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Maternal Awareness Of The Adverse Impact Of Excessive Screen Time On Children"

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Abstract

Introduction: Screen time has become an increasingly prevalent issue among children, with many spending hours each day in front of electronic devices such as televisions, tablets, and smartphones. While technology has its benefits, excessive screen time has been linked to a range of negative effects on children's physical, cognitive, and socio-emotional development. As mothers are often the primary caregivers for young children, it is essential to understand their level of awareness of these adverse impacts and how they manage their children's screen time.
Aim: The purpose of this paper is to investigate maternal awareness of the adverse impact of excessive screen time on children and how they manage their children's screen time
Methodology: A descriptive quantitative approach was used, and an online questionnaire was administered to 200 mothers with children under 14 years in Kottayam district, Kerala.
Result: The assessment of the level of knowledge of mothers regarding the effects of excessive screen time on children revealed that the highest percentage (74%) of mothers had an average level of knowledge
Conclusion: The study highlights the need for more support and resources for mothers to help them manage their children's screen time effectively.The findings suggest that mothers are generally aware of the negative effects of excessive screen time but struggle with limiting their children's screen time due to various factors.

INTRODUCTION

Screen time on children refers to the amount of time that children spend in front of electronic devices such as televisions, computers, tablets, smartphones, and gaming devices. In recent years, screen time has become a ubiquitous part of daily life for many families, with children increasingly exposed to screens at younger ages and for more extended periods.While electronic devices can provide many benefits, such as educational and social opportunities, excessive screen time can have adverse effects on children's development. Research has found that excessive screen time can lead to a range of negative outcomes, including decreased academic performance, poor sleep quality, increased obesity, and behavioural problems.Moreover, excessive screen time can lead to the development of problematic screen habits such as addiction, social isolation, and cyber bullying. As a result, it is essential to understand the impact of screen time on children and develop effective strategies to promote healthy screen habits.

Several studies have explored the effects of too much screen time on children's health and development. According to Madigan et al. (2019)[(1)], excessive screen time in early childhood can lead to developmental delays, specifically in language and communication skills. Adriana (2020)[(2)] found that excessive screen time is linked to poor executive functioning, such as impulse control[(2)], attention regulation[(3)], and working memory. Meanwhile, Hale & Guan (2015)[(4)] found that

excessive screen time was associated with poor sleep quality and quantity among adolescents. Other studies have also discovered that too much screen time can increase the risk of obesity in children [(5)] and reduce their physical activity[(6)]. Collectively, these studies suggest that excessive screen time may have detrimental effects on the health and development of children.[(1)]

Parents and caregivers play a crucial role in managing children's screen time, and their attitudes and Behaviors around screen use can significantly impact children's health and development[(7)]. Therefore, it is important to educate parents and caregivers about the potential risks associated with excessive screen time and provide them with effective tools and strategies to manage their children's screen use to establish healthy habits and limits around screen time.[(8)]By promoting healthy screen habits, parents and caregivers can help ensure that children develop in a positive and healthy manner

SIGNIFICANCE OF THE STUDY

Assessing the knowledge of mothers regarding the effects of excessive screen time is important[(9)] because mothers play a significant role in shaping their children's screen time habits. A mother's knowledge and attitudes towards screen time can influence the amount of time their child spends in front of a screen, as well as the types of content they consume. Furthermore, mothers who are aware of the potential negative consequences of excessive screen time may be more likely to establish healthy habits and limits around its use.

Several research studies have explored the relationship between maternal knowledge and attitudes towards screen time and children's screen time habits. Lampard et al.,[(10)]found that maternal knowledge of the recommended guidelines for screen time was associated with lower levels of screen time in their children[(11).] Tandon et al.,[(12)] investigated that mothers who perceived screen time to be detrimental to their child's health were more likely to limit their child's screen time [(13).]Studies found that maternal attitudes towards screen time were associated with the amount of time their child spent in front of a screen [(14).]Specifically, mothers who believed that screen time had no negative effects on their child's health were more likely to allow their child to spend more time in front of a screen. Overall, these studies suggest that maternal knowledge and attitudes towards screen time can play an important role in shaping children's screen time habits. Assessing the knowledge of mothers regarding the effects of excessive screen time can help identify areas where education and intervention may be needed and may help promote healthy screen time habits for children. Excessive screen time can negatively affect children's health and well-being, and studying maternal awareness can help inform parenting practices and public health policies. The research can identify factors that contribute to negative outcomes and help develop targeted interventions to promote healthy screen time habits.

OBJECTIVE OF THE STUDY

The aim of the research study would be to assess the knowledge of mothers regarding the effects of excessive screen time on their children to determine the level of awareness and understanding that mothers have regarding the potential negative consequences of excessive screen time.

INCLUSION AND EXCLUSION CRITERIA

The inclusion criteria for this study required mothers to have children between the ages of ten and fourteen years and sufficient literacy skills to read either English or Malayalam. The exclusion criteria included mothers with children above 14 years or below 10 years of age, those who faced difficulties accessing the online questionnaire due to issues such as internet problems, and those who faced difficulties reading in both English and Malayalam**.**

METHODOLOGY

In this study, the sample consisted of 300 mothers who had children between the ages of 10-14 years and lived in Kottayam district, Kerala. The researchers collected data on the knowledge level of the mothers regarding the effect of excessive screen time on children
by an online questionnaire.

TOOL

In this study, demographic variables were collected along with a knowledge assessment questionnaire consisting of 30 questions related to the mothers' level of knowledge about the effects of excessive screen time on children. The questionnaire was divided into four sub-scales to assess mothers' knowledge about the impact of excessive screen time on physical, behavioral, psychosocial, and cognitive or academic problems in children. The level of knowledge of mothers assessed through the questionnaire was classified into three categories: poor (Score<40), average (Score40-70), and good(score≥70).The researchers consulted with statisticians, guides, and experts to develop criteria for a rating scale that would categorize the sample based on the mothers' level of knowledge about the effects of excessive screen time on children.Before using the questionnaire in the main study, the researchers reviewed and validated it by obtaining expert opinions. The questionnaire was pretested to evaluate its effectiveness, and the participants in the pre-test were not included as study respondents. The feedback from the pre-test was used to modify and clarify some of the questions. Data was collected in January 2021, where the mothers of children below 14 years residing in Kottayam district, Kerala. The researcher collected the responses through online means, and the response rate was 98%.

Data Analysis:

The completeness of the data was checked, and any inconsistencies were identified and addressed. The SPSS statistical package version 20 was used to capture and analyze the data. Descriptive analyses, including frequencies, mean, median, mode, and standard deviation, were conducted for all items on the questionnaire. The knowledge assessment responses were recoded into three categories: poor (score < 40), average (score 40-70), and good (score ≥ 70).

RESULT

Based on the collected information, demographics of the mothers of early adolescent children showed that 46% of the mothers were in the age group of 30-49, while 40% were in the age group of 18-29, and only 14% were above 50 years old. In terms of educational status, the majority (37%) had a graduate degree, while the least majority (2.5%) were literate only (able to read and write). With respect to family income, the majority (40%) were in the income group of Rs 15,000 and above, while the least majority (14.5%) were in the income group of Rs 10,001-15,000 per month. Regarding family type, the majority (86%) of mothers lived in a nuclear family, while a minority (14%) lived in an extended family. In terms of employment status, the most (74%) were unemployed, while the least (28%) were working part-time. Finally, in terms of community type, the majority (76.5%) were from rural communities, while the least majority (19.5%) were from urban communities.

Section A: Level of knowledge of mothers regardingthe effect of excessive screen time on children

The assessment of the level of knowledge of mothers regarding the effects of excessive screen time on children revealed that the highest percentage (74%) of mothers had an average level of knowledge.16% of mothers had good knowledge, while only 10% had poor knowledge about the effects of excessive screen time on children (Table 1).

Table 1: Assessment of knowledge of mothers regarding the effect of excessive screen time on children

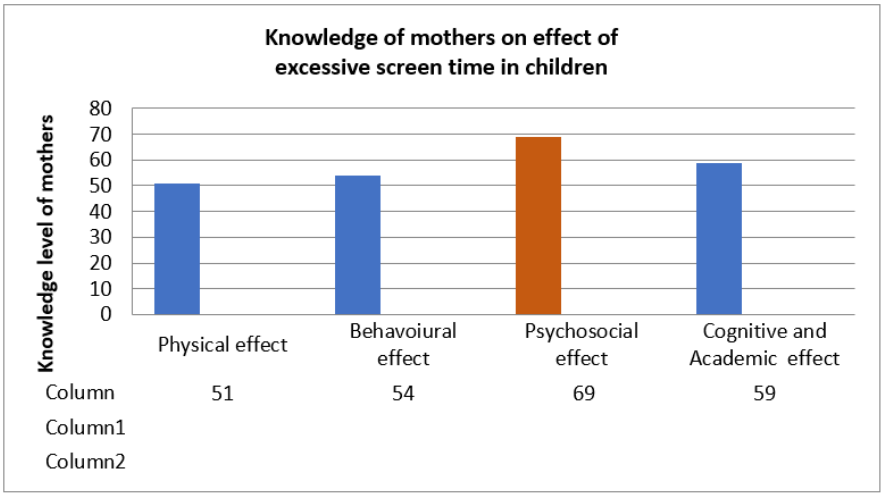
N =200

Sl No	Knowledge area	maxim possible score	Percentage range of score		
			Poor	**Average**	**Good**
			<40	40-70	≥70
1.	Physical problems	10	1	7	2
2.	Behavioural problems	10	1	8	1
3.	Psychosocial Problems	5	-	3	2
4.	Cognitive and academic issues	5	1	4	-
	Total	30	3	22	5
		100 %	10 %	74%	16 %

Section B: Area wise Level of knowledge of mothers regarding the effect of excessive screen time on children

After conducting an area-wise assessment of the level of knowledge of mothers regarding the effects of excessive screen time on children, the results were showed that the highest level of knowledge (69%) was related to psychosocial problems caused by excessive screen time.

59% of mothers had knowledge about the effects of excessive screen time on children's academic and cognitive areas.In the areas of behavioral and physical problems caused by excessive screen usage, mothers answered correctly 54% and 51%, respectively.(Figure1!)



Section C: Item wise analysis of the knowledge score of mothers

Based on the findings of the study, observations were made regarding the level of awareness among mothers regarding the effects of excessive screen time on children. The majority of mothers (82%) were aware that excessive use of screen time in children can lead to eye problems like eye fatigue, pain, strain, irritation, and dryness.65% of mothers were aware that overuse of mobile devices can lead to posture problems in children, which can cause chronic pain and affect balance, as well as negatively impact the digestive system.54% of mothers were aware that too much screen time can lead to childhood obesity.52% of mothers were aware that excessive screen time in children can lead to poor sleep outcomes such as disturbed sleep, delayed sleep onset, and shorter total sleep time.44% of mothers were aware that too much screen time can cause pain in their children's necks, shoulders, and lower backs, as well as leaving them tired and exhausted.42% of mothers were aware that blue light from screens can cause headaches or migraines in children, and that excessive exposure to light from screens can cause thinning of the brain's cortex responsible for critical

thinking and reasoning.Only 35% of mothers were aware that prolonged use of digital devices can cause increased pressure in their children's little hands and fingers.

a. Knowledge on physical problems related to excessive screen time on children

The findings suggest that the majority of mothers are aware of some of the physical problems related to excessive screen time on children. Specifically, 82% of mothers are aware of eye problems, 65% are aware of posture problems, and over half of the mothers surveyed are aware of childhood obesity and poor sleep outcomes. However, there are still some areas where awareness is lacking, such as the increased pressure on children's hands and fingers due to prolonged use of digital devices, which only 35% of mothers were aware of. Additionally, only 42% of mothers were aware of the potential negative impact of blue light on the brain's cortex. These findings highlight the need for continued education and awareness-raising efforts to ensure that parents are well-informed about the potential risks associated with excessive screen time for children.

Table 3: Distribution of percentage of correct responses of mothers regardingphysical problems related to excessive screen time on children

N=200

Sl.No.	Item	Correct responses	Responses %
1	The blue light of the screen induces headaches or migraine in children	84	42
2	Lead to eye problems like fatigue, pain, strain, irritation, and dryness of the eye	164	82
3	Posture problems in children	130	65
4	Excessive Light exposure of screens can cause problems in brain.	84	42
5	Children are constantly tired and exhausted.	88	44
6	Excessive screen time can cause obesity in children	108	54
7	child becomes less engaged in their real-time environment causes less sensory stimulation in brain	92	46
8	Increase Pressure to hands and fingers of children when using devices	70	35
9	Excessive screentime can cause pain on the neck/shoulder and lower back of children	176	88
10	poor sleep outcomes including disturbed sleep, delay in sleep onset or reduced total sleep time	104	52
	Total	1012	51

According to the findings, the majority of mothers (82 percent) were aware that "excessive use of screen time in children leads to eye problems in children like eye fatigue, pain, strain, irritation, and dryness of the eyes of children. 65 % of mothers are aware about the overuse of mobile devices can lead to posture problems in children. Poor posture can also cause the spinal cord to change shape, which can create chronic pain and affect balance. Sitting with poor posture for long periods of time compresses the digestive organs, negatively impacting the digestive system.More than half of the surveyed mothers, specifically 54%, had knowledge that excessive screen time could result in childhood obesity.Just over half of the mothers surveyed (52%) were aware that excessive screen time of children can lead to poor sleep outcomes such as disturbed sleep, delayed sleep onset, and shorter total sleep time in children. According to the findings, 44 percent of parents are aware that too much screen time can cause pain in their children's necks, shoulders, and lower backs, as well as leaving them tired and exhausted. 42 percent of mothers are aware that blue light from screens causes headaches or migraines in children, and that too much light from screens can cause thinning of the brain's cortex, which is responsible for critical thinking and reasoning.Only 35% of mothers were aware that children's prolonged use of digital devices can cause increased pressure in their little hands and fingers.

b. Knowledge on behavioural problems related to excessive screen time on children

According to the findings on behavioral problems, 72 percent of mothers were aware that excessive screen time can cause aggressive behavior and violence in children, and 66 percent of mothers were aware that their children become irritated and angry when they are stopped or removed from screen

devices. 65% of mothers were aware that giving their children too much screen time can lead to them developing a digital device addiction. According to the findings, 54% of mothers were aware that excessive screen time and continuous online video games can lead to suicidal thoughts in children, especially adolescents. More than half of the parents are aware that rapid image changes on screen increase the risk of attention problems and hyperactivity in children. Half of the parents are aware that their children tend to hide what they watch on television from them. Nearly half of parents (48%) are aware that their children have the tendency to watch sexually explicit videos and channels. 46% of mothers were aware that excessive screen time may cause eating problems or changes in eating habits, and only 38% of mothers were aware that extensive screen time may affect their children's self-esteem and self-confidence.

Table 4: Item wise distribution of correct responses of mothers regarding Behavioural problems related to excessive screen time on children

N =200

Sl.No.	Item	Correct response	
		No	%
1	Increasing aggressive behaviour and violence	144	72
2	Increasing tendency to hide what they watch in screen	100	50
3	Getting angry when stopping or removing screen devices	132	66
4	increasing tendency to watch sexually explicit videos and channels	96	48
5	Screentimecauses hyperactivityin children	104	52
6	Rapid image changes on screen increase the risk of attention problem	102	51
7	eating problem or changes in eating habits	92	46
8	Excessive screen time and video games createsuicidal thoughts in children	108	54
9	Reduce Self-confidenceand self-esteem	76	38
10	Tendency to become mobile addiction	130	65
	Total	1084	**54**

c. Knowledge on psychosocial problems related to excessive screen time on children

Item-wise analysis of the correct responses of mothers regarding psychosocial problems related to excessive screen time on children showed that 86% of mothers were aware that excessive screen time can cause mood changes in children, and 82% of mothers were aware that it can weaken children's communication and social skills. According to 65% of mothers, excessive screen usage can cause anxiety, depression, and psychological distress in children. Only 52% were aware that excessive screen time usage in children might lead to greater attention-seeking behavior.

Table 5: Item wise distribution of correct responses of of mothers regarding Psychosocial problems related to excessive screen time on children

N =200

Sl.No.	Item	Correct response	
		No	%
1	Excessive screentime duration causes anxiety and depression	130	65
2	Stress and Psychological distress	128	64
3	Negative affect or mood	172	86
4	Weaken communication and social skills	164	82
5	Increasing Attention seeking behaviour in social media	104	52
	Total	698	69

d. Knowledge on Cognitiveproblems related to excessive screen time on children.

Item-wise analysis of mothers' responses regarding educational and cognitive problems related to excessive screen time on children revealed that 68% of mothers were aware that excessive screen time is linked to low educational achievement in children as well as memory issues when studying. 64% of mothers were aware that excessive screen time can cause verbal or language problems in

children. According to 58% of mothers, spending too much time in the virtual world might lead to a reduction in the creative thinking and imagination skill of the child in the real world. Only 38% of mothers were aware that excessive screen time influences cognitive development in children

Table 6: Item wise distribution of correct responses of mothers regarding Educational and cognitive problems related to excessive screen time on children

Sl. No.	Item	Correct response	
		No	%
1	associated with poorer educational attainments	136	68
2	effect on cognitive development in younger children	76	38
3	Verbal or language, problems in children	128	64
4	Decrease creative thinking and imagination skill	116	58
5.	memory problem related to excess screen time	136	68
		592	59

DISCUSSION

The assessment of the level of knowledge of mothers regarding the effects of excessive screen time on children revealed that the highest percentage (74%) of mothers had an average level of knowledge.Two recent studies have shed light on mothers' knowledge and practices regarding screen time for preschool children. Similarity another study[(15)]surveyed among mothers and found that 74% had an average level of knowledge regarding the potential negative impacts of excessive screen time on children. Similarly, Shrivastava, M.[(16)]surveyed 400 mothers in India and discovered that while most mothers were aware of the potential negative effects of excessive screen time, many still allowed their children to use screens for longer than recommended. The studies also found that mothers with higher education levels and those who spent more time with their children were more likely to limit screen time. However, many mothers still struggled to enforce healthy screen time habits for their children, despite their knowledge of the potential negative impacts of excessive screen time. These findings highlight the importance of education and awareness campaigns aimed at promoting healthy screen time habits for children. By providing mothers with the necessary knowledge and skills to limit their children's screen time, we can help ensure the healthy development of preschool children.

a. Knowledge on physical problems related to excessive screen time on children.

According to the findings, most mothers (82 percent) were aware that "excessive use of screen time in children leads to eye problems in children like eye fatigue, pain, strain, irritation, and dryness of the eyes of children. The American Academy of Paediatrics (2021) [(17)]reports that staring at a screen for long periods of time without taking breaks can cause eye fatigue, blurry vision, and dry eyes. Similarly, studies have found that excessive screen time in children is associated with eye problems such as myopia (near-sightedness) and dry eye syndrome[(18)(19)]. Despite this knowledge, it is noteworthy that most mothers (82 %) are still aware that excessive screen time can lead to eye problems in children.

According to the present study, 65% of mothers are aware that the overuse of mobile devices can lead to posture problems in children. Poor posture can also cause the spinal cord to change shape, which can create chronic pain and affect balance. Sitting with poor posture for long periods of time compresses the digestive organs, negatively impacting the digestive system.A study conducted by Oner[(20)]aimed to investigate parents' awareness of the risks associated with mobile device usage in children. The study surveyed 416 parents of primary school students in Turkey and found that 68.3% of parents were aware that prolonged mobile device usage can cause posture problems in children. However, only 23.1% of parents reported taking measures to prevent posture problems. Another study conducted by Hong et al. (2021) [(21)]aimed to evaluate the impact of parents' awareness of the risks associated with smartphone use on their children's posture. The study surveyed 345 parents of elementary school students in South Korea and found that 65.7% of parents

were aware of the relationship between smartphone use and posture problems. However, only 18.3% of parents reported taking action to prevent posture problems. These studies suggest that while some mothers are aware of the risks associated with mobile device usage and posture problems in children, many do not take measures to prevent them. Education and awareness campaigns may be helpful in increasing mothers' knowledge and promoting healthy mobile device habits for children.

In the present study ,over half of the mothers surveyed (54%) were aware that too much screen time can lead to childhood obesity ,Pardini and Baker (2019)[22] examined the relationship between maternal knowledge about screen time and child obesity and found that mothers who had greater knowledge about the negative effects of screen time on child health were more likely to set limits on their children's screen time and to encourage their children to engage in physical activity. Wethington, Huang, and Sherry[23] investigated the association between maternal mobile device use and child obesity in Hispanic mothers and found that mothers who had greater knowledge about the negative effects of mobile device use on child health were more likely to limit their own use of mobile devices and to set limits on their children's use. Another study [24] examined mothers' knowledge and attitudes towards mobile device use and physical activity in their children and found that mothers who had greater knowledge about the negative effects of mobile device use on child health were more likely to encourage their children to engage in physical activity and to limit their screen time. Overall, these studies suggest that maternal knowledge about the negative effects of mobile device use on child health may play an important role in preventing childhood obesity.

Just over half of the mothers surveyed (52%) were aware that excessive screen time of children can lead to poor sleep outcomes such as disturbed sleep, delayed sleep onset, and shorter total sleep time in children. Wethington[23],investigated the relationship between maternal mobile device use and sleep outcomes in children. The study found that mothers who reported greater knowledge about the negative effects of mobile device use on child sleep were more likely to limit their children's screen time and to enforce consistent bedtime routines.Another [9] examined the association between maternal knowledge about screen time and sleep quality in preschool children. The study found that mothers who had greater knowledge about the negative effects of screen time on child sleep were more likely to restrict their children's screen time and to establish consistent bedtime routines.Hisler,[25] investigated the relationship between parental knowledge about sleep hygiene and sleep outcomes in children. The study found that mothers who had greater knowledge about the importance of sleep hygiene were more likely to establish consistent bedtime routines and to promote healthy sleep habits in their children.Overall, these studies suggest that maternal knowledge about the negative effects of mobile device use on child sleep and the importance of sleep hygiene may play an important role in promoting healthy sleep habits in children.

44% of mothers are aware that excessive screen time can cause constantly tired and exhausted in children.A study [26] conductedon the relationship between mobile device use and fatigue among Chinese children and found that excessive mobile device use was associated with increased fatigue in children. In another study Kim,[27]investigated the relationship between smartphone addiction and fatigue in South Korean children and found that children with higher levels of smartphone addiction had increased fatigue. These studies showing that maternal knowledge about the negative effects of mobile device use on child health could play a role in preventing or reducing fatigue in children. By limiting their children's use of mobile devices, mothers may be able to reduce the risk of fatigue in their children.

According to the findings, 44 % of parents are aware that too much screen time can cause pain in their children's necks, shoulders, and lower backs.A study by Smith et al. (2017) [28]examined the

prevalence of musculoskeletal pain in Danish children and found that frequent use of electronic devices was associated with an increased risk of neck and shoulder pain. Another study by Sirnya (2020)[29] found that prolonged use of mobile devices was associated with an increased risk of musculoskeletal pain in adolescents.

42 percent of mothers are aware that blue light from screens causes headaches or migraines in children, and that too much light from screens can cause thinning of the brain's cortex, which is responsible for critical thinking and reasoning. Hutton et al.[30]investigated the association between screen time and structural integrity in brain regions critical for language and literacy development in preschool children. The study found that higher levels of screen time were associated with lower structural integrity in white matter tracts in these brain regions, which could potentially affect children's language and literacy skills.

Only 35% of mothers were aware that children's prolonged use of digital devices can cause increased pressure in their little hands and fingers. According to Global News (February, 2016)[31], an increasing number of people are developing "smartphone pinky," a condition in which their pinky fingers are injured as a result of holding their phones for too long. According to the findings, when children touch a smart phone's little keypad, their thumbs are controlled by small muscles in their hands. The notion of a "BlackBerry thumb" came about because of too much texting, swiping, and scrolling. There are several studies that have examined the effects of prolonged digital device use on children's hands and fingers. A study by Chiang et al. (2017)[32]found that prolonged digital device use was associated with an increased risk of carpal tunnel syndrome in children. Another study by Wajda et al. (2019)[33] found that prolonged smartphone use was associated with an increased risk of hand and wrist pain in children. Lee et al. (2019)[34]investigated that prolonged smartphone use was associated with changes in hand grip strength and hand muscle activity in children.

b. Knowledge on behavioural problems related to excessive screen time on children

According to the data on behavioural problems, around 70% of mothers were aware that excessive screen time affects aggressive behaviour and violence in children, and they were upset and angry when they stopped or withdrew screen devices from their children.MojtabaKeikha (2020)[35]conducted a systematic search and discovered that children and adolescents who spend most of their time watching television areat greater risk for violent behaviorssuch as physical fighting, victimisation, and bullying.65% of mothers were aware that giving their children too much screen time can lead to them developing an addiction to digital devices.

According to the findings, 54% of mothers were aware that excessive screen time and continuous online video games lead to suicidal thoughts in children, especially adolescents. CNN-News18 (2021)[36], an Indian English-language news television channel, conducted a study on 500 teenagers starting at the age of 13 and discovered that those who spent more time glued to screens, such as television, smartphones, or game consoles, showed signs of developing suicidal thoughts later in life. In Contrary, Sarah Coyne (2021)[37]claimed that spending more time hooked to a screen did not cause suicide thoughts, but that it did lead to "some bad experiences.

More than half of the parents are aware that rapid image changes on screen increase the risk of attention problems and hyperactivity in children. A study conducted by Radesky et al. (2019)[38]examined the relationship between mobile device use and parent-child interactions, as well as the association between mobile device use and child behavior problems. The study found that higher levels of mobile device use by parents during parent-child interactions were associated with increased child behavior problems, including hyperactivity and attention problems. Additionally, a

study by Kostyrka-Allchorne et al. (2020)[39] found that excessive mobile phone use in children was associated with attention problems and hyperactivity. Mothers who were more aware of the potential negative effects of mobile device use on child behavior were more likely to limit their children's mobile device use and encourage other activities such as physical play and reading. Overall, these studies suggest that maternal knowledge about the negative effects of mobile device use on child behavior can play a role in preventing attention problems and hyperactivity in children.

Half of the parents are aware that their children have a tendency to hide what they watch on television from their parents.It is possible that some parents may be aware that their children have the tendency to hide what they watch on television from them. However, this may not be true for all parents or children, as individual family dynamics can vary. it is commonly accepted that children may try to hide certain media content from their parents. This can be due to a variety of reasons, such as fear of punishment or shame. A study by the Kaiser Family Foundation[40] found that 59% of parents reported that their children had watched or played something they didn't want them to see or play, and 34% of parents reported finding something on their child's device that they found concerning or inappropriate. Additionally, a survey by Common Sense Media found that 45% of teenagers reported that they had hidden online activity from their parents. Overall, it is generally understood that children may try to hide certain media content from their parents.

Nearly half of parents (48%) are aware that their children have a proclivity to watch sexually explicit videos and channels. It is possible that some parents may be aware of their children's exposure to sexually explicit videos and channels, but it cannot be generalized to all parents. It is important to note that exposure to sexually explicit content can have negative psychological and emotional effects on children and adolescents. Wen-Hsu Lin et al. (2020)[41] conducted a longitudinal study to see if exposure to sexually explicit media during adolescent is associated with risky sexual behaviour in emerging adulthood. They discovered that early adolescent sexually explicit media exposure was strongly associated to three risky sexual behaviours in late adolescence: early sexual debut, unsafe sex, and sexual partners, as well as that sexually explicit media led to risky sexual behaviour later in life.

46% of mothers were aware that excessive screen time may cause eating problems or changes in eating habits and only 38 % of mothers were aware that children's self-esteem and self-confidence may be affected by extensive screen time. a study by Joanna et al. (2018)[42]examined the relationship between screen time and dietary behaviors among young children. The study found that mothers who reported higher levels of screen time for their children were also more likely to report difficulties with their child's eating behaviors, such as being selective or fussy eaters.Another study by Wills et al. (2019)[43] explored the impact of screen time on young children's eating behaviors and found that mothers who were more aware of the potential negative effects of screen time on their child's eating habits were more likely to limit their child's screen time.These studies suggest that mothers may be aware of the potential link between excessive screen time and eating problems in their children, and may take steps to limit screen time as a result.According to S.Braig et al's(2018) [44]Cohort Study on Screen Time, Physical Activity, and Self-Esteem in Children, time spent watching television at age 11 was negatively related to girls' self-esteem at that age, but positively related to an increase in self-esteem between the ages of 11 and 13.

C. Knowledge on Psychosocial problems related to excessive screen time on children

Excessive screen time in children and adolescents can lead to a range of psychosocial problems, including lower psychological well-being, reduced social competence, increased aggression, and decreased face-to-face communication skills. (Twenge, J. M.(2018)[45]Duch, H.etl[46] . Item wise analysis of correct responses of mothers regarding psychosocial problems related to excessive

screen time on children showed that 86% of mothers were aware that excessive screen time causes mood changes in children. In a cross-sectional descriptive study conducted in a university hospital among mothers of healthy children aged 2-5 years with a daily screen time of less than 1 hour or more than 4 hours, AyseOfu (2021)[47] discovered that excessive screen time is associated with emotional lability in this early childhood period.

82% of mothers were aware that excessive screen time weakens children's communication and social skills.Uhls Y[48]conducted an observational trial with 106 sixth graders from the same school in Southern California to see how screen time affects social interaction skills in children. They discovered that children who spent 5 days without using a screen and were encouraged to engage in face-to-face interactions had a significant improvement in their scores compared to the beginning of the week.A study conducted by Radesky[1], Peacock-Chambers,[23]& Zuckerman [49] investigated the impact of mobile device use on parent-child interactions and child behavior. The study found that parents who reported high levels of mobile device use during parent-child interactions had children who were more likely to exhibit behavior problems and decreased communication skills. Another study by Twenge&Campbell[50] found that increased screen time among adolescents was associated with decreased face-to-face communication skills and lower social skills. These studies suggest that excessive screen time can have negative effects on children's communication and social skills, and mothers' awareness of these effects may be important in promoting healthy social development in their children.

According to 65 % of mothers, excessive screen usage can cause anxiety, depression, and psychological distress in children. A study by Twenge and Campbell [50] found that adolescents who spent more time on screens were more likely to experience symptoms of anxiety and depression. Similarly, a study by Przybylski and Weinstein[1]found that there is a modest association between screen time and adolescent well-being, with higher levels of screen time being associated with lower psychological well-being. A study by Khattak[51] surveyed 500 mothers in Pakistan and found that 73% of mothers were aware of the negative impact of excessive screen time on their children's mental health. However, despite this knowledge, the study also found that 59% of mothers allowed their children to spend more than two hours a day on screens. Another study by Nikkelen et al.[52]found that parental awareness of the negative effects of excessive screen time on children's mental health was associated with less screen time use. The study surveyed 1,511 parents of young children in the Netherlands and found that parents who were more aware of the potential negative effects of screen time on children's mental health were more likely to set limits on their children's screen time use. These studies suggest that while some mothers are aware of the potential negative effects of excessive screen time on children's mental health, there is a need for increased awareness and education to promote healthy screen time habits for children.

Only 52% were aware that excessive screen time usage in children might lead to greater attention-seeking behavior. The Indian express[53] reported that Screens lead to decreased attention span and lead to impulsiveness in children. Each hour of television viewed led to a 10 per cent increase in the risk for attention problems when the child enters school. This is because a child's brain is being preconditioned to expect rapid, changing stimulation. In ten out of eleven investigations, Suchert et al[54]found an association between screen usage and hyperactivity and inattention difficulties.

d. Knowledge on educational and cognitive problems related to excessive screen time in children

68% of mothers were aware that excessive screen time is linked to low educational achievement in children as well as memory issues when studying.According to Tremblay[55]there was little evidence that watching more television was linked to worse educational achievement. Carson et al. also found

only weak evidence that screen time or television screen time was linked to worse academic achievement.A study conducted by Kuo, Chen, and Wang[56]aimed to investigate the association between screen time and academic performance in children. The study surveyed 1,370 elementary school students and found that longer screen time was significantly associated with lower academic performance. Another study conducted by Rikkers et al[57]investigated the relationship between screen time and academic performance in a sample of 2,527 Dutch primary school children. The study found that excessive screen time was negatively associated with academic achievement and these studies suggest that mothers' awareness of the potential negative effects of excessive screen time on educational achievement in children may be important in promoting healthy screen time habits and supporting academic success.

64% of mothers were aware that excessive screen time can cause verbal or language problems in children. According to 58 percent of mothers, spending too much time in the virtual world might lead to a reduction in the creative thinking and imagination skill of the child in the real world.According to NezaStiglic[58]there is very little evidence that screen exposure, particularly television viewing, is linked to lower educational achievement and has a negative impact on cognitive development in young children.Only 38% of mothers were aware that excessive screen time influences cognitive development in children. According to LeBlanc et al,[59] there was low-quality evidence indicating television viewing had an adverse influence on young children's cognitive development. In new-borns, the evidence was stronger, with LeBlanc et al concluding that there was moderate-quality evidence that television screen time had no benefits and was hazardous to cognitive development.

CONCLUSION

The study aimed to investigate the knowledge of mothers regarding the effect of excessive screen time on children. Results showed that 74% of mothers had an average level of knowledge on the potential negative effects of excessive screen time on children's physical, behavioural, psychosocial, and academic and cognitive areas. However, the study also revealed that there is still room for improvement in terms of taking preventative measures to address issues in these areas. Furthermore, there may be a lack of awareness about the potential impact on other areas such as language development and creative thinking skills. It is suggested that education and awareness campaigns could be beneficial in increasing mothers' knowledge and promoting healthy screen time habits for children.

REFERENCE:

- Madigan S, Browne D, Racine N, Mori C, Tough S. Association Between Screen Time and Children's Performance on a Developmental Screening Test. JAMA Pediatr [Internet]. 2019 Mar 1];173(3):244–50. Available from: https://jamanetwork.com/journals/jamapediatrics/fullarticle/2722666
- Bus A, Yanaoka K, Henning A, Mcharg G, Ribner AD, Devine RT, et al. Screen Time and Executive Function in Toddlerhood: A Longitudinal Study. 2020 Available from: www.frontiersin.org
- Chassiakos YR, Radesky J, Christakis D, Moreno MA, Cross C, Hill D, et al. Children and adolescents and digital media. Pediatrics. 2016;138(5).
- Hale L, Guan S. Screen time and sleep among school-aged children and adolescents: a systematic literature review. Sleep Med Rev [Internet]. 2015 Jun 121:50–8. Available from: https://pubmed.ncbi.nlm.nih.gov/25193149/
- 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 Nov;18(1).

- Madigan S, Browne D, Racine N, Mori C, Tough S. Association Between Screen Time and Children's Performance on a Developmental Screening Test. JAMA Pediatr [Internet]. 2019 Mar 1];173(3):244–50. Available from: https://jamanetwork.com/journals/jamapediatrics/fullarticle/2722666
- Bus A, Yanaoka K, Henning A, Mcharg G, Ribner AD, Devine RT, et al. Screen Time and Executive Function in Toddlerhood: A Longitudinal Study. 2020 Available from: www.frontiersin.org
- Chassiakos YR, Radesky J, Christakis D, Moreno MA, Cross C, Hill D, et al. Children and adolescents and digital media. Pediatrics. 2016;138(5).
- Hale L, Guan S. Screen time and sleep among school-aged children and adolescents: a systematic literature review. Sleep Med Rev [Internet]. 2015 Jun 121:50–8. Available from: https://pubmed.ncbi.nlm.nih.gov/25193149/
- 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 Nov;18(1).
- H C, Q Q, T W, C Y, Y S, H W, et al. Screen time, physical activity and mental health among urban adolescents in China. Prev Med (Baltim). 2011 Oct;53(4–5):316–20.
- Durak A, Kaygin H. Parental mediation of young children's internet use: Adaptation of parental mediation scale and review of parental mediation based on the demographic variables and digital data security awareness. 2019;
- Benedetto L, Ingrassia M, Benedetto L, Ingrassia M. Digital Parenting: Raising and Protecting Children in Media World. Parent - Stud by an Ecocultural Trans Perspect [Internet]. 2020 May 20 Available from: https://www.intechopen.com/chapters/72249
- Geurts SM, Koning IM, Vossen H, Van Den Eijnden RJJM. A Qualitative Study on Children's Digital Media Use and Parents' Self-interest. J Child Fam Stud [Internet]. 2074 31:2015–26. Available from: https://doi.org/10.1007/s10826-021-02074-3
- Lampard, A. M., Jurkowski, J. M., Lawson, H. A., & Davison KK. Family ecological predictors and co-occurring child behaviors that influence caregiver's use of restrictive feeding practices. BMC Public Heal. 2018;18(1):1265.
- Wood AC, Blissett JM, Brunstrom JM, Carnell S, Faith MS, Fisher JO, et al. Caregiver Influences on Eating Behaviors in Young Children. J Am Heart Assoc [Internet]. 2020 May 18;9(10). Available from: https://www.ahajournals.org/doi/10.1161/JAHA.119.014520
- Tandon, P. S., Saelens, B. E., Zhou, C., Kerr, J., Christakis DA. A comparison of parent practices and children's physical activity and screen time by family socioeconomic status. J Child Media,. 2019;13(2):188–204.
- Annum Ishtiaq1, Hiba Ashraf1, Sundus Iftikhar2, Naila Baig‐ Ansari2. Parental perception on screen time and psychological distress among young children [Internet]. Journal of Family Medicine and Primary Care. 2021]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8138366/pdf/JFMPC-10-765.pdf
- Xu H, Ming Wen L, Rissel C. Associations of Parental Influences with Physical Activity and Screen Time among Young Children: A Systematic Review. 2015 Available from: http://dx.doi.org/10.1155/2015/546925
- Shirley SA, Kumar SS. Awareness and attitude among parents of primary school students towards screen time in children. Int J Contemp Pediatr [Internet]. 2020 Dec 24;7(1):107–11. Available from: https://www.ijpediatrics.com/index.php/ijcp/article/view/2959
- Vajpayee, N., & Shrivastava M. A knowledge, attitudes, and practices survey of mothers in India. J Fam Med Prim Care. 2020;9(10):5285–90.
- 2021 AAP National Conference [Internet]. [cited 2023 Mar 18]. Available from: https://www.eventscribe.net/2021/AAPexperience/

- Li, L., Li, SM., Kang, MT. et al. . Near work, outdoor activities, and myopia in children in rural China: the Anyang Childhood Eye Study. BMC Ophthalmol. 2020;20(1):143.
- Uchino, M., Schaumberg, DA., Dogru, M. et al. Prevalence of dry eye disease among Japanese visual display terminal users. Ophthalmology. 2019;12612(12):1625–33.
- Oner, N., & Leblebicioglu G. Awareness and behavior of parents on risks of mobile device usage in primary school children. Eur J Pediatr. 2020;179(5):779-785.
- Mohamed NF, Soliman SM, Abd El-Mouty SM. Mpthers knowledge and Practice regarding electroic media used by the children .
- Pardini, R. S., & Baker BL. Knowledge and parenting practices related to child screen time and obesity risk: A pilot study. J Child Heal Care,. 2019;23(3):365–75.
- Wood AC, Blissett JM, Brunstrom JM, Carnell S, Faith MS, Fisher JO, et al. Caregiver Influences on Eating Behaviors in Young Children: A Scientific Statement From the American Heart Association. J Am Hear Assoc Cardiovasc Cerebrovasc Dis [Internet]. 2020 May 5;9(10). Available from: /pmc/articles/PMC7660848/
- McGloin, A. F., Esliger, D. W., & Owens N. Knowledge, attitudes, and beliefs about the use of mobile health technologies: A survey of mothers with children with type 1 diabetes. J Med Internet Res. 2018;20(1).
- Hisler, G. C., & Twumasi-Ankrah P. Parental knowledge of sleep hygiene and sleep outcomes in children. J Sleep Res. 2019;28(3).
- W. Xiao - The Relationship Between Physical Activity and Mobile Phone Addiction Among Adolescents and Young Adults: Systematic Review and Meta-analysis of Observational Studies [Internet]. Available from: https://click.endnote.com/viewer?doi=10.2196/41606&route=6
- Kim SG, Park J, Kim HT, Pan Z, Lee Y, McIntyre RS. The relationship between smartphone addiction and symptoms of depression, anxiety, and attention-deficit/hyperactivity in South Korean adolescents. Ann Gen Psychiatry [Internet]. 2019 Mar 9 ;18(1). Available from: https://click.endnote.com/viewer?doi=10.1186%2Fs12991-019-0224-
- Smith S, Bevan A. Erratum: Role of school nurses in identifying and supporting children and young people with mental health issues (Nursing children and young people (2020)). Nurs Child Young People. 2020 Mar;32(2):23–8.
- Eitivipart AC, Viriyarojanakul S, Redhead L. Musculoskeletal disorder and pain associated with smartphone use: A systematic review of biomechanical evidence. Hong Kong Physiother J [Internet]. 2018 Dec 138(2):77–90. Available from: https://click.endnote.com/viewer?doi=10.1142%2Fs1013702518300010&token=WzMzMDcx
- Hutton, J. S., Dudley, J., Horowitz-Kraus, T., DeWitt, T., & Holland SK. Associations between screen-based media use and brain white matter integrity in preschool-aged children. JAMA Pediatr. 2019;173(3):244–50.
- From ‘smartphone pinkie’ to ‘BlackBerry thumb’: How digital gadgets ruin your hand health - National | Globalnews.ca [Internet]. Available from: https://globalnews.ca/news/2475723/from-smartphone-pinkie-to-blackberry-thumb-how-digital-gadgets-ruin-your-hand-health/
- Chiang, H. Y., Lee, H. C., Hsu, Y. W., Tseng, C. Y., Lin, C. H., & Chang JH. Increased risk of carpal tunnel syndrome for long-time computer users in children. BMC Musculoskelet Disord. 2017;18(1):272.
- Wajda, M. M., Chiu, Y. Y., Krzyzanowicz, J., Lark, S., & Côté P. Associations between mobile touchscreen device use and musculoskeletal discomfort in young adults. Applied Ergonomics. 2019;80:191–9.
- Lee, J., Cho, J., Cho, Y. S., & Park H. Effects of smartphone usage time on grip strength and muscle activity of the upper limb. Journal of Physical Therapy Science. J Phys Ther Sci. 2019;31(9):718–20.
- Keikha M QM, Kazemi Tabaee MS DS. Screen Time Activities and Aggressive Behaviors

Among Children and Adolescents: A Systematic Review. Int J Prev Med [Internet]. 2020 Available from: www.ijpvmjournal.net/www.ijpm.ir

- https://www.news18.com/news/buzz/too-much-tv-or-mobile-screen-exposure-can-cause-suicidal-thoughts-in-teens-study-3452963.html. 2021 Feb; Available from: too-much-tv-or-mobile-screen-exposure-can-cause-suicidal-thoughts
- Coyne SM, Hurst JL, Dyer WJ, Hunt Q, Schvanaveldt E, Brown S, et al. Suicide Risk in Emerging Adulthood: Associations with Screen Time over 10 years. J Youth Adolesc [Internet]. 2021 Dec 1;50(12):2324–38. Available from: https://news.byu.edu/intellect/10-year-byu-study-shows-elevated-suicide-risk-from-excess-social-media-time-for-young-teen-girls
- Coyne SM, Radesky J, Collier KM, Gentile DA, Linder JR, Nathanson AI, et al. Parenting and digital media. Pediatrics. 2017 Nov 1;140:S112–6.
- Kostyrka-Allchorne, K., Cooper, N. R., & Simpson A. An exploration of the relationship between problematic smartphone use, maternal style, and attachment in a UK sample of late adolescents. Journal of Child and Family Studies. 2020;29(9):2535–47.
- Rideout, V. J., Foehr, U. G., & Roberts DF. Generation M2: Media in the Lives of 8- to 18-Year-Olds. Kaiser Family Foundation. 2010;
- Lin W-H, Liu C-H, Yi C-C. Exposure to sexually explicit media in early adolescence is related to risky sexual behavior in emerging adulthood. 2020; Available from: https://doi.org/10.1371/journal.pone.0230242
- Myszkowska-Ryciak J, Harton A, Lange E, Laskowski W, Wawrzyniak A, Hamulka J, et al. Reduced Screen Time is Associated with Healthy Dietary Behaviors but Not Body Weight Status among Polish Adolescents. Report from the Wise Nutrition-Healthy Generation Project. Available from: www.mdpi.com/journal/nutrients
- Wills, W., Backett-Milburn, K., Gregory, S., & Lawton J. Wills, W., Backett-Milburn, K., Gregory, S., & Lawton, J. Young teenagers' perceptions of their own and others' eating behaviours and the influence of the family. Sociology of Health & Illness. 2019;41(1):127–42.
- Braig, S., Genuneit, J., Walter, V., Brandt, S., Wabitsch, M., Goldbeck, L., Brenner, H., & Rothenbacher D. Screen Time, Physical Activity and Self-Esteem in Children: The Ulm Birth Cohort Study. Int J Environ Res Public Health. 2018;15(6):1275.
- Twenge, J. M., Campbell, W. K., & Martin GN. Decreases in psychological well-being among American adolescents after 2012 and links to screen time during the rise of smartphone technology. Emotion. 2018;18(6):765–80.
- Duch, H., Fisher, E. M., Ensari, I., & Harrington A. Screen time use in children under 3 years old: a systematic review of correlates. The International Journal of Behavioral Nutrition and Physical Activity. 2013;10(102).
- Nergiz ME, Çaylan N, Yalçin SS, Oflu A, Tezol Ö, Özdemir DF, et al. Excessive screen time is associated with maternal rejection behaviours in pre-school children. J Paediatr Child Health. 2020 Jul;56(7):1077–82.
- Uhls Y. (2014). The Digital Edge: Exploring the Habits of Digital Tweens. Southern California. 2014.
- Abbas J, Aman J, Nurunnabi M, Bano S. The Impact of Social Media on Learning Behavior for Sustainable Education: Evidence of Students from Selected Universities in Pakistan. Sustain 2019, Vol 11, Page 1683 [Internet]. 2019 Mar 2011(6):1683. Available from: https://www.mdpi.com/2071-1050/11/6/1683/htm
- Twenge, J. M., Campbell, W. K., & Martin GN. Decreases in psychological well-being among American adolescents after 2012 and links to screen time during the rise of smartphone technology. Emotion. 2018;18(6):765–80.
- Khattak, A. M., Khan, M. A., Rehman, R., &Ullah I. Investigating the Relationship between Screen Time and the Mental Health of Children: A Study of Pakistani Mothers. Children &

Society. 2021;35(3):207–18.

- Fu X, Liu J, Liu R De, Ding Y, Wang J, Zhen R, et al. Parental monitoring and adolescent problematic mobile phone use: The mediating role of escape motivation and the moderating role of shyness. Int J Environ Res Public Health. 2020 Mar 1;17(5).
- How excessive screen time affects brain health in children. Available from: https://indianexpress.com/article/parenting/health-fitness/how-excessive-screen-time-affects-brain-health-in-children-5864049/
- Suchert V, Hanewinkel R IB. Sedentary behavior and indicators of mental health in school-aged children and adolescents: A systematic review. 2015;76(48):57.
- Tremblay MS, LeBlanc AG, Kho ME et al. . Systematic review of sedentary behaviour and health indicators in school-aged children and youth. Int J Behav Nutr Phys Act. 2011;8(98).
- Chen H, Sun L, Du Z, Zhao L, Wang L. A cross-sectional study of mental health status and self-psychological adjustment in nurses who supported Wuhan for fighting against the COVID-19. J Clin Nurs. 2020 Nov;
- Rikkers, W., Lawrence, D., Hafekost, J., & Zubrick SR. Screen time and child development: A systematic review of the literature. Pediatrics. 2019;143(6).
- Stiglic, N., & Viner RM. Effects of screentime on the health and well-being of children and adolescents: a systematic review of reviews. BMJ Open. 2019;9(1).
- LeBlanc AG, Spence JC, Carson V et al. . Systematic review of sedentary behaviour and health indicators in the early years (aged 04 years). Appl Physiol Nutr Metab. 2012;37(753)