

Original Research Article

Awareness and attitude among parents of primary school students towards screen time in children

S. Alph Shirley¹, S. Santha Kumar^{*2}

¹Department of Paediatrics, Kanyakumari Government Medical College, Asaripallam, Nagercoil, Tamil Nadu, India

²Department of Paediatrics, Government Thiruvannamalai Medical College, Thiruvannamalai, Tamil Nadu, India

Received: 04 October 2019

Revised: 08 November 2019

Accepted: 14 November 2019

*Correspondence:

Dr. S. Santha Kumar,

E-mail: littleflowerhospital93@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Screen time behavior in young children is highly influenced by parental attitude towards screen time. The objective of this study is to assess the awareness and attitude among parents of primary school students in the state of Tamil Nadu, India towards screen time in children.

Methods: This cross-sectional observational study was conducted in the state of Tamil Nadu, India among 134 parents of primary school children. Data collected using a predesigned questionnaire were analyzed using suitable statistical methods.

Results: Of the 134 participants, 48.5% were fathers and 51.5% mothers. Majority (77.6%) were in the age group of 24 to 35 years. Only 3.7% of the participants were aware of the exact screen time guidelines in children. 93.3% of the participants felt that it was important to limit screen time in children. 84.3% of the participants believed that the content of screen time should be controlled in children. 82.1% of parents felt that they should co view media with their children. 65.7% of the participants believed that the ideal screen time in children per day is 1 to 2 hours. 82.1% of the participants believed that using screen time as a replacement for caretaker was an important reason for increasing screen time. The awareness of adverse effects of increased screen time was high among the participants. 91.8% of the participants believed that establishing limits for screen time in children was the most efficient way to limit screen time in children. 89.6 % believed that increasing awareness among children was important.

Conclusions: In this study, we conclude that majority of the parents were aware of the adverse effects of increasing screen time and want to establish healthy screen time behaviours in children.

Keywords: Parents attitude screen time, Parental awareness screen time, Primary school children screen time, Screen time children, Screen time children Tamil Nadu, Screen time guidelines

INTRODUCTION

Parental attitudes and knowledge play a major role in improving the health of children and establishing lifelong healthy habits. Increasing screen time in children has been linked to several adverse effects affecting the physical, emotional, social and intellectual wellbeing of children. Several health organizations including the World Health Organization (WHO) and American

Academy of Pediatrics (AAP) has recommended guidelines for screen time use in children.^{1,2}

Screen time behavior in young children is highly influenced by parental screen time behaviors and their attitude towards screen time. The objective of this study was to assess the awareness and attitude among parents of primary school students in the state of Tamil Nadu, India towards screen time in children.

METHODS

This cross-sectional observational study was conducted at the state of Tamil Nadu, India among 134 parents of children studying at primary school in Tamil Nadu, India. The study was conducted over 3 months from June 2019 to August 2019.

Inclusion criteria

- Parents of children studying in primary school who were willing to participate in the study.

Exclusion criteria

- Parents of children with physical disability, developmental delay, intellectual disability, behavioral problems, visual impairment, hearing impairment and chronic illness.

After obtaining informed consent, data was collected from the parents using a predesigned questionnaire. Demographic details were collected. Modified Kuppasamy's socioeconomic status scale was used to find the socioeconomic status. Questions were designed to test the awareness and attitude of the parents towards screen time in children. Data collected were analyzed with suitable statistical methods using SPSS 25 software.

RESULTS

Of the 134 participants, 65(48.5%) were fathers and 69(51.5%) mothers. Majority (77.6%) were in the age group of 24 to 35 years followed by 36 to 45 years (20.2%) and 46 to 60 years (2.2%).

Table 1: Demographic profile of the participants (Based on age, gender and socioeconomic status).

	24 to 35 years	104(77.6%)
Age group	36 to 45 years	27(20.2%)
	46 to 60 years	3 (2.2%)
Gender	Male	65(48.5%)
	Female	69(51.5%)
Socioeconomic Status	Class I (Upper)	5(3.7%)
	Class II (Upper Middle)	30(22.4%)
	Class III (Middle)	38(28.4%)
	Class IV (Upper Lower)	39(29.1%)
	Class V (Lower)	22 (16.4%)
Family type	Joint Family	83(61.9%)
	Nuclear Family	51(38.1%)

As per Modified Kuppasamy Socio economic status scale, 3.7% belonged to Class I (Upper), 22.4% were Class II (Upper Middle), 28.4% were Class III (Middle), 29.1% belonged to Class IV (Upper Lower) and 16.4% belonged to Class V (Lower). 83(61.9%) of the participants belonged to joint family and 51(38.1%) of the participants belong to nuclear family (Table 1).

The demographic distribution as per the participant's education and occupation is shown in Table 2.

Table 2: Demographic profile of the study population (Based on occupation and education).

	Housewife/House Husband	29(21.6%)
Occupation	Unskilled/ Semiskilled	23(17.2%)
	Skilled	15(11.2%)
	Clerical/Shop Owner/Farm	13(9.7%)
	Semi professional	20(14.9%)
	Professional	34(25.4%)
Education	Illiterate	0(0%)
	Primary	14(10.4%)
	Middle/High School	30(22.4%)
	Higher Secondary	25(18.7%)
	Graduate	26(19.4%)
	Professional	39(29.1%)

Of the 134 participants, only 5 participants (3.7%) were aware of the exact WHO or AAP guidelines regarding screen time in children. (Figure 1). This included 4 fathers (6.2%) and 1 mother (1.4%).

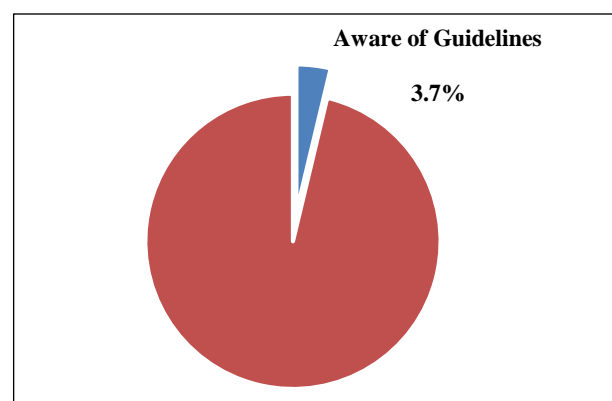


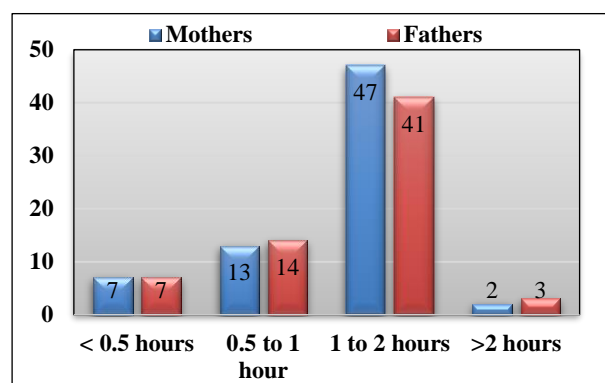
Figure 1: Awareness of screen time guidelines among study participants.

Majority of the study participants (93.3%) felt that it was important to limit screen time in children. 84.3% of the participants believed that the content of screen time should be controlled in children. 88.8% believed that there should be media free time for children. 85.1% believed that home must have specific media free places at home. 82.1% of parents felt that they should co view media with their children. The attitude of mothers and fathers towards various screen time behaviors in children is shown in Table 3.

Majority of the participants (65.7%) believed that the ideal screen time in children per day is 1 to 2 hours followed by 0.5 to 1 hour per day (20.1%), less than 0.5 hours per day (10.5%) and more than 2 hours per day (3.7%). The perception of mothers and fathers towards the ideal screen time per day in children is shown in Figure 2.

Table 3: Attitude of parents towards screen time behavior in children.

Attitude of parents towards screen time behaviour	Mothers (n=69)	Fathers (n=65)	Total (n=134)
Need to limit duration	65(94.2%)	60(92.3%)	125(93.3%)
Need to control content of screen time	59(85.5%)	54(83.1%)	113(84.3%)
Need to designate media free time	60(86.9%)	59(90.8%)	119(88.8%)
Need to designate media free places at home	56(81.2%)	58(89.2%)	114(85.1%)
Need to co view with children	58(84.1%)	52(80%)	110(82.1%)

**Figure 2: Attitude of parents towards ideal screen time duration in children.**

Most of the participants (82.1%) believed that using screen time as a replacement for caretaker was an important the reason for increasing screen time. 74.6% of the participants believed that one of the important reasons for increasing screen time is to reduce parental distress. The percentage of participants who believed in the various reasons for increasing screen time is as shown in Table 4.

The awareness of the participants regarding the various adverse effects of increased screen time duration is shown in Table 5. Most of the participants were aware of the various physical, mental and social effects of increasing screen time.

Table 4: Reasons for increasing screen time among children.

Reasons for increasing screen time	Mothers (n=69)	Fathers (n=65)	Total (n=134)
Using screen time as replacement for caretaker	56(81.2%)	54(83.1%)	110(82.1%)
To reduce parental distress	49(71.0%)	51(78.5%)	100(74.6%)
Increasing nuclear family trend	36(52.2%)	31(47.7%)	67(50.0%)
Peer Pressure	45(65.2%)	38(58.5%)	83(61.9%)
To update children	31(44.9%)	37(56.9%)	68(50.7%)
To educate children	40(58.0%)	39(60.0%)	79(58.9%)
To entertain children	49(71.0%)	42(64.6%)	91(67.9%)
Increasing availability of screens	44(63.8%)	32(49.2%)	76(56.7%)
Increasing availability of free media content	32(46.4%)	28(43.1%)	60(44.8%)

Table 5: Awareness of adverse effects of increased screen time among parents.

Adverse effects	Mothers (n=69)	Fathers (n=65)	Total (n=134)
Overeating	54(78.3%)	59(90.8%)	113(84.3%)
Reduced Physical activity	56(81.2%)	57(87.7%)	113(84.3%)
Overweight and obesity	57(82.6%)	55(84.6%)	112(83.6%)
Lifestyle related diseases in childhood	45(65.2%)	43(66.2%)	88(65.7%)
Lifestyle related diseases in adulthood	32(46.4%)	39(60.0%)	71(52.9%)
Eye problem	51(73.9%)	54(83.1%)	105(78.4%)
Sleep related problems	40(57.9%)	39(60.0%)	79(58.9%)
Behavioural problems	43(62.3%)	47(72.3%)	90(67.2%)
Anxiety	32(46.4%)	38(58.5%)	70(52.2%)
Hyperactivity, Inattention	35(50.7%)	37(56.9%)	72(53.7%)
Poor scholastic performance	44(63.8%)	48(73.8%)	92(68.7%)
Poor self esteem	31(44.9%)	29(44.6%)	60(44.8%)
Poor social interaction	42 (60.9%)	44 (67.7%)	86 (64.2%)
Poor interpersonal relationships	41 (59.4%)	46 (70.8%)	87 (64.9%)

A 91.8% of the participants believed that establishing limits for screen time in children was the most efficient way to limit screen time in children. 89.6% believed that increasing awareness among children was important.

66.4% of the participants felt that improving social interactions in children is a way to limit screen time in children. The attitude of parents towards ways to limit screen time in children is shown in Table 6.

Table 6: Attitude among parents towards ways to limit screen time in children.

Ways to limit screen time in children	Mothers (n = 69)	Fathers (n = 65)	Total (n = 134)
Establishing limits in children	61(88.4%)	62(95.4%)	123(91.8%)
Increasing outdoor activities in children	51(73.9%)	52(80.0%)	103(76.9%)
Increasing social interactions in children	48(69.7%)	41(63.1%)	89(66.4%)
Increasing awareness among parents	59(85.5%)	61(93.8%)	120(89.6%)
Increasing awareness among children	58(84.1%)	62(95.4%)	120(89.6%)

DISCUSSION

WHO guidelines on physical activity, sedentary behavior and sleep for children under 5 years of age, 2019 recommends no screen time under two years of age and to limit screen time in children 2 to 5 years to not more than 1 hour per day.¹

AAP guidelines (2016) recommends that children under 18 months avoid use of screen media other than video-chatting.² It recommends that parents of children 18 to 24 months of age who want to introduce digital media should choose high-quality programming and watch it with their children to help them understand what they're seeing. Kids between 2 and 5 years are recommended limit their use to an hour of high quality Programme, and that ideally parents should co-view media with children. It is also recommended to designate media-free times together, such as dinner or driving, as well as media-free locations at home, such as bedrooms.

Several studies have demonstrated the influence of parental attitudes and perceptions on screen time in children. In the Toy Box-study on Parental perceptions, attitudes and knowledge on European preschool children's total screen time by Miguel-Berges ML et al, (2019) it was observed that the odds of exceeding total screen time recommendations were significantly higher when parental perceptions towards limiting the total screen time were negative and that the odds of exceeding TV/video/DVDs viewing recommendations were significantly higher when parental knowledge of recommendation were absent.³

The findings of a systematic review on associations of parental influences with physical activity and screen time among young children by Xu H et al, suggested that parental perceptions, parental influence and parenting style play a major role in decreasing screen time in children.⁴ Parental habits at home were found to be the most important factor influencing children's screen time in a study by De Decker E et al.⁵ Low parental self-efficacy and parental barriers were found to be associated

with the likelihood of children exceeding screen time guidelines in a study by Smith BJ et al.⁶

In this study, though majority of the parents were aware of the various adverse effects of increased screen time duration and wanted to establish healthy screen time behavior in children, only 3.7% of the participants were aware of the recommended guidelines regarding screen time use in children. In a study by Joseph ED et al, (2019) in US on perceptive of care givers on young children's screen time, the care givers were unaware of screen time guidelines.⁷ In the study by Bentley GF et al, done at UK on mother's perception of sedentary behavior guidelines, the mothers were not aware of the UK screen time guidelines for the early years.⁸ This shows the need for increasing awareness among parents regarding the recommended screen time guidelines. More steps need to be taken by health care professionals, educational professionals and healthcare organizations to educate parents not only regarding the adverse effects of prolonged screen time but also the recommended screen time guidelines to be followed in children.

In this study 93.3% of the participants felt the need to limit screen time in children. This is similar to the study by Nwankwo F et al, (2019) where 84% were concerned that their children are spending a lot of time using screen devices.⁹

Hinkley T et al, in their study on parental perception of screen time in children noted that there were mixed perceptions of screen time, with benefits such as learning, education and relaxation, and risks including habit formation, inappropriate content, negative cognitive and social outcome, and detriments to health.¹⁰ In the study by Hamilton K et al, exploring parent's beliefs about young children's screen time behaviors, improved family interactions and improved child behavior were perceived be advantages and mess and noise factor and increase in parental distress were found to be disadvantages of limiting screen time duration in children.¹¹ In this study however, though parents were aware of the benefits of screen time like education and entertainment, majority of

the parents understood the risks of excess screen time and felt the need to limit the screen time duration and modify screen time behavior of children. 76% of the participants reported that their children were inactive due to excessive screen time in the study by Nwankwo F et al, (2019).⁹ In this study 84.3% of the participants felt that reduced physical activity is an adverse effect of excessive screen time and 83.6% believed that excessive screen time can lead to overweight and obesity.

Edwards MJ et al, in their study found that majority of the parents believe that their child's screen viewing behaviors are influenced by their child's siblings and friends.¹² This is similar to this study where 61.9% of the parents felt that peer pressure was one of the important causes for increasing screen time. But no univocal results were found about the influence of siblings or friends on children's screen time in the study by De Decker E et al.⁵

Majority of the parents in this study were concerned about the screen time behaviors of their children and were aware of the adverse effects of prolonged screen time. This higher awareness in this study group could be partly explained by the higher number of professionals and graduates in this study group. More studies on this area in a wider range of demographic population is required to learn more about parental awareness and attitude towards screen time in children. Motivating and encouraging parents to practice screen time guidelines will help in dealing with the emerging problem of increasing screen time in children.

CONCLUSION

One of the major steps in dealing with any public health issue is improving the awareness of the problem among the population. In this study, author conclude that majority of the parents were aware of the adverse effects of increasing screen time and want to establish healthy screen time behaviours in children. These findings show an increasing awareness of the problems associated with screen time among parents of primary school children. The improving awareness and attitude toward healthy screen time have to be imbibed in the child rearing practices of parents to reduce the problems associated with increasing screen time in children.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. World Health Organization. Guidelines on physical activity, sedentary behaviour and sleep for children under 5 years of age. World Health Organization. 2019. Available at:

<http://www.who.int/iris/handle/10665/311664>. Accessed October 3, 2019.

2. Council OC. Media and Young Minds. *Pediatr.* 2016;138(5).
3. Miguel-Berges ML, Santaliestra-Pasias AM, Mouratidou T, Flores-Barrantes P, Androutsos O, Craemer MD, et al. Parental perceptions, attitudes and knowledge on European preschool children's total screen time: the ToyBox-study. *Eur J Public Health.* 2019 Sep 9.
4. Xu H, Wen LM, Rissel C. Associations of parental influences with physical activity and screen time among young children: a systematic review. *J Obesity.* 2015;2015.
5. De Decker E, De Craemer M, De Bourdeaudhuij I, Wijndaele K, Duvinage K, Koletzko B, et al. Influencing factors of screen time in preschool children: an exploration of parents' perceptions through focus groups in six European countries. *Obesity Rev.* 2012;13:75-84.
6. Smith BJ, Grunseit A, Hardy LL, King L, Wolfenden L, Milat A. Parental influences on child physical activity and screen viewing time: a population-based study. *BMC Public Health.* 2010;10(1):593.
7. Joseph ED, Kracht CL, St. Romain J, Allen AT, Barbaree C, Martin CK, et al. Young Children's Screen Time and Physical Activity: Perspectives of Parents and Early Care and Education Center Providers. *Global Pediatr Health.* 2019;6:2333794X19865856.
8. Bentley GF, Jago R, Turner KM. Mothers' perceptions of the UK physical activity and sedentary behaviour guidelines for the early years (Start Active, Stay Active): a qualitative study. *BMJ Open.* 2015;5(9):008383.
9. Nwankwo F, Shin HD, Al-Habaibeh A, Massoud H. Evaluation of children's screen viewing time and parental role in household context. *Global Pediatr Health.* 2019;6:2333794X19878062.
10. Hinkley T, McCann JR. Mothers' and father's perceptions of the risks and benefits of screen time and physical activity during early childhood: a qualitative study. *BMC Public Health.* 2018;18(1):1271.
11. Hamilton K, Cleary C, White KM, Hawkes AL. Keeping kids sun safe: Exploring parents' beliefs about their young child's sun-protective behaviours. *Psycho-Oncol.* 2016;25(2):158-63.
12. Edwards MJ, Jago R, Sebire SJ, Kesten JM, Pool L, Thompson JL. The influence of friends and siblings on the physical activity and screen viewing behaviours of children aged 5-6 years: a qualitative analysis of parent interviews. *BMJ Open.* 2015;5(5):e006593.

Cite this article as: Shirley SA, Kumar SS. Awareness and attitude among parents of primary school students towards screen time in children. *Int J Contemp Pediatr* 2020;7:107-111.