

THE POSSIBLE EFFECTS OF DIGITAL MEDIA AND PARENTAL SCREEN SOOTHING ON CHILDREN

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Abstract. Digital media or devices are no longer considered uncommon in society. Everyone has used it, from a young age to adults. Screen use habits among children are an ongoing issue as they are in the developing stage. The widespread use of digital media in today's society, especially among younger generations, highlights the importance of having an in-depth understanding of its effects. This study proposes a conceptual model to better understand the possible effects of digital media exposure and parental screen soothing on children which also includes the children's development outcome. The theory implemented in this research can set a strong foundation towards children's use and habits of digital media or digital devices. Excessive screen time raises concerns about potential negative impacts on children's physical and mental health, even though digital media offers educational benefits. Plus, parental screen soothing influences children's screen time and developmental consequences are considered one of the major concerns which bring this research's attention. This research contributes to a better knowledge of the effects of digital media and parental screen soothing on children, including implications for policy and practice aimed at supporting positive child development in the digital age.

Keywords: *digital media, parental soothing screen, children, screen time, effects*

Introduction

Digital media use such as apps, social media, and video games is growing increasingly common as a result of technological advancements (Ren, 2023). It has been an essential part of our lives, starting from early childhood. Early childhood involves critical periods of brain development that lead to the emergence and growth of cognitive abilities in several domains, including focused attention, memory, executive functions, and language, exposure to digital media can influence a child's optimal functioning and growth (Swider-Cios et al., 2023). Parents and caregivers occasionally use media and other devices as a calm tool for their children. Examples include educational apps, games, and videos. Young minds have been drawn to digital media due to its interactive features, eye-catching images, and instant gratification. Examples include educational apps, games, and videos that can be effective learning tools for promoting curiosity, critical thinking, and problem-solving skills. This is further proven as technology became easy to use, and children's use of it increased (Sharma, 2021). The content of digital media plays a big role in delivering and attracting children to reach the objectives that have been set. A soothing screen acts as a calming tool for parents to help calm and relax a child which indicates that parents or caregivers normally use available digital

media as pacifying tools. Parents might use digital media as a way to relieve parenting stress. Furthermore, parental attitudes to their children's media use have been shown to predict screen time in young children (Brauchli et al., 2024a). Screen time has become routine in modern parenting. Today, digital devices, such as TVs, mobile phones, tablets, digital games, and laptops, are present in every home. Parents might employ different types of media as parenting tools hence increasing children's screen time (Lev and Elias, 2020). Handing a fussy preschooler a digital device seems to be a quick remedy. According to research, screen devices can be used strategically as tools for babysitting or educational support.

Panjeti-Madan and Ranganathan (2023) stated that a child's average daily screen time increases significantly with age. Children aged 0 to 8 spend approximately two and a half hours every day using screen media. Most parents 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. Research from Guellai et al. (2022) regarding the number of television programmes aimed towards infants has increased over time, resulting in more time spent in front of screens and earlier exposure. Numerous experts enter the world of digital media by producing video games, music or educational apps specially made for kids. It works to create suitable or kid's kid-friendly platforms which include creativity, fun, attractive and useful content. Excessive technology use in children causes many health, developmental, and behavioural changes. While there is no doubt that using digital media and other digital devices to aid children is currently helpful, there is also concern about the potential drawbacks of doing so, particularly concerning elementary school-aged children (Aryanti et al., 2023).

Brauchli et al. (2024b) mention in their research that the extent to which this screen time can be viewed as a beneficial extension of toddlers' lives is debatable. Screen media can have negative impacts on sleep, attention, and learning. Bream (2023) stated that recent studies examined the effects of mobile phones on young children's long-term executive performance and emotional reactivity. The study takes a look into the aspect of executive functioning that allows us to plan, follow orders, stay focused, solve problems, and display self-control. At baseline, researchers discovered that increased mobile device use to calm children affected executive performance and emotional reactivity. Children's use of digital media raises concerns, according to data from the Malaysian Communications and Multimedia Commission (MCMC), 83.2 per cent of Internet users are under the age of 17 (Zain et al., 2022). Previous research from Kattein et al. (2023) has found that increased digital media use among children is connected with a sedentary lifestyle, including physical inactivity and unhealthy nutrition behaviour. In addition, there's studies highlighted excessive screen time has been related to higher risks of developmental delay and disrupted cognitive and socioemotional development, leading to poor academic achievement and reducing children's ability to use their imaginations or explore the world (Raj et al., 2022). Further research is conducted to know the effects of digital media on children as well as parental soothing screens towards children to create a better understanding and outcome of this research.

Literature review

Digital media has become an inseparable element of daily life, especially among children. Children are born into the digital environment, which plays a significant part in modern life (Topçu and Dinçer, 2022). Interactions with the external environment,

even the digital environment, shape children's brains and neural structure including cognitive abilities (Sina et al., 2023). According to researchers, parents stimulating screen time does not teach children how to identify their emotions and soothe themselves. This can cause problems later on. Parental factors have been looked at to understand young children's screen media usage since early screen media use is frequently started and controlled by parents' media-related decisions (Shin et al., 2021). Media in all forms, including TV, computers, and smartphones, can affect how young people feel, learn, think, and behave. Increased screen time has been connected with unhealthy diet patterns, poor sleep quality, cardiovascular disease, and obesity in children (Nakshine et al., 2022). According to Common Sense Media's 2021 study, 53% of children in the United States have access to a smartphone by the age of 11, and the average daily screen usage for children (ages 8-12) exceeds 5 hours. The research mentioned above, shows that children do interact with digital media at an early age and how digital media can potentially affect children.

Materials and Methods

To determine a conceptual model towards the possible effects of digital media and parental soothing screens on children. This research needs to pay attention to how and why digital media are integrated into children's lives. Children's experiences and connections with parents, relatives, babysitters, and teachers, determine their growth and development (Qaiser, 2020). One theory has been chosen to apply in this paper as a reference to build clear research relating to the topic. The theory stated is Media Ecology Theory and it gives a view of how media work as a medium towards human culture. Also, able to provide valuable insights or expectations for this conceptual paper.

Ecology Theory by Neil Postman in Gamaleri (2019)

Marshall McLuhan proposed the theoretical concepts in 1964, while Neil Postman formally established the term media ecology in 1968. Media ecology theory is the study of media, technology, and communication and how these affect the human environment. This theory is related to the effects of digital media and parental soothing screens on children as it focuses on the media as a medium used around children while parental soothing screens work as an environment that could influence the children's development outcome. Children benefit from virtual worlds developed through digital media, particularly interactive and multimedia content. These environments encourage active interaction and participation, rather than passive consumption. Joseph et al. (2022) stated that extended use of digital media has been found to impact young children's mobile dependency, socialisation, cognition, and behaviour. It shows that the media environment contributed to changes in children's screen time, behaviour, well-being and development. Media ecology studies how media technologies create environments that influence our lives. Think of these environments like bubbles shaped by technology. The main bubble represents the people or humans that are surrounded by other bubbles that consist of digital knowledge, machines like iPads or smartphones and networks such as the internet. The idea is that technology and techniques, modes of information and communication play are important in human affairs (Gamaleri, 2019). This has been illustrated in *Figure 1*.

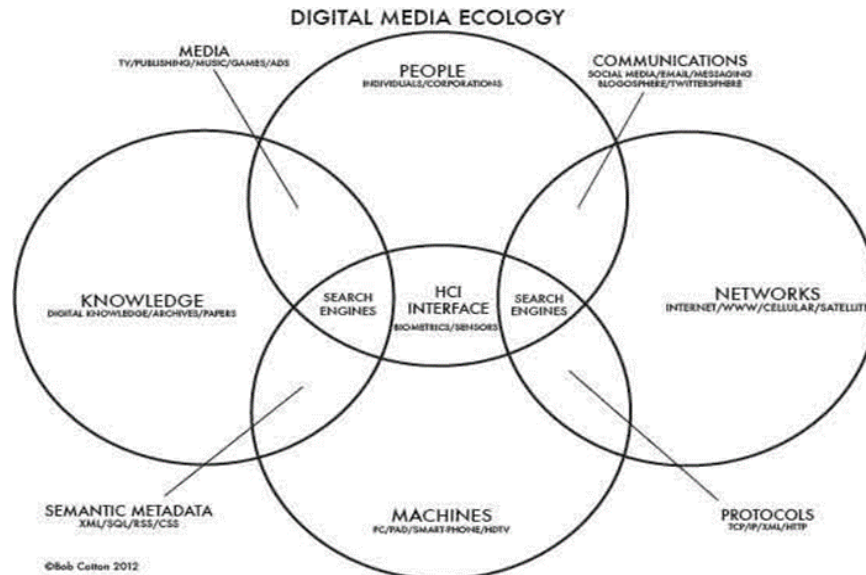


Figure 1. Postman's theory of media ecology.

Results and Discussion

Proposed conceptual model

Based on the above model, this study proposed the following conceptual model in Figure 2. In the Proposed Conceptual Model, digital media exposure is the independent variable which acts as a medium towards parental screen soothing environment for children. Parental soothing screen is the mediator while children's development outcome represents the dependent variable. In addition, time spent in the context is a moderator which affects the relationship between digital media and children.

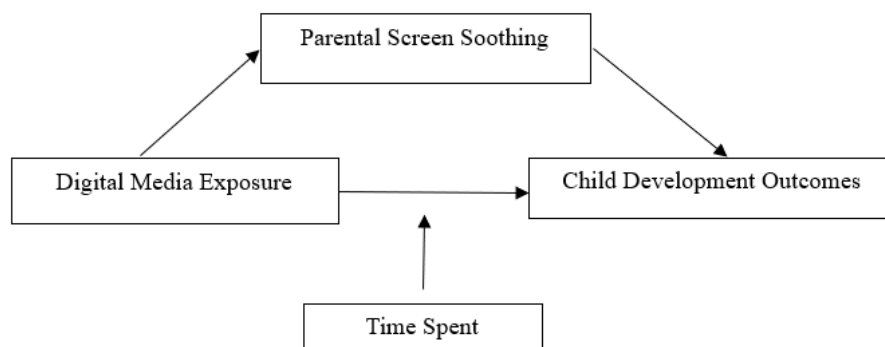


Figure 2. Proposed conceptual model.

Digital media exposure

Research points out that children's cognitive, language and social development can be influenced by digital media exposure (Panjeti-Madan and Ranganathan, 2023). This shows that digital media exposure is involved in children's development outcomes. Children's digital media exposure involves how much time they spend interacting with various digital media and devices. Durham et al. (2021) highlighted that children today

grow up with both traditional electronic media (television) and new interactive media, such as entertainment gadgets (game consoles, video, and tablets), work devices (personal computers and laptops), multi-functional devices (smartphones), and electronic book readers. Although digital media offers educational and entertainment benefits, it also raises worries about its potential negative effect on children's physical and mental health. Most research on children's media exposure has been undertaken. Still, debate continues about the effects of media on children's development such as social, and cognitive development in preschool children, especially before the age of two (Kim et al., 2023). Besides, screen time can affect language development as frequent or longer screen time affects the amount and quality of interactions between children and their caregivers (Muppalla et al., 2023). Balancing the positive effects of digital media with the need for responsible usage and age-appropriate content plays an important role in creating a healthy and constructive digital environment for children, while also acknowledging its effect on their cognitive development, social skills, and general well-being.

Parental screen soothing

Parents play an important role in helping minimise this impact by co-viewing quality screen content and positively influencing their kids which could result in children's development outcomes. Shah and Phadke (2023) stated toddlers were given screen-based devices to console them or to keep them occupied while their parents or caretakers were busy. Parents' reasons for using screen media in everyday life with their young children vary and can be categorised as child-centred and parent-centred (Brauchli et al, 2024a). Child-centred reasons include education, learning new skills, collecting new knowledge, providing entertainment, and preventing boredom, whereas the most frequently said parent-centred reason is "to keep the child busy so other things can get done", such as doing household duties. Chen et al. (2020) discuss the link between TV and tablet use and reduced home literacy practices. This implies that excessive screen time, which may be influenced by parental soothing through screens, may have effects on children's engagement in beneficial activities such as reading and learning at home. Understanding the impact of preschool media usage on health and development requires promoting positive media use practices while reducing harm (Fitzpatrick et al., 2023). Thus, parental soothing screens contributed to children's development outcomes.

Child development outcome

Well-being development

The impact of excessive screen use on children's health and development is a public health concern, and several nations have issued recommendations to limit and guide the use of screen media in childhood (Morawska et al., 2023). Well-being can be defined as the way you feel about yourself and your life, which consists of physical, social, emotional and mental well-being. Children's exposure to digital media and screen time has become an ongoing issue for parents and society. Longitudinal studies have shown that higher levels of screen usage are not only connected with poorer physical health and obesity in later life but also with lower psychological well-being and mental health difficulties in school-aged children and adolescents (Schwarzer et al., 2022). For example, one of the aims of the studies by Brauchli et al. (2024b) examine the

developmental relations of screen time among children from 1 to 3 years old within 10 months using questionnaires. The findings found that there was a negative finding that increased screen time in children is linked to higher negative emotions (like sadness or anger). This shows how interaction between children and screens can affect their well-being development.

Cognitive development

Cognitive development refers to thinking, reasoning, and extracting meaning from experiences. According to Merdin and Şahin (2023) research, most children aged 0-6 are exposed to and use screen devices. This indicates screen device exposure occurs at an early age in children's development phase. Muppalla et al. (2023) stated in their research, that electronic books and learning-to-read apps can help young children develop their early reading skills and creative thinking abilities. They also found out that excessive screen usage has a detrimental effect on social and emotional development, including an increase in the chance of obesity, sleep difficulties, and mental health conditions like anxiety and depression. From the above, it shows the facts about how children's interaction with digital devices or digital media could affect children's cognitive development whether in both positive and negative ways. Therefore, a proper way to implement digital media use or digital devices towards children should be taken into account as in the world of technology and digital growth, our habits also change according to the surroundings we are in.

Time spent

Time spent in this context refers to how much time children use their digital devices also known as screen time where children spend the amount of time using digital or electronic media devices, like computers, tablets, smartphones, and televisions (Qi et al., 2023). Digital devices like computers, tablets, and mobile phones are becoming more and more common in daily life, business, and education as science and technology advance and become more connected to social life. Younger children are being exposed to technology, and they are spending more time on screens. Raj et al. (2022) stated in their study that in 2019, the World Health Organisation (WHO) advised against allowing children under the age of two to spend any time on screens and said that children between the ages of two and five should only spend one hour a day on screens. Turnouts globally, between 70% and 90% of children under the age of five did not follow the recommended amount of screen time. This shows children have access using their digital devices with or without their parents keeping an eye on them which could lead to excessive use of digital devices. Time spent is correlated with digital media exposure which could be influenced by a few factors for example parental soothing screen.

Conclusion

In conclusion, an in-depth study of digital media's effects has been driven by the regularity that it is in children's lives nowadays. Studies have shed light on highlighting the possible advantages as well as disadvantages of exposure to digital media. Studies like those by Brauchli et al. (2024a; 2024b), Ma et al. (2024), Merdin and Şahin (2023), Rathod (2023) as well as Joseph et al. (2022) have shown that extended use of digital

devices, parental involvement, screen time, and mobile dependency affect children's cognitive, social, and emotional development. The results emphasize the need for a well-rounded strategy regarding the usage of digital media, in which parents play a key role in reducing potential negative effects by encouraging positive screen habits and developing deep connections with their kids. The suggested conceptual model provides insight into understanding the interactions between children and digital media which are influenced by the habits or environment created and brings awareness, especially to adults specifically the ones who have kids.

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Conflict of interest

The authors confirm that no conflict of interest is involved with any parties in this research.

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