

THE RELATIONSHIP BETWEEN CHILD'S MEDIA  
USAGE AND PARENTAL INFLUENCE ON EXCESSIVE  
MEDIA EXPOSURE TOWARDS CHILDREN AMONG  
THE PUBLIC ATTENDING HOSPITAL UNIVERSITI  
SAINS MALAYSIA

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by

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Dissertation submitted in partial  
fulfilment of the  
requirements for degree  
of Bachelor of Nursing (Honours)

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## **CERTIFICATE**

This is to clarify that the dissertation entitled “The Relationship Between Child’s Media Usage and Parental Influence on Excessive Media Exposure Towards Children among Public Attending Hospital Universiti Sains Malaysia” is the bona fide records of research work done Mr. Muhammad Faris during the period October 2022 to August 2023 under my supervision’s. I have read this dissertation and that my opinion it confirms acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation to be submitted in partial fulfilment for the degree of Bachelor of Nursing (Honours).

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## **DECLARATION**

I hereby declare that this dissertation is the result of my investigation, except where otherwise stated and duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degrees at Universiti Sains Malaysia or other institutions. I grant Universiti Sains Malaysia the right to use the dissertation for teaching, research and promotional purposes.

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## **ABSTRAK**

### **Hubungan penggunaan media dalam kalangan kanak-kanak dengan pengaruh ibubapa terhadap pendedahan media yang berlebihan kepada kanak-kanak dalam kalangan orang ramai yang menghadiri Hospital Universiti Sains Malaysia (USM)**

Pendedahan media yang berlebihan boleh memberi kesan negatif terhadap kanak-kanak kepada perkembangan mereka, ini mesti dielakkan untuk berlaku. Pengaruh ibu bapa dan faktor penggunaan media kanak-kanak mungkin dikaitkan dengan pendedahan media yang berlebihan terhadap kanak-kanak. Jururawat mesti menjadi peranan penting untuk memberi pendidikan kesihatan tentang sisi negatif kepada ibu bapa, oleh itu, meningkatkan pemahaman dan kesedaran ibu bapa tentang kepentingan mengehadkan pendedahan media anak-anak mereka, yang dapat membantu perkembangan anak yang lebih baik dalam kemahiran kognitif, bahasa, sosial, dan emosi. Kajian keratan rentas itu dijalankan bagi menentukan hubungan antara penggunaan media kanak-kanak dan pengaruh ibu bapa terhadap pendedahan media yang berlebihan terhadap kanak-kanak dalam kalangan orang awam yang hadir ke Hospital Universiti Sains Malaysia (USM). Seramai 125 orang peserta dari seluruh kawasan Hospital USM yang memenuhi kriteria kemasukan dan pengecualian telah menyertai kajian ini. Mereka dipilih melalui kaedah pensampelan kemudahan. Data yang dikumpul dianalisis secara statistik menggunakan perisian Statistical Package Social Sciences (SPSS) versi 26. Kajian ini menunjukkan telefon pintar adalah peranti pilihan oleh kanak-kanak untuk digunakan dengan 82.1%. Ibu bapa dalam kajian ini menunjukkan bahawa mereka terlibat dalam penggunaan media anak-anak mereka. Pembinaan peranan ibu bapa, keberkesanan diri ibu bapa dan ibu bapa yang dirasakan arahan ibu bapa mempunyai korelasi positif antara penggunaan internet anak-anak dalam hiburan, praktikal dan berkaitan sekolah atau pembelajaran ( $p < 0.001$ ). Hasil

kajian ini mendedahkan bahawa di mana terdapat korelasi yang signifikan antara pengaruh parenteral dan penggunaan media kanak-kanak ( $p < 0.001$ ). Kajian mendapati kebanyakan ibu bapa tidak mengawal penggunaan media anak-anak mereka yang disebabkan oleh pengetahuan yang tidak mencukupi mengenai pendedahan media yang berlebihan memberi kesan negatif kepada perkembangan anak-anak mereka.

## **ABSTRACT**

### **Relationship between Child's Media Usage and Parental Influence on Excessive Media Exposure Towards Children Among Public Attending Hospital Universiti Sains Malaysia (USM)**

Excessive media exposure can give negative impact towards children to their development this must be avoided to be happens. Parents influence and the factors of child's media usage may be connected to the excessive media exposure towards children. The nurses must be a key role to give the health education about the negative side to the parent, therefore, raise parents' understanding and awareness of the significance of limiting their children's media exposure, which can aid in better child development in cognitive, language, social, and emotional skills. The cross-sectional study was conducted to determine the relationship between child's media usage and parental influence on excessive media exposure towards children among public attending Hospital Universiti Sains Malaysia (USM). A total 125 participants from all around areas Hospital USM who are fulfilled inclusion and exclusion criteria participated in this study. They were selected through convenience sampling method. Data collected were statistically analyzed using the Statistical Package Social Sciences (SPSS) software version of 26. This study shown smartphone were preferred devices by children to used with 82.1%. The parents in this studies showed that they were involved in their children media usage. Parent role construction, parents' self- efficacy and parents perceived parental instruction has positive correlation between children internet use in entertainment, practical and school-or- learning related ( $p < 0.001$ ). The results of the present study revealed that where is a significant correlation between parenteral influence and children's media usage ( $p < 0.001$ ). The study finds that most of the parents not controlling the usage of their children's media usage which because of insufficient knowledges regarding excessive media exposure negative affect to their children development.

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## LIST OF ABBREVIATIONS

COVID-19	Coronavirus disease
CDC	Centres for Disease Control and Prevention
ML	Mobile Legends
PUBG	Player Battle Underground
SPSS	Statistical Package for Social Sciences
UNICEF	United Nations International Children's Emergency Fund
USM	Universiti Sains Malaysia
WHO	World Health Organizations
WIP	World Internet Population

# CHAPTER 1

## INTRODUCTION

### 1.0 Background of the Study

Child development is the series of physical, linguistic, cognitive, and emotional changes that occur in a child from birth to the start of adulthood. The early years of a child's life are crucial in achieving healthy development because of the child's capacity to grow up in an environment where their social, emotional, and educational needs are addressed (Centers for Disease Control and Prevention, 2021). Parenting characteristics, family size, parent work status, community infrastructure, social cohesion, schooling, built environmental quality, and the effects of complex interplay such as genetic predisposition and environmental stress are known as the exposome.

Though young children's use of mobile devices such as tablets and smartphones is growing, research tying them to their development is still in its early stages (Lawrence & Choe, 2021). Children nowadays have unrestricted access to the internet, which may be harmful to them; hence, parents' involvement in minimizing their children's online hazards is critical (Yusuf et al., 2014).

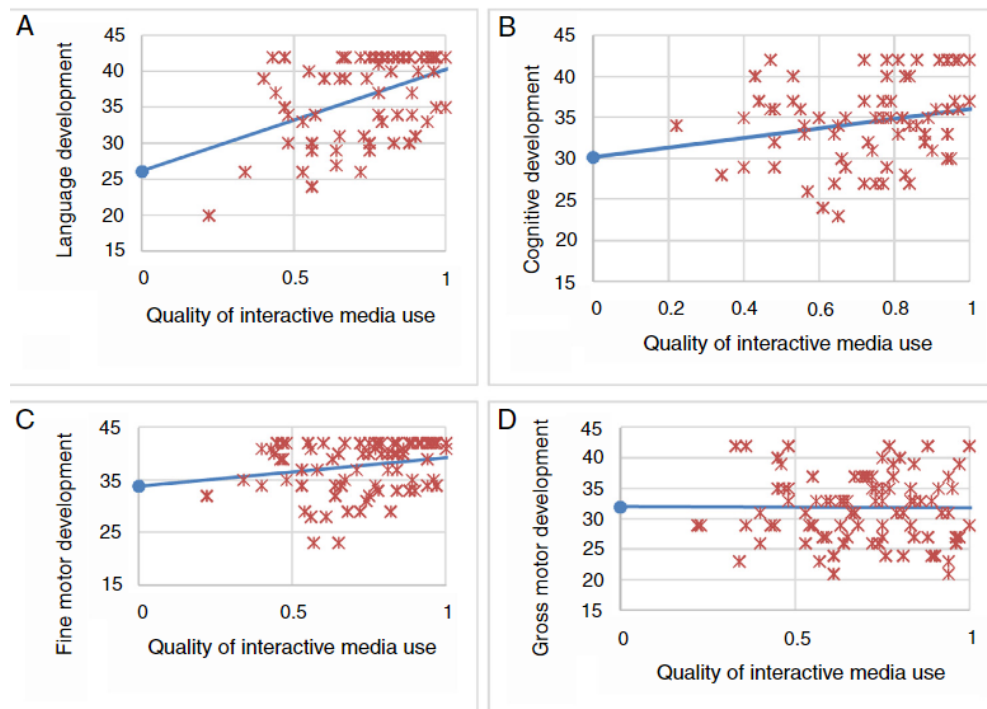
Early childhood is when children attain important developmental milestones (Schwarzer et al., 2021). Environmental influences, such as the COVID-19 epidemic, can either help or impede this process. The World Health Organization and UNICEF have raised the impact of the COVID-19 lockdown on children's and adolescents' mental health. The effects of increased screen media use as a major concern due to school closures, social distancing, and reduced opportunities for stress regulation, critical effects of the lockdown on children's and adolescent mental health that have been reported (Werling et al., 2021).

Internet use is prevalent in children's daily lives and can be classified as entertainment-related, informative-related, or school-related (Gruchel et al., 2022). Because of COVID-19, they have been using the media platform for class (online classes). Because they cannot participate in physical sports, they have spent their leisure time playing e-sports such as Mobile Legends (ML) and Player Battle Underground (PUBG). As a result of increasing interest in the benefits and costs of this development, various reports on the effects of screen time and digital media usage on early development, such as language, cognition, and later academic accomplishment, have been published (Martzog & Suggate, 2022).

Children increasingly utilize media at earlier ages, and studies have classified child-problematic media use as excessive media usage that may interfere with a kid's social, behavioral, or academic functioning (Holmgren et al., 2022). Excessive media consumption among children has been linked to several negative developmental consequences, including poor sleep quality, scholastic problems, attention deficit-related behaviors, and decreased prosocial behaviors (Holmgren et al., 2022). As a result, World Health Organization (WHO) guidelines recommend that young children limit their screen time to no more than one hour per day. This is because digital media has become omnipresent in the lives of young children, with preschoolers spending more than two hours per day on average using digital media (Schwarzer et al., 2021).

Because of their multifunctional qualities, smartphones have become an integral part of people's daily lives. This has made adolescents and adults more interested in phones. It has been claimed that 19.5% of Serbian young adults and 16.9% of Swiss adolescents are addicted to smartphones (Gong et al., 2022). In Japan, roughly 22.8%–28.0% of young adults became addicted to smartphones. In contrast, in mainland China, approximately 80% of adolescents had smartphones, nearly 40% of them used smartphones without restriction, and 22.8% of adolescents became addicted to smartphones (Gong et al., 2022).





**Figure 1:** The quality of interactive media development towards child development in Switzerland.

## 1.2 Problem Statements

The World Health Organization (WHO) recommends limiting young children's screen time to one hour daily. Children currently have unrestricted access to the internet, which can be harmful. According to the 2013 World Internet Population (WIP) survey, 90% of children aged 12 to 14 worldwide use the internet extensively (Yusuf et al., 2014). This was because children were the world's fastest-growing internet population and the most frequent internet users in terms of online time (Yusuf et al., 2014). The effects of media exposure on early childhood development have been debated (Schwarzer et al., 2021).

According to a study conducted in Malaysia in 2014, 236 children aged 6 to 10 were exposed to the internet, with 65% spending 1 to 5 hours online daily. Still, on non-school days, 83% of them spend around 5 hours online, an increase of nearly 20% compared to internet consumption during the week (Yusuf et al., 2014). Yet digital media has become omnipresent

in young children's lives, with preschoolers spending more than two hours per day on average (Schwarzer et al., 2021)

Based on a study by Schwarzer et al. (2021), 24% of children's preschoolers in Germany exceeded the approved screen time levels. Heavy media use by children was associated with lower cognitive, language, and social-emotional development outcomes (Schwarzer et al., 2021). The study found that youngsters who watched a lot of television had inferior cognitive and linguistic development outcomes (Schwarzer et al., 2021). Conversely, more frequent parent-child engagement relates to improved child body motor, cognition, language, and social-emotional skills (Schwarzer et al., 2021).

Children who use media at a younger age and at higher rates are more likely to engage in problematic media use, as excessive media usage can interfere with a child's social, behavioral, or academic performance (Holmgren et al., 2022). Excessive media use in childhood has been linked to various negative developmental consequences, including poor sleep quality, educational problems, attention deficit-related disorders, and decreased prosocial behaviors (Holmgren et al., 2022)

Parents act as agents who guide and regulate their children's use of technology (Matthes et al., 2021). The parent-child relationship is a major factor influencing increased digital media use (Shutzman & Gershy, 2022). Because it was the family's responsibility to provide a favorable environment, adequate stimuli, and learning material, the family environment was an important predictor of child development (Nobre et al., 2020). Parental stress was been linked to toddler screen use, highlighting the importance of family contexts in parental decision-making for children's screen use (Shin et al., 2021). Furthermore, children's perceptions of their parents' involvement frequently moderate the impact of environmental events on their behavior and learning (Gruchel et al., 2022).

There was since more advanced internet use by children is associated with more parental supervision (Gruchel et al., 2022). According to Shin et al. (2021), mothers who rated their children as having more social-emotional difficulties, such as frequent crying and irritability, were more likely to supply technologies to calm children's tantrums and keep peace in the home. Parents experiencing prominent levels of parenting stress may have less energy and motivation to deal with parenting roles and interactions with their children. As a result, they may turn to media as a parental tool (Shin et al., 2021). High levels of parent-child conflict, parental psychological control, and parental phubbing are correlated with high levels of digital media use and addiction among adolescents (Shutzman & Gershy, 2022). When attempting to regulate their children's technology use, parents may perceive their children as addicted to new technologies, resulting in a perceived lack of control (Matthes et al., 2021).

However, the study on the relationship between a child's media usage and parental influence on excessive media exposure among children in Malaysia is tiny. As a result, there was little evidence to link excessive media exposure to children's development.

### **1.3 Research Questions**

1. What are the associated reasons and daily screen use of children media usage?
2. What is the parenteral involvement in their children's media usage?
3. Is there any correlation between parenteral influence and children's media usage?

### **1.4 Research Objectives**

#### **1.4.1 General Objective**

To determine the relationship between children's media usage and the parental influence among the public attending Hospital USM.

### **1.4.2 Specific Objectives**

1. To identify the associated reasons and daily screen time in children's media usage.
2. To determine the parenteral involvement in their children's media usage.
3. To determine the correlation between parental influence and children's media usage.

### **1.5 Research Hypothesis**

Null hypothesis,  $H_0$ :

There is no significant correlation between parenteral influence and children's media usage.

Alternate hypothesis,  $H_A$ :

There is a significant correlation between parenteral influence and children's media usage.

## **1.6 Conceptual and Operational Definitions**

### **Media Excessive uses among Children:**

Excessive media use in children is defined as using media for more than one hour per day (Schwarzer et al., 2021). According to the World Health Organization (WHO), the maximum screen time for a young child should be one hour per day. Screen exposure is not recommended for children younger than 18 months of age. Still, children 18-24 months of age can be introduced to high-quality digital media programming/apps through parent-child co-use, and daily screen time for children 2-5 years of age should be limited to 1 hour (Tezol et al., 2022). The time spent by children using media will be measured using a questionnaire from Martzog & Suggate (2022). In this study, the use of media gadgets among children who are between 4-12 years will be studied.

### **Children:**

Children are a person who is under 18 years old (UNICEF, 2022). Berk (2012), stated that the prenatal period lasts from conception to birth, infancy and toddlerhood from birth to two years, early childhood from two to six years, middle childhood from six to eleven years, and adolescence from eleven to eighteen years. In this study, children in the range of 4-12 years old will be subjects.

**Media usage:**

Time spent using digital devices such as television, computers, gaming consoles, smartphones, and tablets (Martzog & Suggate, 2022). In this study, researchers will assess what is the preferred media gadgets by children and how much of them spend their time with it by using questionnaire by Martzog and Suggate.

**Parents influence:**

Parents provide a secure foundation for their children's development and influence their children's behaviors and attitudes (Yusuf et al., 2014). In this study, the parents influence will be measured by using a questionnaire from (Gruchel et al., 2022). This questionnaire will assess parents role construction, self-efficacy and parents' perceived parental instruction.

## **1.7 Significance of Study**

The study investigates the relationship between children's media usage and parental influence toward excessive media exposure among parents attending Hospital USM. The use of media by children under 18 is not recommended. In contrast, for those 18- 24 months, screen time was only recommended for one hour because these are important for their early childhood development. These findings were significant because they can help identify the variables that contributed to the increased media consumption among Malaysian children and the impact on children's development.

Meanwhile, this study intends to investigate the role of parents in children's media consumption. These will raise parents' understanding and awareness of the significance of limiting their children's media exposure, which can aid in better child development in cognitive, language, social, and emotional skills. It can also help reduce media addiction cases and other negative developmental effects such as poor sleep quality, academic problems, and a lack of socialization behavior. On the other hand, this study supplied information and findings to other researchers investigating related topics about excessive media exposure and its impacts on children's development from the parents' perspective.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The impact of media exposure on early childhood development has been debated. As a result, parents' involvement in their children's media use affects their children's development. So, in this chapter, we reviewed the current literature on children's media usage and parents' influence on excessive media exposure on children among the public attending Hospital USM. This chapter also detailed the conceptual framework used in this study.

#### **2.2 Review of Literature**

##### **2.2.1 Media usage among children**

The spread of COVID-19 has resulted in the declaration of a global health emergency, requiring all citizens to remain vigilant to control the virus's spread and protect public health (Shutzman & Gershy, 2022). COVID-19 increased screen media use in children and adolescents (Werling et al., 2021). The increased media use negatively impacts children's functioning and development (Shutzman & Gershy, 2022). As a result of the closure of public areas, including schools, many children began to spend their entire days at home. These make digital media has become the primary way for children to connect with their peers, occupy themselves in the absence of outdoor activities, and engage in remote learning (Shutzman & Gershy, 2022).

##### **2.2.2 Benefit of media uses among children**

Smart mobile devices are widely used for communicating educational information and providing entertainment at home and school (Papadakis et al., 2019). Media exposure also provides opportunities for children to communicate, interact, play, and thus learn (Schwarzer



et al., 2021). A stable family environment is essential for the healthy development of adolescents (Qiu et al., 2022). This was because parents' preferences and beliefs about technology play a significant role in toddlers' and infants' use of technology. After all, they directly affect the quality and quantity of digital media available to them, particularly at home (Papadakis et al., 2019).

Mobile applications (apps) for young children have altered the digital media landscape for babies and toddlers. According to studies by Schwarzer et al. (2021), high-quality media content and parental co-viewing benefit young children's language and social-emotional outcomes. Smartphones have become a widely used medium for humans worldwide, thanks to the development of the internet and the popularisation of smartphones (Qiu et al., 2022), regarding their potential for promoting early academic skills, touchscreen devices, and interactive apps (Schwarzer et al., 2021).

The COVID-19 lockdown has also increased screen use by children and adolescents (Werling et al., 2021). So, how children use the internet is related to various purposes, which can be divided into entertainment, such as playing games; practical communication, such as email, and school-or-learning-related (Gruchel et al., 2022). Media use may be a useful coping strategy during the COVID-19 pandemic and a possible way to stay socially connected with peers (Werling et al., 2021). As a result, parental solid control is essential for controlling children's screen time. This is since parents' interactions with their children promote academic success by implementing activities such as checking or monitoring homework or providing educational enrichment at home (Gruchel et al., 2022).

### **2.2.3 Downside of media usage**

Excessive media use during childhood has been linked to several negative developmental outcomes, including poor sleep quality, academic difficulty, attention deficit-related behaviours, and decreased prosocial behaviour (Holmgren et al., 2022). Mobile devices nowadays are part of everyday families and ubiquitous in toddlers' and infants' lives and most young children, including those in disadvantaged households (Papadakis et al., 2019). This is because children are growing up with digital technologies every day, even from birth.

Despite the warnings and recommendations, children's screen time is increasing, with younger children engaging with digital devices, and excessive screen time is becoming a common and serious threat to child health. Excessive screen time is prevalent in high-income countries, ranging from 10% to 93.7%, and in middle-income countries, ranging from 21% to 98%. (Tezol et al., 2022). Excessive screen time has been linked to sedentary behaviours, lower quality of life, and impaired developmental, cognitive, physical, and psychosocial outcomes in children (Tezol et al., 2022). Young children's cognition and language outcomes are affected by high media consumption, with toddlers and children from low socio-economic status families being especially vulnerable (Schwarzer et al., 2021).

The greater level of screen time not only associated with poorer physical health and not only associated with poorer physical health and obesity but also with lower psychological well-being issues in school-aged children and adolescents and high media used by preschool-aged children is related to conduct problems, hyperactivity and inattention later in life (Schwarzer et al., 2021).

#### **2.2.4 Reasons of children's media usage**

The World Health Organization (WHO) and UNICEF have expressed concern about the impact of the COVID-19 lockdown on children and adolescents due to increased screen media use (Werling et al., 2021). This is due to school closures, social isolation, and fewer opportunities for stress management (Werling et al., 2021). However, how children use the internet is related to various purposes, which can be classified as entertainment-related, practical, and school- or learning-related (Gruchel et al., 2022). Because of the increased popularity of mobile applications (apps), infants and toddlers can easily engage with many apps for education or entertainment. As a result, installing apps has become an activity (Papadakis et al.).

Children nowadays have unrestricted internet access, which can harm them; thus, parents must play important roles in protecting their children online (Yusuf et al., 2014). Early childhood is when children reach important developmental milestones (Schwarzer et al., 2021). Screen time is not recommended for children under the age of 18 months. Still, children 18-24 months of age can be introduced to high-quality digital media programming/apps through parent-child co-use, and daily screen time for children 2-5 years of age should be limited to one hour (Tezol et al., 2022).

#### **2.2.5 The time children spend on media usage**

Children and adolescents are the most frequent internet users, so the internet remains an essential constant companion (Gruchel et al., 2022). According to The American Academy of Pediatrics (AAP, 2016), a maximum of 2 hours of digital media time for school-age children is generally recommended, along with consistent and family-specific limits for digital media time use (Shutzman & Gershky, 2022).

In Malaysia, more than 90% of children use the internet around Klang Valley via high-speed broadband or smartphone to easily access almost anywhere. From the percentage, Malaysian children spend an average of 19 hours per week on online-related activities (Yusuf et al., 2014).

For children aged 2 to 5, more than one hour of screen time per day is excessive (Tezol et al., 2022). According to Tezol et al. (2022), excessive screen time prevalence ranges from 10% to 93.7% in high-income countries and from 21% to 98% in middle-income countries. In a Japanese study, for example, the rate of watching television for 4 hours or more per day was 29.4% and 24.5% 18 months and 30 months, respectively. In contrast, the average daily screen time in American preschoolers was found to be 3.6 hours.

Children who watch television with their parents daily have a 1.84-fold increased risk of excessive television viewing (Wong et al., 2020). The negative consequences of digital media use were evaluated regarding usage time and dependency (Shutzman & Gershby, 2022). Wong et al. (2020) discovered that children from lower socio-economic families in Hong Kong are more likely to overuse electronic devices. In contrast, children from underprivileged families in Western countries reported more screen time. Parental screen time appears to be a determinant of child behavioral problems in these families (Wong et al., 2020).

#### **2.2.6 Parents' Involvement in children's internet uses**

Parents and guardians in Malaysia have varying reactions to their children's online activities and behaviors with four out of ten parents knowing what their children are doing and what they are accessing during their online time (Yusuf et al., 2014). Parents nowadays rarely follow the recommendations for children's screen time (Shin et al., 2021). Parents' engagement can be defined as parent interaction with their children to promote academic success through activities such as checking or monitoring homework or providing educational enrichment

activities at home, as well as the significant role for children's development, achievement, and academic performance in school (Gruchel et al., 2022).

Parental media use has been shown to disrupt parent-child interaction, with parents reacting to their children more slowly, less attentively, and passively (Schwarzer et al., 2021). The parents' heavy use of media, including social media, video games, and television, is also linked to problematic media use in their children's lives (Holmgren et al., 2022). Screen media use is likely to provide parents with time to cope with parenting stress by occupying their children with media content, potentially lowering the demands of parenting (Shin et al., 2021).

Because it is the family's responsibility to provide a favorable environment, adequate stimuli, and learning material, the family environment is an important predictor of child development (Nobre et al., 2020). Parent-child interaction can explain 28.1% of the effect of screen time on total difficulties and 58.6% of the effect on prosocial behavior problems, implying that excessive media exposure may have the greatest effect on parent-child interaction, which is a crucial risk factor for child psychosocial problems (Zhao et al., 2018).

### **2.2.7 Association between reason media usage among children parental influence**

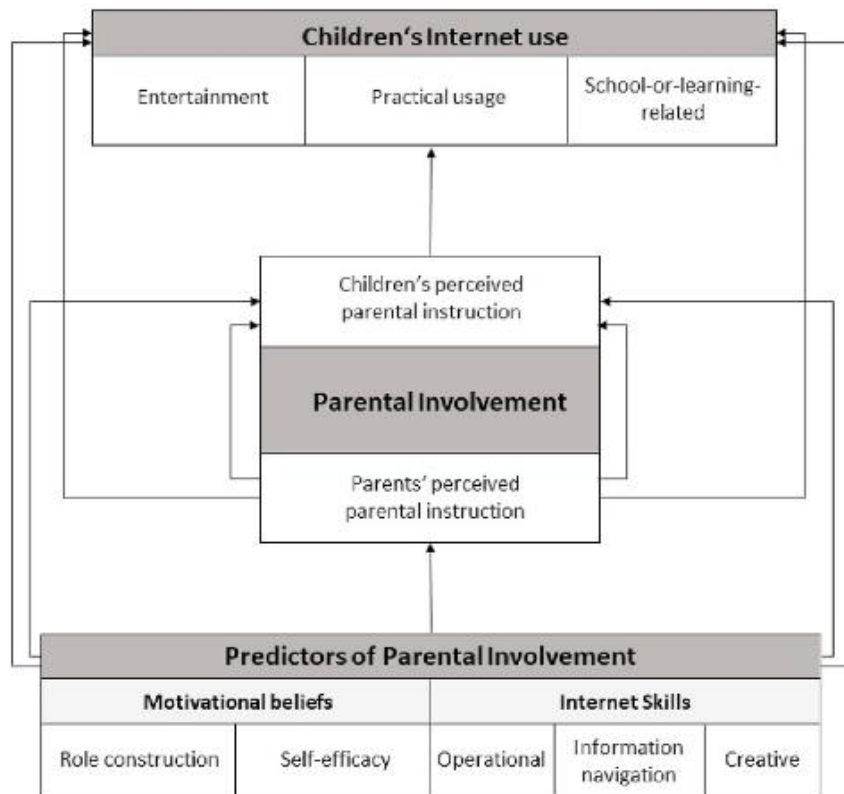
Parenting stress has been linked to children's screen use, highlighting the importance of family contexts in parental decision-making for child screen use (Shin et al., 2021). This is because parental beliefs, opinions, and attitudes, as well as personal app use, are related to children's use of mobile devices, particularly for noticeably young children, and parents' perceptions and attitudes toward technology positively or negatively influence child behaviors regarding screen media use (Papadakis et al., 2019).

According to Zhao et al. (2018), risk factors for excessive screen time included older age, boys from lower socio-economic families, parental divorce, siblings, and/or the father as a primary caregiver. On the other hand, parental income was reported to be inversely related to

increased screen time, while contradictory findings of positive, negative, and no associations between family income and young children's mobile screen media use were reported (Tezol et al., 2022). Excessive media use can be attributed to larger family sizes and sibling factors, which may lead to household screen use exposure (Tezol et al., 2022).

### **2.3 Theoretical and Conceptual Framework of the Study**

According to the literature above, excessive media exposure negatively impacts child development, particularly in young children. As a result, prevention measures or productive steps must be implemented as soon as possible, particularly by parents, to prevent excessive media exposure to their children. Parental supervision may reduce the risk of pathological internet use (Gong et al., 2022). It has been shown that parental-child interaction and influence on media usage are associated with their children's media usage and, thus, with their development.

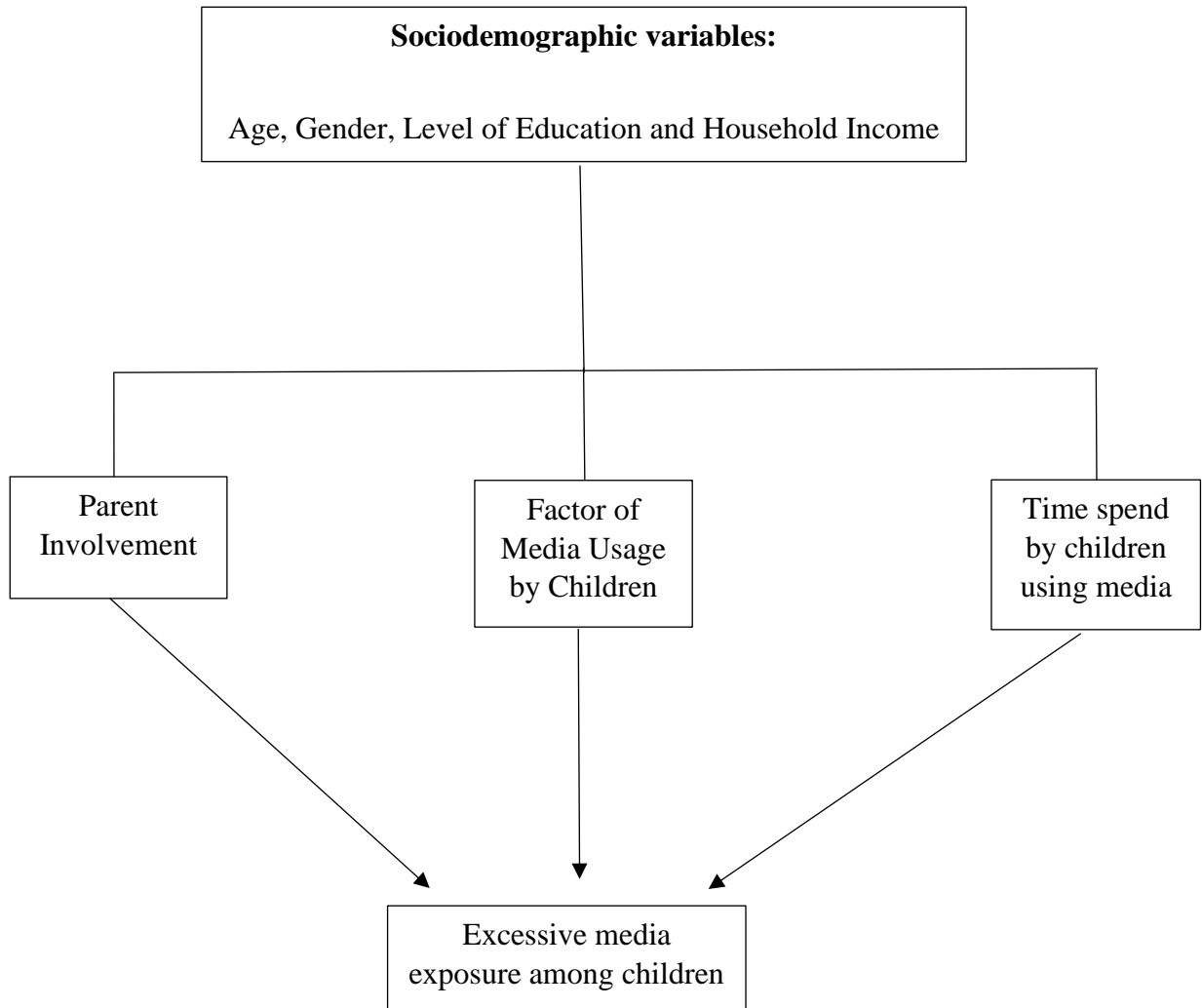


**Figure 2:** Parents Involvement Model adopted from Gruchel et al., (2022)

The Parents Involvement Model was one theoretical approach to understanding parental influence (PIM). The model was deemed suitable for and chosen as the theoretical framework for this study. Hoover-Dempsey and Sandler, 2005, adopt this model (Eereka et al., 2022). When considering predictors for home-based involvement on the first level, this model focused on parent-related procedural and modifiable aspects: parents' motivational beliefs and self-perceived internet skills. Aside from that, parental instruction is an active form of parental assistance with the child's tasks due to its impact as an important predictor of children's development and the outcome variable. In this context, parental instruction is defined as parents' support in their children's internet use, such as direct assistance or guidance, such as assisting with problems when children ask for assistance or illustrating ideals about what children can do on the internet.

The conceptual framework in this study described how selected socio-demographic characteristics such as age, gender, level of education, and household income of media excessive exposure to children's development. When parents understand the impact of excessive media exposure on their child's development, problems related to cognitive, emotional, and social development can be reduced and parent-child interaction can be improved. In this study, respondents completed a self-administered questionnaire to assess the factors associated with child media use, parental involvement, and parent-child interaction to determine the impact of excessive media on child development.





**Figure 3:** Conceptual Framework of the study

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter will explain the cross-sectional research design approach and the rationale for supporting the research methodology chosen. This chapter will cover the study population and setting, sampling plan, sample size estimation, participant selection criteria, instrumentation, variables, and data collection plan in greater detail. The last section described the data analysis method, ethical considerations, and expected research results.

#### **3.2 Research Design**

The study used a cross-sectional study design.

#### **3.3 Study Location**

This study conducted at all areas of the Hospital Universiti Sains Malaysia (Hospital USM), Kelantan, which included the outpatient pharmacy, outpatient clinic, café around Hospital USM (Gloria Jeans, Kopitiam, Koperasi Hospital USM(Ko-op), red square and Café Harmoni.

#### **3.4 Research duration**

The duration of this study started from October 2022 until August 2023.

#### **3.5 Research Population**

This study was done among the public attending Hospital USM during the data collecting period and meets the inclusion and exclusion criteria.

### 3.6 Subject Criteria

Inclusion Criteria	Exclusion Criteria
1. The parents must have a child around 4-12 years old.	1. The children have a mental disability
2. Able to understand and respond in Malay or English language	2. Children being admitted to Hospital USM.
3. Have media gadgets such as smartphones, television, laptop, computer, television and tablet.	

### 3.7 Sampling Plan

#### 3.7.1 Sampling Size Estimation

The sample size was estimated using single proportion formula on the first and second objectives taken based on a previous study conducted by (Wong et al., 2020).

$$n = \left[ \frac{z}{\Delta} \right]^2 p(1-p)$$

Where,

n = sample size

$\rho$  = Anticipated population proportion

z = value of normal distribution = 1.96

$\Delta$  = Precision = 0.0

Meanwhile, the sample size is calculated for the objective third using the Coefficient Correlation formula based on studies conducted by (Matthes et al., 2021).

$$n = [(Z\alpha + Z\beta)/C]^2 + 3$$

Where,

n = Sample size

$$Z\alpha = 0.05$$

$$Z\beta = 0.20$$

$$C = 0.5 * \ln[(1+r)/(1-r)]$$

**Table 1: Calculation for sample size**

	Type of Formula	Estimate proportion	N	Drop out 20%
Objective 1: To identify the reason associated with children's increased use of media usage	Single Proportion formula	<b>P = 0.047</b> Refer to the factor associated with increased child media used (Wong et al., 2020).	69	83
Objective 2: To determine the parenteral involvement in their children's media usage	Single Proportion Formula	<b>P = 0.04</b> Refer to parental involvement in their children's media usage (Matthes et al., 2021).	59	71

Objective 3: To determine the relationship between parental influence and children's media usage.	Coefficient correlation formula	<b>r = 0.21</b> Refer to the association between parental influence and children's media usage (Matthes et al., 2021)	176	<b>211</b>
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In conclusion, based on the calculations above, the minimum sample size required to complete analyses of all objectives was 176 respondents. With a 20% dropout rate, the total number of participants needed to be recruited was 211.

### 3.7.2 Sampling Method

This study used convenience sampling to collect data in Hospital Universiti Sains Malaysia (Hospital USM), Kelantan, which included the outpatient pharmacy, café around Hospital USM (Gloria Jeans, Kopitiam, Koperasi Hospital USM(Ko-op), red square and Café Harmoni.

## 3.8 Research Instrument

### 3.8.1 Questionnaire

Data was collected using a self-administered questionnaire divided into four sections A, B, C, and D. This questionnaire was adapted from Martzog and Suggate (2022) for parts A, B, and C. While from Gruchel et al. (2022) for part D, who were permitted to use the instrument in this study (Appendix B).

Part A, about socio-demographic data, included four questions about age, gender, child relationship, level of education, and household income. For a level of education, the respondent was asked to select the highest educational attainment from a list of options. In the case of household income, the respondent must select one of the options.

Part B, the reason for children's media. The questions were " "reason uses the respective medium." The respondent must determine whether their children use the media in these three components: entertainment, learning, and communication. The respondent must rate all these components by using the Linkert scale that has been provided, which is "none", "sometimes," "often," and "very often."

Part C assesses the time spent by children using media. The question was "How much time does your child usually spend with the following media during the week" and "How much time does your child spends with the following media during the weekend. For time spent on media by children on weekday, the respondent must choose the time that has been given which are "none," "up to 30 minutes", " up to 1 hour", "up to 2 hours", "up to 3 hours" and "more than 3 hours" on the respective medium. While for question for times spends by children weekend, they must determine the time spend of their using the respective medium whether "none," "up to 30 minutes". "Until 1 hour", "until 2 hours", "to 3 hours", 'until 4 hours" or "more than 5 hours".

Part D discusses parental involvement in their children's media use. This section contains 20 questions covering seven topics: 'parents' role construction' (2), 'parents' self-efficacy' (3), 'parents' perceived parental instruction' (4), and 'parents' involvement in children's media use in entertainment (4), practical (2) and school-or-learning related (5). These statements had a 5-Linkert-scale which 1 is not responsible while five is very accountable. The original questionnaire has 35 questions, but only 20 were selected for this study.