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Navigating Screen Time: Scoping Review on Parental Role in Shaping Children's Digital Habits

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Abstract

The rapid growth of digital devices in recent years has caused significant effects on children's screen time. Advancements in technology usage have a particularly strong impact on children in an era dominated by digital advancements, influencing their education, entertainment, communication, and socialisation, raising concerns about the implications on their health and development. Children are mostly unaware of their patterns while using the digital devices which lead to curiosity to conduct reviews that are related to parental involvement in children's screen time usage. This scoping review aims to identify the impact of children's screen time usage and parental involvement. To conduct this research, four databases, namely Scopus, WOS, ERIC, and ScienceDirect, were utilized. The investigation identified 36 articles, and after the exclusion and inclusion process, 14 articles were chosen eligible for analysis and reference in the data collection phase. The findings of the review highlight that screen time usage does impact on children's development and parental involvement plays a major role in observing and shaping their children's growth.

Introduction

The use of technology among children has grown in recent years. Today's generation is surrounded by digital devices such as smartphones, iPads, computers, video games, and smart gadgets (Panjeti-Madan & Ranganathan, 2023). Young children (ages 0 to 5) have been using screens more and more in screen-based activities such as smartphones, televisions, and tablets, over the past years (Swider-Cios et al., 2023). In this context, "Screen Time" or "Soothing Screen" is a concept between the use of screen devices towards children which most likely act as a pacifier in this era. It is a calming tool for parents to help calm and relax a child. By the age of two, most children use devices every day, and they spent roughly equal amounts of time watching TV and using their phones (Liang, 2022).

Lin et al. (2020) stated digital media or touchscreen devices have become increasingly popular in recent years. These devices are often used by parents as "electronic babysitters" to comfort and calm their young children, particularly when they are bored, need company, or cry. This could be due to the sense of relief that screen time can provide for parents, particularly during the challenging and stressful transition period that new parents of little

ones typically face (Chong et al., 2023).

Most parents and caregivers introduce their young children to mobile phones and other smart devices through video communication during early infancy to connect with family and friends far from them (Panjeti-Madan & Ranganathan, 2023). This also aligns with research showing that children learn language through responsive and interactive exchanges rather than passive viewing that usually gets from watching TV (Puzio et al., 2022). Young minds have been drawn to interactive features, eye-catching images, and instant gratification in digital media that can be accessed using screen devices.

The study by Bream (2023) by age six, young children's brains have grown to around 90% of their adult size. This phase provides an opportunity to improve executive functioning, which includes mental skills that allow for self-regulation. Executive functioning makes planning, following directions, focusing, solving problems, and demonstrating self-control easier. It is critical to understand that these abilities are not natural. They must be learned through interactions and experiences, including media use. Children today have access to a variety of screen devices for their screen time, like laptops, game consoles, smartphones, and tablets, in addition to traditional home-based television (Byrne et al., 2021).

A study on children's screen time in the US by Auxier et al. (2020) shows that the most common device that parents report their young child engages with is a television with 88% and the rest utilised other screen devices. Furthermore, Madigan et al. (2022) discovered a 52% global rise in screen use among children aged 3 to 18 between 2020 and 2022, most likely due to the pandemic. Time spent with screen devices has expanded significantly since the beginning of the twenty-first century and is now a large portion of a child's free time (Sauce et al., 2022). Screen devices are used as a means of communication, virtual interactions, and connections with others (Pandya & Lodha, 2021).

Many children are "hooked" on electronics, and in fact, application gaming releases so much dopamine, sometimes known as the "feel-good" chemical, that it resembles cocaine use on brain scans (Dunckley, 2024). Menon (2022) discovered that interactive design, convenience, and entertainment were among the criteria that influenced adults to recommend applications from screen devices for children. The availability of many apps and platforms for children led to an increase in screen time for entertainment and social engagement. This new generation is advancing in the way they live, especially the access to knowledge widely without seeing their teachers face to face, group discussion or even finding a partner can be easily accessed through the internet.

This accessibility attracts each group of age including toddlers. In exploring new things in life, the first impression is the main thing in the children's lives where the parents or caregivers are the ones that introduce the revolution of technology towards their children. Parenting is one of the important factors contributing to children's development. Parents and caregivers have a substantial amount of control over their children's early experiences (Attai et al., 2020). Digital media can offer several benefits for children, such as individualized learning opportunities and the development of various skills via educational apps if approached mindfully and under parental supervision (Kattein et al., 2023).

Recent studies stated that younger children generally spend more time with mobile devices, while older children engage with laptops, video games, and other media (Panjeti & Ranganathan, 2023). As newer screen technologies grow in popularity among preschool children and more child-directed media products are produced specifically for this age group, concerns about potential risks of screen time are no longer limited to TV viewing but now extend to newer screen technologies (Corkin et al., 2021). Hence, this review aims to get the overall view on the impact of children's screen time usage and parental involvement. Creating a scoping study on the children's screen time usage and parental involvement is compulsory. Understanding children's engagement towards screen devices or digital media will allow us to keep updated or informed regarding children's technology use based on individual needs and circumstances.

Method

This scoping review was observed by Preferred Reporting Items for Systematic Reviews (PRISMA) guidelines. The present scoping review was carried out based on Arksey and O'Malley (2005) methodological framework: (1) identifying research questions; (2) identifying relevant studies; (3) selecting relevant studies; (4) charting the data; (5) collating, summarizing and reporting the results. The aim is to identify the impact of children's screen time usage and parental involvement. Table 1 shows the research questions leading to this scoping review are as follows.

Table 1. Research Questions Were Formed based on PCC

Research Question	Research Objective
1. How are past studies on screen media usage and parental involvement distributed?	1. To explore the temporal and geographical relationship of past studies.
2. What research design was used by past studies on screen media usage and parental involvement?	2. To determine the research method used in past studies.
3. What are the research aims of past studies on screen media usage and parental involvement?	3. To analyse the research purpose of past studies on screen media usage and parental involvement.
4. What skills of the study were found in past studies on screen media usage and parental involvement?	4. To investigate the skills that have been researched in past studies.
5. What are the findings of past studies on screen media usage and parental involvement?	5. To report the results of past studies on screen media usage and parental involvement.

Source: Primary data

In identifying journal articles stage for the review was done by utilizing four research databases, which are Scopus, Web of Science (WOS), Electronic Registration Information Centre (ERIC), and ScienceDirect. For each of the databases, a string search was created using a variety of keywords and concepts relating to screen time, soothing screen, children, parental participation, and usage. Then, a complete search string as in Table 2, is used in the search option of each database to identify the suitable and related to this scoping review.

Table 2. Search String

Search Directory	Search String
Scopus	TITLE-ABS-KEY ((“usage*” OR “application*” AND “soothing” OR “screen” OR “screen” OR “time” AND “parental*” OR “involvement*” OR “parental*” OR “engagement*” AND “child*” OR “kid*”)) AND PUBYEAR > 2020 AND PUBYEAR < 2023
WOS	TS=((‘soothing screen’ OR ‘screen time’) AND (usage* OR application*) AND (parental involvement* OR parental engagement*) AND (child* OR kid*))
ERIC ScienceDirect	(usage) AND (soothing screen OR screen time) AND (parental involvement OR parental engagement) AND (children OR kids)

Source: Primary data

Inclusion and exclusion criteria as shown in Table 3, are applied to determine relevant studies based on the date of publication, language, full-text availability and keywords.

Table 3. Inclusion and Exclusion Criterion

Inclusion criterion	Exclusion criterion
1. Article published from 2020-Recent	1. Article published before 2020
2. Related to Children	2. Not related to children
3. Related to parents	3. Not related to parents
4. Text in the English language	4. Other languages
5. Full text available	5. Without full text

Source: Primary data

Next, for charting the data, it is required to extract relevant data from the selected studies into different categories such as research design, participants, methods, findings, and conclusions. After categorizing the representative sample of studies to be investigated in Microsoft Word, the researchers selected the attributes of the articles to be assessed for summary and analysis. The completed data charting structure was designed to retrieve the following study elements: author, year of publication, country of origin, study source, study purpose, research design, study elements, and findings.Finally, analyse and integrate the extracted data to identify key themes, concepts and gaps found. The research summarised and reported on the charting findings. The findings are then arranged using codes and keywords to reduce and narrow down the data into related content. Next, the codes and keywords are reviewed to ensure that the data obtained is relevant to the study and grouped into selected categories.

Results

The search identified 139 articles through four selected databases: Scopus, Web of Science (WOS), Education Resources Information Center (ERIC), and ScienceDirect. Figure 1 shows that 39 titles were extracted from the

Scopus database, 18 articles from the WOS database, 34 articles from ERIC, and 48 articles were found in ScienceDirect databases which have been stated for the identification process. Three duplicate titles were removed from the 139 articles, leaving 136 articles to be screened for eligibility. Plus, 100 titles were excluded from screening based on their title and abstract. As a result, 36 titles were evaluated for eligibility using data extraction. A total of 22 titles were excluded as they did not match the inclusion criteria. Thus, 14 titles were selected to be included in this scoping review.

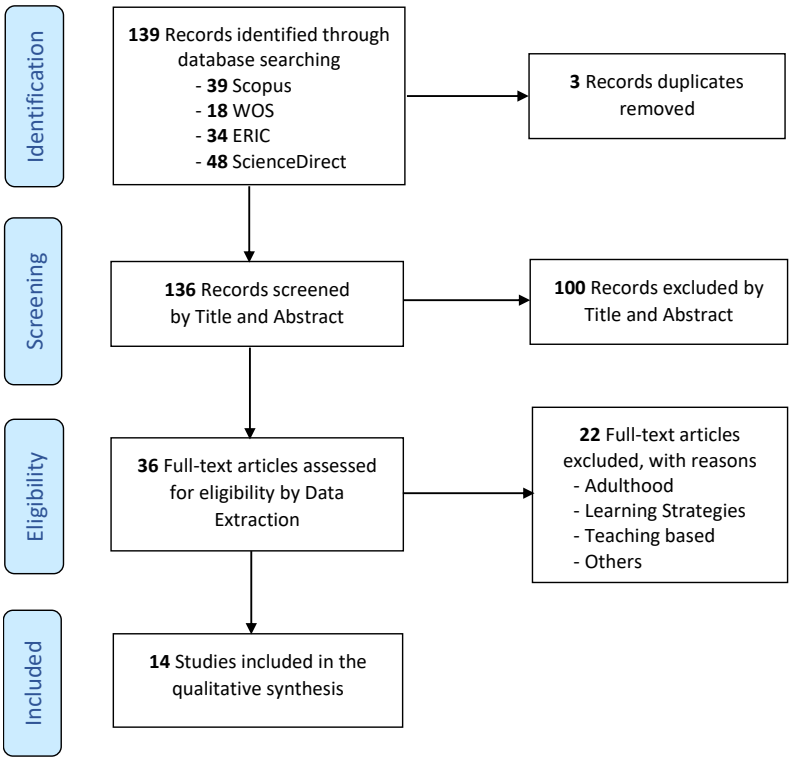

Figure 1. Flow Diagram of the Scoping Review (Source: Primary data)

Table 4. Literature Matrix

Distribution	Research Design	Aims	Element of study	Findings
Martzog & Suggate (2022) German	Questionnaires	We examined longitudinal links between media usage and FMS in 141 preschool children	Fine motor skills	Study found that using media is linked to lower FMS (Fine Motor Skills), especially with newer media. This connection remained significant even after considering factors like parental education, immigrant status, device ownership, age of first use, working memory, and

Distribution	Research Design	Aims	Element of study	Findings
				vocabulary. Overall, the research helps to understand how media usage relates to the development of Fine Motor Skills.
Joseph et al. (2022) India	Questionnaires descriptive study	This study analyses the impact of extended use of digital gadgets and mobile dependency on early childhood manifested through their cognition, socialization and behaviour	Mobile dependency	Extended use of digital gadgets has been found to impact young children's mobile dependency, socialization, cognition, and behaviour. These children show signs of alienation and behavioural issues linked to the time spent on screens, with similar results for both genders. Parents notice differences based on the children's age and their own characteristics. Their mobile dependency mediated their extended digital Screen Time to the Behaviour.
Nabi & Wolfers (2022) Portugal	Survey Emotional Intelligence (EI) Level	This research assesses how the media diet of children and the media use of their parents relates to child EI levels to assess what, if any, specific patterns exist.	Well-being development	The analysis showed that there is no significant link between a child's emotional intelligence (EI) and screen use. However, reading is associated positively with a child's EI. Interestingly, children whose parents use mobile devices more frequently around them tend to have lower EI. On the other hand, parents

Distribution	Research Design	Aims	Element of study	Findings
				who talk to their children about their media use have children with higher EI levels.
Kristo et al. (2021) Turkey	Questionnaire Cross-sectional study	The aim of this study was (1) to describe total usage of technological devices, (2) to evaluate the level of exclusive use of such devices by children, (3) to investigate children's eating behaviours and diet in relation to screen time and type.	Well-being impact	Poor eating habits, like those seen in our study, can lead to obesity and health issues. This problem gets worse the more we use technology. Families need to encourage healthy technology use to protect their present and future health.
Domoff et al. (2021) USA	Online survey	This study examined risk factors of persistent requesting to use screen media among preschool-age children, focusing on parent-reported characteristics of parent and child screen media use	Digital skills	28.7% of children exhibited persistent requesting, which was often accompanied by whining, crying, gesturing, or physically taking a device. Higher parental social media use was associated with a greater prevalence of children's persistent requests.
Sundqvist et al. (2021) Sweden	Recorded their home sound environment during a typical day [Language ENvironment Analysis (LENA) and online questionnaire	The current study examined the associations between children's language development and early DM exposure	Well-being development	Study found that 2-year-olds develop language better when parents interact with them and limit screen time. TV and parents using devices during routines were linked to slower language development, while talking, reading, and shared media engagement

Distribution	Research Design	Aims	Element of study	Findings
				had positive effects.
Merdin & Şahin (2023) Turkey	Survey	Examined the media environment in young children's homes (from 0 to 6 years of age), how early and how much they use television, computers, and tablet/smartphones, and the media environment in their homes and the parents' rules and regulations for their children's electronic media use	Digital skills	The findings indicate that almost all children live in homes with different types of electronic media devices, and they start to use them at an early age with longer time than recommended and parents try to use some rules in order to regulate their children's usage.
Akgun (2023) Turkey	Mixed method	The study aims to determine the level of parents' attitudes towards their children's use of information and communication technologies and to obtain parental views on the use of technology	Parental attitudes	Parents' attitudes towards their children's use of technology were positive. There was no significant difference between parents' attitudes and gender. Age, educational level, occupation, computer usage skills, and computer usage time all had a significant impact on parents' attitudes.
Kizilcec et al. (2021) Africa	Case study	We investigate two mobile learning technologies deployed in sub-Saharan Africa: a text-message-based application with lessons and quizzes adhering to the national curriculum in Kenya (N = 1.3 million), and a voice-based platform for supporting early literacy in Côte d'Ivoire (N = 236)	Digital skills	We find that mobile learning is used as a supplement for formal and informal schooling during disruptions with equivalent or higher intensity, as parents feel responsible to ensure continuity in schooling.

Distribution	Research Design	Aims	Element of study	Findings
Chen et al. (2020) China	Online survey	To investigate how different devices (including TV, tablet, computer and paper-based books) may channel parental efficacy (or the lack of it) to home literacy practices	Parental involvement	Parents who felt confident in their parenting (high parental efficacy) used less TV and tablet time but more books and computers with their children, leading to better home literacy practices. These parents also had higher socio-economic status (SES). In contrast, parents with low parental efficacy relied more on TV and tablets, reducing their children's exposure to books and computers, and resulting in poorer literacy practices.
Brauchli et al. (2024) Switzerland	Questionnaires	This study aimed to examine developmental relations of screen time, negative affect and effortful control in children aged 12–36 months	Well-being development	Study found that increased screen time in children is linked to higher negative emotions (like sadness or anger) but not to lower self-control. This suggests screen time might directly affect how kids feel, regardless of their ability to control their impulses. The researchers focused on kids with well-educated parents and didn't find that screen time affected self-control differently in this group.
Sciacca (2022) Ireland	Survey	The present study aimed at analysing the frequency of parental mediation strategies (i.e. active and	Parental attitudes	Parental concerns about online risks were linked to active mediation, whereas children's online time,

Distribution	Research Design	Aims	Element of study	Findings
		restrictive) during lockdown, their determinants, and how the two strategies affected children's digital skills and time spent online		parental worries about risks, negative attitudes towards digital technology, and parental digital skills were predictors of restrictive mediation. Higher levels of both active and restrictive mediation by parents were associated with children developing more digital skills. Moreover, children spent less time online when parents practiced higher levels of restrictive mediation and lower levels of active mediation.
Rathod (2023) Sweden	mixed methods observational data	Aims to note the children's movement behaviours as well as their screen activities	Digital skills	The research reveals that kids can be both inactive and active when using screens, challenging the notion that screen time is always sedentary. Additionally, the study highlights that children's screen activities at home involve diverse elements that interact dynamically, questioning the common narrative about device use and parental influence.
Ma & Chen (2022) Taiwan	Stratified sampling questionnaires	We investigated parents' engagement, children's screen time, and their social competence among Taiwanese Chinese children's families	Parental involvement	The results suggest a need to monitor and limit young children's screen time. Rather than relying on screens to occupy children, it is

Distribution	Research Design	Aims	Element of study	Findings
				recommended that parents and educators actively engage with them to enhance social skills.

Distribution of Past Studies

This scoping review has included studies that were published between the years 2020 and 2024. In 2020, only one study (Chen et al., 2020) related to the impact of screen time usage on children and parental involvement. Four articles from 2021 (Kristo et al., 2021; Domoff et al., 2021; Sundqvist et al., 2021; Kizilcec et al., 2021) were found in the four databases Scopus, WOS, ERIC and ScienceDirect. Besides that, five articles were retrieved from 2022 (Martzog & Suggate, 2022; Joseph et al., 2022; Nabi & Wolfers, 2022; Sciacca, 2022; Ma & Chen, 2022) that have similar content on the usage of soothing screens on children and parental involvement. In addition, there were three articles found in 2023 (Merdin & Şahin, 2023; Akgun, 2023; Rathod, 2023) and one article was discovered in 2024 (Brauchli et al., 2024).

According to the distribution by region, Europe has the highest number of studies on children's screen time usage and parental involvement with n=6. In contrast, there were n=3 studies in Eurasia in which the mix of Europe and Asia continents and also from Asia regions. There was only one study found in Africa and North America. Moving on to distribution by country, the highest number of studies were conducted in Turkey (Kristo et al., 2021; Merdin & Şahin, 2023; Akgun, 2023) with n=3 studies. Whereas, n=2 studies were found in Sweden (Sundqvist et al., 2021; Rathod, 2023). Moreover, nine countries remaining which are India (Joseph et al., 2022), Portugal (Nabi & Wolfers, 2022), USA (Domoff et al., 2021), China (Chen et al., 2020), Africa (Kizilcec et al., 2021), Switzerland (Brauchli et al., 2024), Germany (Martzog & Suggate, 2022), Taiwan (Ma & Chen, 2022), and Ireland (Sciacca, 2022) were recorded with one study each.

Research Design Used in Past Studies

There are 14 studies in total for this scoping review, n=11 (Martzog & Suggate, 2022; Nabi & Wolfers, 2022; Joseph et al., 2022; Domoff et al., 2021; Kristo et al., 2021; Sundqvist et al., 2021; Merdin & Şahin, 2023; Chen et al., 2020; Brauchli et al., 2024; Sciacca, 2022; Ma & Chen, 2022) were quantitative. There was only one qualitative study, followed by n=2 (Akgun, 2023; Rathod, 2023) mixed method studies. Studies conducted using questionnaires have n=5 in total (Martzog & Suggate, 2022; Joseph et al., 2022; Kristo et al., 2021; Sundqvist et al., 2021; Brauchli et al., 2024), while with the same total of n=5 studies (Sciacca, 2022; Chen et al., 2020; Nabi & Wolfers, 2022; Domoff et al., 2021; Merdin & Şahin, 2023) conducted using surveys. Furthermore, other research methods found were accelerometery and observational data (Rathod, 2023), methodological approach (Akgun, 2023), stratified sampling (Ma & Chen, 2022) and case studies (Kizilcec et al, 2021) with one study each.

Research Aim of Past Studies

There were six categories of aims for conducting a study on screen time usage in children and parental involvement. Studies that focus on screen time exposure recorded n=2 (Joseph et al., 2022; Rathod, 2023). Next, there were n=2 studies aimed at exploring the children's media diet (Nabi & Wolfers, 2022; Kristo et al., 2021). Also, there were n=2 studies aimed at determining children's and parents' attitudes (Domoff et al., 2021; Merdin & Şahin, 2023). Moreover, four studies (Sundqvist et al., 2021; Brauchli et al., 2024; Ma & Chen, 2022; Martzog & Suggate, 2022) examine the children's development influenced by screen time or digital media. On the other hand, three studies (Akgun, 2023; Chen et al., 2020; Sciacca, 2022) analysing parental involvement. Only one study (Kizilcec et al., 2021) investigates mobile learning technologies.

Elements of Study

There were six main elements identified as the impact of children's screen time usage and parental involvement. From this review, elements on children's well-being were found and have been categorised into well-being development and well-being impact. There was n=3 studies related to well-being development (Nabi & Wolfers, 2022; Sundqvist et al., 2021; Brauchli et al., 2024) while well-being impact has only one study (Kristo et al., 2021). On the other hand, elements about digital skills (Domoff et al., 2021; Merdin & Şahin, 2023; Kizilcec et al., 2021; Rathod, 2023) also have n=4 studies. Furthermore, parental involvement (Chen et al., 2020; Ma & Chen, 2022) and parental attitudes (Akgun, 2023; Sciacca, 2022) both have n=2 studies. The remaining elements, mobile dependency (Joseph et al., 2022; Martzog & Suggate, 2022), only have n=1 study each.

Findings of Past Studies

Based on this scoping review, the findings were identified from the 14 articles reviewed. The first findings were related to improving children's engagement with a total of n=4 studies (Nabi & Wolfers, 2022; Domoff et al., 2021; Merdin & Şahin, 2023; Rathod, 2023). Also, there were n=5 studies (Martzog & Suggate, 2022; Joseph et al., 2022; Kristo et al., 2021; Sundqvist et al., 2021; Brauchli et al., 2024) indicating that developing positive media usage could enhance better media use among children. Next, there were n=4 studies (Akgun, 2023; Sciacca, 2022; Ma & Chen, 2022; Chen et al., 2020) that indicated developing parents' attitudes helps with the children's engagement in screen media. Lastly, there was only one study that pointed out that increased screen media usage can help with learning based on socioeconomic status.

Discussion

Well-Being Development

Children's well-being development has been discussed in three related articles (Nabi & Wolfers, 2022; Sundqvist et al., 2021; Brauchli et al., 2024), that focus on a few aspects of children's well-being development such as emotional, behavioural and language development. Childhood and teenage years are defined as times of significant functional and structural reorganisation, during which the brain is highly susceptible to external stimuli

(Vedechkina & Borgonovi, 2021). Irzalinda and Latifah (2023) stated in their study, that children's behavioural, cognitive, and physical health are all negatively impacted by excessive screen usage. Also, children are prone to screen device addiction, due to their poor coping mechanisms. Result of this, they frequently seek activities they are interested in without thinking through the potential implications. Screen devices have completely transformed childhood, getting into practically every aspect of a child's life and the need to bring mindfulness on screen time use to society. Webb (2023) emphasized in her research, that mindfulness requires one to be aware, focused, and intentional about the factors influencing one's life.

Well-Being Impact

Previous studies have highlighted potential concerns for children's well-being with excessive use. Studies by Muppalla et al. (2023) show that excessive screen usage and media multitasking can have negative effects on executive functioning, sensorimotor development, and academic outcomes. According to the study by Irzalinda and Latifah (2023), screen time has both direct and indirect effects on children's well-being. A child who is constantly exposed to the virtual world on screens has less time to play, exercise, or engage with friends and family in real life. This can have a significant impact on a child's overall development (Dutta, 2020). The negative impact on the cognitive dimension of early childhood well-being includes a delay in achieving early childhood language development following early childhood development milestones. Kristo et al. (2021) conducted a cross-sectional study examining the relationship between total usage of technological devices, exclusive use by children, and children's health issues and the findings discovered excessive use of screen time does impact the children’s health.

Digital Skills

Children are bound to have access to digital devices due to the rapid evolution of technology, so they must acquire fundamental digital skills. The use of new technologies by children depends on several factors, including the digital skills possessed not just by the children themselves, but also by their parents, a prominent peer environment, digitally skilled teachers, and a school that consciously uses new technology (Iwanicka, 2021). Four studies focus on children’s screen time or screen media usage from different perspectives. For example, Domoff et al. (2021), examined risk factors for persistent requests to use screen media among preschool-age children. Merdin and Şahin (2023) examined the media environment in young children's homes, their early use of electronic media, and parental rules, while Kizilcec et al. (2021) investigated mobile learning technologies in sub-Saharan Africa. Last but not least, Rathod (2023) explores children's screen use as a socio-material assemblage that is dynamic and contingent. These show how digital skills could be applied to children’s screen habits to enhance better experience in front of the screens.

Parental Involvement

Parents have a significant influence on their children's screen time behaviours through role modelling, co-participation, and beliefs, as well as establishing and controlling the home social and physical environment, which

can either promote or restrict their own and their child's screen time (Arundell et al., 2020). Parents also decide the kinds of devices their children have access to and how long they spend using screens (Raj et al., 2022). Some studies have found that aspects of parenting and the family environment may reduce the impact of screen usage on children's psychological, behavioural, and developmental outcomes. For example, choosing better programming for their children (educational content) and co-viewing (with caregivers) are linked to improved language outcomes for children (Morawska et al., 2023). Two articles go in-depth on parental development. Chen et al. (2020) conducted an online survey to investigate how different devices influence parenting a child and home literacy practices, while Ma and Chen (2022) investigated the influence of parental involvement and children's screen time on social competence. Both studies include parental involvement as a main element or factor for their studies.

Parental Attitudes

Parents have to create an environment suitable for improving the learning process in their children's growth from the aspect of their attitudes (Aman et al., 2019). A recent qualitative study by Mallawaarachchi et al. (2022) indicated a range of parental attitudes towards young children's screen use, from positive to negative. Positive opinions towards screen media include its use in establishing social ties, as a new instructional tool, and as a quick babysitter. Negative attitudes include concerns about overstimulation, displacement of interactions and other activities, and hindering the child's creativity. There were two studies found related to these elements. Akgun (2023) conducted a mixed-method study to determine parents' attitudes towards their children's use of information and communication technologies, and Sciacca (2022) analyzed parental actions with strategies during lockdown and their impact on children's digital skills and online time. Parents have to create an environment suitable for improving the learning process in their children's growth.

Mobile Dependency

As technology advances, people increasingly rely on smartphones for essential functions and accessibility (Sunday et al., 2021). Depending on digital devices have increased daily screen time, which has some negative implications for physical and mental health. Constant exposure to technology like smartphones, personal computers, and television can have a serious impact on mental health, increasing anxiety and stress (Nakshine et al., 2022). Screen dependency is an increasing issue for the public, especially among young children who are constantly exposed to it. Excessive screen usage, particularly among young children, has been linked to numerous health, physical, and social problems despite its many benefits (Hadi et al., 2023). Just like the study that was found throughout this scoping review, Joseph et al. (2022) conducted a descriptive study in India, analysing the impact of extended use of digital gadgets and mobile dependency on early childhood. Priftis and Panagiotakos (2023) highlighted excessive screen time for a child depends on the child's background story such as parent relationships, age, or country. Screens have become common in children's daily lives, can be accessed easily and serve as a frequent platform for activity and entertainment (Kerai et al., 2022). Mobile dependency should be considered as an important reason that may be the reason that drew children closer to the use of screen media.

Fine Motor Skills

A new and disturbing pattern is showing up on the educational horizon. Lots of children enter kindergarten lacking the basic fine motor skills needed to hold a pencil and write. This lack of dexterity in their fingers and hands can be linked to their greater reliance on touch screen technology and decreased use of crayons, paints, pencils, scissors, clay, and other manipulatives in their daily lives (Guddemi, 2017). Touchscreens have become appealing to young children for sensory and cognitive stimulation and their effect on children's development is a major concern for parents, researchers, and policy officials (Mohamed et al., 2023). Among all of the articles, an article by Martzog and Suggate (2022) was the only one with Fine Motor Skills (FMS) content. It talks about the link between media usage and Fine Motor Skills (FMS) among preschool children. Marissa (2022) stated a study of preschool children discovered that increased screen media exposure (such as television and smartphones) has negative effects on fine motor skill development and that children struggled to draw figures when asked. A balanced approach to screen time, along with active parental relationships, can have a significant impact on children's fine motor abilities.

Conclusion and Implication

In conclusion, the scoping review on the impact of children's screen time usage and parental involvement reveals an environment full of variables with implications for various aspects of children's development. The findings highlight the significance of parental involvement in shaping and observing children's screen time habits. The reviewed studies underline that children's well-being, which includes emotional, behavioural, and language development, has a direct connection to screen time exposure. The identified elements of the study, including digital skills, parental involvement, parental attitudes, mobile dependency, and fine motor skills, further emphasize the diverse factors influencing children's interactions with screens. This scoping review points out the key role of parents and caregivers to actively monitor and regulate their children's screen usage, taking into account the potential impacts on their well-being and development. However, having limited data to collect is a challenge during the process of retrieving the data. This encourages further research and collaboration besides the countries that have been mentioned in this review like Malaysia itself, so that more research specifically in this area of study could be explored based on experience worldwide which also provides advice on starting a healthy and productive digital environment for children in the fast-changing technological landscape.

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