

**PARENTAL KNOWLEDGE AND PRACTICES REGARDING SCREEN TIME AND ITS
PERCEIVED IMPACT ON CHILD BEHAVIOR IN THE MALDIVES: A CROSS-
SECTIONAL STUDY**

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Abstract

Background: Excessive screen time among children has become a growing public health concern due to its potential effects on behavioural and developmental outcomes. In the Maldives, increasing access to digital devices has raised concerns regarding children's screen exposure and the role of parents in managing screen use. This study assessed parental knowledge and practices regarding screen time and examined its perceived impact on child behaviour.

Methods and Material: A cross-sectional study was conducted among 92 parents of children aged 5–15 years in the Maldives. Data were collected through an online questionnaire assessing parental knowledge, screen time management practices, children's screen use patterns, and perceived behavioural outcomes. Descriptive and comparative analyses were performed.

Results: Most parents were aware of recommended screen time guidelines and recognized the potential negative effects of excessive screen use. However, consistent enforcement of screen time rules varied. Television and smartphones were the most commonly used devices, with most children spending one to four hours daily on screens. Parents frequently reported reduced attention span, irritability, and sleep disturbances among children. Reduced attention problems were less common among children whose parents consistently enforced screen time rules.

Conclusion: Although parental awareness of screen time recommendations was high, implementation of effective screen time management practices was inconsistent. Strengthening parental guidance, promoting consistent screen time rules, and encouraging balanced daily routines may help reduce behavioural problems associated with excessive screen exposure among children in the Maldives.

Keywords: *Screen time; Parental knowledge; Parental practices; Child behaviour; Maldives*

Project Definition

The increasing use of digital technology, particularly digital devices among young children, has raised global concerns about its impact on a child's development. Screen time, usually defined as the use of smartphones, televisions, tablets, gaming consoles and other digital devices, has become a part of children's daily routines. It is believed that moderate use may provide educational benefits, while excessive exposure is associated with negative behavioural outcomes like sleep disturbances, irritability, reduced attention span and poor academic performance.

In the 5-15 age group, children are at a critical developmental stage when their emotional, social, and cognitive skills are rapidly developing. During this period, excessive screen exposure may interfere with the development of these functions. In the Maldives, rapid technological advancement, widespread access to digital devices, and the busy lifestyles of parents have contributed to greater screen exposure among children. However, there is limited research showing parental awareness and management of screentime in this context.

The rationale for this project is to understand how parents perceive and manage screentime, and what behavioural effects they observe in their children. Parents play an important role in regulating a child's routine, and their knowledge and practices remarkably influence children's behavioural outcomes.

The Objectives of this capstone project were to assess knowledge of parents regarding recommended screentime limits, find out more about parental practices in controlling and monitoring screen use, recognize behavioural effects of screen exposure, analyze the relationship between screentime and behavioural outcomes, and provide recommendations for improving screentime management.

Final Project Overview

This project involved conducting a cross-sectional study among parents in the Maldives to identify screen time patterns among young children and their associated behavioural outcomes.

This project was carried out in multiple phases, including planning, data collection, analysis, and interpretation.

The study collected responses from 92 parents via an online questionnaire distributed across various platforms. The questionnaire collected information on socio-demographic characteristics, parental knowledge and practices, the child's screen time, and behavioural outcomes. Data were

analyzed using descriptive statistics and comparative analysis to understand trends in screen exposure, behavioural impacts, and parental awareness. The findings were then interpreted in relation to existing literature and also public health guidelines.

The project also involved developing practical recommendations to improve parental practices and promote healthier screen time routines among children. Overall, the project provides valuable insights into screen time behaviours in the Maldivian context and highlights areas that need further intervention.

Updated Research Summary

The existing literature suggests that excessive screen use is associated with various negative behavioural outcomes in young children. Research has shown that prolonged exposure to screens can increase irritability, disrupt sleep patterns, and reduce attention span. Studies have indicated that children who spend more time on screens are more likely to experience poor academic performance.

Sleep disturbances are among the most frequently reported effects of excessive screen exposure. Screen use, particularly before bedtime, can interfere with sleep patterns due to blue light exposure and increased mental stimulation (Hale & Guan, 2015). Poor sleep quality can easily contribute to reduced concentration, academic difficulties and also increased irritability.

Global organizations like the World Health Organization (WHO) have recommended limiting screen time, promoting physical activity, and encouraging adequate sleep among kids aged 5-17 years (World Health Organization, 2020). Similarly, the American Academy of Pediatrics (AAP) highlights the importance of parental involvement, including setting steady rules and monitoring what your child watches (American Academy of Pediatrics, 2016).

Despite high awareness levels, studies have found that many parents struggle to maintain consistent control measures due to factors like their busy lifestyles, which make it easier to manage children when they've been given a screen. This gap between knowledge and practice is a recurring theme in research. Additionally, some studies have shown that abrupt restrictions on screen time may lead to behavioural responses such as increased irritability, highlighting the importance of balance and gradual regulation.

In the Maldivian context, limited research exists on this topic, making this project important for understanding local patterns and informing culturally appropriate interventions.

Project Implementation Summary (Action Steps Taken)

The implementation of this project involved several key steps. Initially, a structured questionnaire was developed based on the research objectives and existing literature. The questionnaire was designed to recognize comprehensive information on screentime patterns, parental practices, parental knowledge and their child's behavioural changes.

A pilot study was done to ensure the reliability and clarity of the questionnaire. Based on the feedback, necessary corrections were made. The final questionnaire was then distributed online via multiple social media platforms, including Facebook, Viber, and community networks.

Convenience sampling was used to recruit participants, and 92 responses were collected.

Respondent participation was voluntary, and confidentiality was maintained throughout the research process.

Data collection was followed by descriptive statistical analysis. The information was organized into tables and figures to make interpretation easier. A comparative analysis was conducted to identify associations among variables.

Challenges encountered during the project included reliance on self-reported data and a limited sample size, which may have introduced bias. However, the study still provides valuable insights into parental practices and children's screen time routines and behaviours.

Project Analysis, Evaluation, and Recommendations

Analysis

Socio-demographic Characteristics

A total of 92 parents participated in this study. The majority of respondents were aged 30-39 years (63%), with a smaller proportion in other age categories. In terms of educational status, most participants had attained a bachelor's degree (31.5%), followed by secondary (22.8%) and diploma/postgraduate (21.7%). The majority of the respondents were from the capital city of Maldives – Male' (69.6%), while the other participants were from other islands of the Maldives. The majority of the parents who participated in this study had children aged 5-7 years (64.1%).

Table 1

Socio-demographic Characteristics of participants (N=92)

Variable	Category	Percentage (%)
Age	20-29 years	18.5%

	30-39 years	63%
	40-49 years	18.5%
Education	Primary	2.2%
	Secondary	22.8%
	Diploma	21.7%
	Bachelor's Degree	31.5%
	Postgraduate	21.7%
Location	Male'	69.6%
	Other islands	30.4%
Number of Children	1	23.9%
	2	42.4%
	3	25%
	4+	8.7%
Age of child	5-7 years	64.1%
	8-10 years	19.6%
	11-13 years	9.8%
	14-15 years	6.5%

Screen Time Patterns

The study reveals that a considerable proportion of children were exposed to screen use in daily life. The majority of children had daily screen time of 1-2 hours (38%), while 33.7% had 3-4 hours per day.

The Television was the most commonly used device among children (59.8%), followed by the smartphone (48.9%) and tablets (44.6%). As for the purpose of screen time, the majority of parents reported that their children use screens for entertainment (89.1%), educational purposes (41.3%), and gaming (38%). These findings highlight the widespread use and accessibility of digital devices among children in this study population.

Table 2

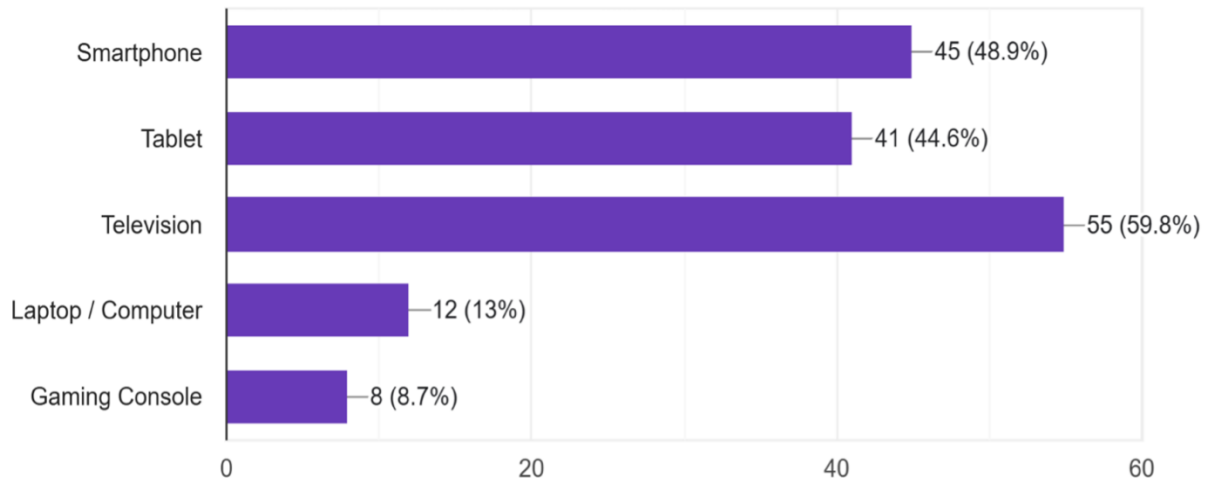
Screen time Patterns of children

Screen Time Duration	Percentage
Less than 1 hour	6.5 %
1 – 2 hours	38%
3 – 4 hours	33.7%

More than 4 hours	21.7%
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Figure 1

Device usage among children



Parental Knowledge regarding Screen Time

Regarding parental knowledge, 93.5% of parents reported being aware of recommended screentime limits for children. Additionally, 97.8% of participants acknowledged that excessive screen time could negatively impact a child's behaviour and overall well-being.

Despite this awareness, a proportion of parents remained uncertain or unaware about established guidelines, indicating gaps in knowledge within the population.

Parental Practices Related to Screen Time

The findings show that 55.4% of parents reported always setting rules for their child's screentime, while 44.6% reported sometimes enforcing such rules. No participants indicated that they did not implement any rules.

72.8% reported monitoring children's screen usage, while 27.2% reported sometimes monitoring. The practice of limiting screentime before bed was practiced by 52.2% of parents, while 45.7% reported occasional limiting of screentime, and a small proportion (2.2%) reported never implementing limits before bed.

These findings suggest variability in parental practices, with not all of the parents consistently applying the recommended control measures.

Table 3

Parental practices related to screen time

Practice	Always (%)	Sometimes (%)	Never (%)
Setting Rules	55.4%	44.6%	0%
Monitoring	72.8%	27.2%	0%
Limiting before bed	52.2%	45.7%	2.2%

Perceived behavioural effects of screen time

Parents reported several behavioural effects associated with screen exposure among children. Sleep disturbances were reported in 63% of children, and irritability was observed in 70.7%. Additionally, 79.3% of parents reported reduced attention span, and also 34.8% noted a negative impact on their child's academic performance.

These findings indicate that a significant proportion of parents perceive screentime as having adverse effects on a child's behaviour and daily functioning.

Table 4

Behavioural Effects of Screentime

Behavior	Yes (%)	No (%)
Reduced attention span	79.3%	20.7%
Irritability	70.7%	29.3%
Sleep Disturbances	63%	37%
Social Interaction	45.7%	54.3%
Academic Impact	34.8%	65.2%

Evaluation

Based on the findings of this study, various patterns were observed regarding screentime, parental practices and the behavioural outcomes of the children.

Screen time and sleep

It can be observed that among children with higher screen time (>3 hours per day), 63% reported sleep-related issues, compared to 63% among children with lower screen time (<2 hours per day). These results indicate that sleep disturbances are prevalent among children regardless of screen exposure, although the high-exposure group still represents a considerable proportion experiencing difficulties. This point does highlight the need for parental awareness and guidance regarding screen exposure.

Screen time and irritability

Regarding irritability, 69% of children with higher screen time were reported as irritable, compared to 73% of children with lower screen time. These findings indicate that irritability is common across both groups, regardless of the screentime duration, suggesting that factors beyond screen exposure may contribute to these behavioural outcomes. It can be suggested that they become more irritable in lower screen time exposure because, in a child's nature, they do get addicted to screens, and removal of these devices by parents can contribute to the fact that they become more irritable compared to children whose parents let them have higher screen exposure.

Parental rules and attention span

It can be observed that in terms of attention span, 71% of children whose parents always set screen time rules were reported to have reduced attention span, compared to the 90% of children whose parents sometimes set rules. This suggests that consistent parental enforcement of screen time rules may help reduce attention-related issues in children, underscoring the importance of active parental supervision and guidance in managing screen exposure.

Table 5

Observed Association Between Screen Time, Parental Rules and Child Behaviour (N=92)

Behavioral Outcome	Variable	Category	Total No. of children	No. with Outcome	Percentage (%)
Sleep Disturbances	Screen time	≤ 2 hours	41	26	63%
		>3 hours	51	32	63%
Irritability	Screen time	≤ 2 hours	41	30	73%
		>3 hours	51	35	69%

Reduced attention span	Parental rules	Always	51	36	71%
		Sometimes	41	37	90%

Overall, the results demonstrate a clear gap between parental knowledge and actual practices. While most parents are aware of screen time guidelines, only a few consistently implement them. This irregularity may be a contributing factor to the high prevalence of behavioural issues observed.

The high rate of reduced attention span aligns with previous research linking screen exposure to cognitive difficulties (Twenge & Campbell, 2018). Likewise, sleep disturbances reported in this study are also consistent with findings from earlier studies (Hale & Guan, 2015)

Interestingly, irritability was observed in both high and low screen time groups, suggesting that factors beyond screen exposure may play a role, including parenting style, individual child characteristics, and environmental influences.

Recommendations

The project highlights that while parental knowledge of recommended screentime limits is remarkably high, their practical implementation is inconsistent. The data show that children whose parents consistently enforce rules tend to have a better attention span than those whose parents are inconsistent in enforcing rules. Therefore, a key recommendation is for parents to implement clear and consistent screentime rules. Positive reinforcement for adherence, structured routines, and a gradual decrease in screen exposure can help children adapt to these limits, resulting in a gradual reduction in the likelihood of irritability.

Scheduling can be another important aspect. Parents are encouraged to implement structured daily schedules that balance recreational, educational, and physical activities. Creating screen-free times, especially during meals and bedtime, can help to improve sleep quality and also family and social interactions. Technological devices can support these goals, while parental control applications and child-friendly modes can enforce schedules without sparking undesirable arguments.

Awareness and educational campaigns should increase parental efforts in this matter. Health clinics, schools and community organizations can provide workshops and materials on the WHO and AAP guidelines for screentime, which highlight behavioural and developmental suggestions.

Pediatricians can integrate screen time counselling into their routine pediatric checkups, providing tailored guidance for individual children.

Encouraging alternative recreational activities is also another important factor. Reading, creative hobbies, outdoor play, and sports can serve as substitutes for recreational screen exposure.

Family-centred activities that do not involve screens strengthen family bonds and model healthy behaviour for a child. Parents are also strongly advised to monitor behavioural changes over time, such as maintaining simple logs to track attention span, sleep patterns, and irritability. Also, talking with teachers helps us identify issues that may be linked to screen use, which can be a factor in supporting early intervention.

At the policy level, the government and NGOs can also play a supportive role, including organizing public health campaigns that highlight the importance of healthy screen habits, developing appropriate national guidelines, and collaborating with technology companies to limit excessive use, all of which can help strengthen parental efforts. Future research should explore long-term outcomes, including social, academic, and cognitive effects of excessive screen exposure, and also evaluate the effectiveness of interventions designed to improve parental enforcement and a child's behavioural outcomes.

By implementing these multi-level strategies, it can be expected that children aged 5–15 years in the Maldives will experience reduced irritability, better sleep patterns, and improved attention span. Structured routines, education, strict parental involvement and policy-level support can altogether provide a comprehensive approach to managing excessive screen exposure in this population.

Materials Delivered

As part of this capstone project, several materials were developed and used to conduct and document this study. The main material used was the online survey questionnaire, which was designed based on the study objectives and also pilot-tested before final distribution.

Additionally, the data collection tools used included the Google Forms platform, which enabled the systematic recording of responses from 92 parents. All the responses were then exported into a spreadsheet for further analysis, and descriptive statistics, percentages and graphs were made to summarize and interpret the findings easily. Figures and tables were created to illustrate observed associations among parental rules, screentime, and behavioural factors, including

irritability, attention span, and sleep patterns. These visual aids were then formatted according to the APA guidelines to ensure consistency and clarity.

Some other materials delivered include documentation of pilot testing, notes explaining the implementation procedure, and the final compiled project report, which explains the research findings, analysis, evaluation, recommendations, and finally the references. These materials, together, provide a comprehensive record of the process of this project, its results, and the actionable factors, which can then be utilized for further research, educational purposes, and policy development.

Conclusion

In conclusion, this project highlights that while most parents in the Maldives are highly aware of the recommended screentime limits and recognize the negative effects of excessive screen exposure, consistent enforcement of these practices remains a challenge. A considerable proportion of children were reported to experience behavioural problems like irritability, disturbances of sleep and reduced attention span, while a smaller proportion also experienced poor academic performance.

These results suggest that while some behavioural outcomes, such as irritability and sleep disturbances, occur across varying levels of screen exposure, attention-related issues are more evident among children whose parents inconsistently enforce screentime rules. This highlights the importance of steady parental involvement and also structured screen time management.

Lastly, this study demonstrated that improving parental practices, rather than only knowledge, will result in more favourable outcomes and is key to reducing the negative behavioural effects associated with screentime. Promoting consistent rule implementation, strengthening awareness, and encouraging balanced daily routines can help support healthier development in children aged 5–15 years.

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