5%)
High school	69 (32.2%)
Intermediate	78 (36.5%)
Degree	42 (19.6%)
Occupation of mother	
Homemaker	63 (29.4%)
Agriculture	71 (33.2%)
Business	18 (8.4%)
Service	24 (11.2%)
Skilled work	38 (17.8%)

Socioeconomic status	
Class 1	14 (6.5%)
Class 2	60 (28%)
Class 3	109 (51%)
Class 4	27 (12.6%)
Class 5	4 (1.9%)

All 214 (100%) of our study subjects were using smart phones, among them 70.3% of less than 2 year children had supervised screen time and 62.5% of 2 to 5 year old children had supervised screen time. Among less than 2 year group majority of study subjects 89 (75.4%) had screen time duration between 0 to 30 minutes which was followed by 30 to 60 minutes i.e., 19 (16.1%) subjects. Among 2 to 5 year group majority of study subjects 49 (51%) had screen time duration between 60 to 120 minutes which was followed by 30 to 60 minutes i.e. 22 (22.9%) subjects. (Table 2)

Table 2: Screen time pattern distribution among study population

SCREEN TIME CATEGORY	< 2 years (n=118)	2- 5 years (n=96)
Screen time supervision		
PRESENT	83 (70.3%)	60 (62.5%)
ABSENT	35 (29.3%)	36 (37.5%)
Screen time duration		
0-30 mins	89 (75.4%)	9 (9.4%)
30- 60 mins	19 (16.1%)	22 (22.9%)
60 – 120 mins	8 (6.7%)	49 (51%)
> 120 mins	2 (1.6%)	16 (16.6%)

In our present study, we found the most common circumstances which lead to the usage of mobile phones by children in both the study groups was to make the crying child calm 97 (82.2%) in <2 year group and 69 (71.8%) in 2 to 5 year group, which was followed by to make children eat food 84 (71.1%) in <2 year group and 61 (63.5%) in 2 to 5 year group. Apart from these two circumstances educative reason and to keep the child engaged while parents are busy in their work were other major contributors. Watching videos was most common content used in smart phone in both groups 101 (85.5%) subjects in less than 2 year group and 88 (91.6%) in 2 to 5 year group, which was followed making video calls by 77 (65.8%) subjects in less than 2 year group and 78 (81.2%) subjects in 2 to 5 year age group. (Table 3)

Table 3: Smart phone usage pattern among study population

SMART PHONE USAGE PATTERN	< 2 years (n=118)	2- 5 years (n=96)
Circumstances leading to smart phone usage		
Make them calm while crying	97 (82.2%)	69 (71.8%)
Make them eat food	84 (71.1%)	61 (63.5%)
Recreation	24 (37.2%)	50 (52%)
Education	51 (43.2%)	48 (50%)
Make them sleep	31 (26.2%)	24 (25%)
To keep children engaged while parents are busy in their work	52 (44%)	44 (45%)
Predominant content used in smart phone		
Watching videos	101 (85.5%)	88 (91.6%)
Video call	77 (65.8%)	78 (81.2%)
Audio call	34 (28.8%)	54 (56.2%)
Listening to Songs	44 (37.2%)	32 (33.3%)
Playing games	52 (44%)	72 (75%)
Camera	41 (34.7%)	58 (60.4%)

DISCUSSION

Screen exposure include both traditional (like watching television) and new digital or social media (using smart phones/tablets, use of videos and computers for recreational activities, video and computer gaming, social media, mobile phone applications, internet use etc.).² Screen time is the total time spent per day in viewing screens such as mobile phone, TV, computer, tablet, or any hand-held or visual device.³ Mobile media has both positive and negative impact on children. Mobile devices, because of their portability and interactive components, are introducing media into all aspects of children's experience.⁴ Mobiles phones are helpful in communication and helps in connecting with peers.⁵ Children below the age of 2 years should not be exposed to any type of screen with the exception of occasional video call with relatives.³ Screen time for children between the age of 2 and 5 years should not exceed 1 hour; the lesser, the better.³

In our study, all the children had access to smart phones. Most common reasons for parents to offer smart phone was to calm the child and to feed the child in both the age groups. Parents quoted education, entertainment and babysitting as major reasons for media exposure in their children younger than 2 years in two similar studies.^{1,6} Another study done by Sayid MB et al, showed that majority of the children were using smart phones mostly for entertainment purposes.⁷ A study from Korea by Bae SM⁸ also suggested similar findings.

In our study we found that most common reason for using smart phone was to watch videos which was followed by video calls similar study by Meena SK et al⁹ showed youtube was most common content accessed by children, another study by Sayid MB et al⁷ found that phones were used maximum for calling purposes.

CONCLUSION

There is lack of awareness among parents regarding screen time and the use of smart phones. Parental education regarding the advantages and disadvantages is required.

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