The Influence of Parenting Patterns on Smartphone Addiction Among Children of Indonesian Migrant Workers in Johor Bahru, Malaysia

Nasharuddin[1*], Sandi Pratama[2], Tri Ramadhani[3], Yanti Ramdaniah[4]

[1,4]Primary School Teacher Education Program, Faculty of Education, Muhammadiyah University of Makassar, Indonesia

[2]Islamic Education Counseling and Guidance Program, Faculty of Islamic Studies, Muhammadiyah University of Makassar, Indonesia

[3]Primary School Sekolah Indoneisa Johor Bahru, Malaysia

ABSTRACT: In the era of globalization and digital technology development, smartphone usage has become an integral part of daily life, including in the context of child-rearing. This research aims to explore the influence of smartphone use on parenting patterns and smartphone addiction levels among Indonesian migrant workers' children at the Indonesian Elementary School in Johor Bahru, Malaysia. The study involved 76 parents and 3 teachers as respondents. Data was collected through interviews and questionnaires, then analyzed using descriptive and inferential methods. The results show that the majority of children use smartphones with frequencies of very often (19%), often (7%), quite often (37%), and rarely (37%), but parental supervision of smartphone use still includes some families in the categories of not supervising (5%), moderately supervising (18%), often supervising (7%), and very closely supervising (70%). The level of parental awareness about the importance of monitoring also varies, with most still lacking awareness of the negative impacts of uncontrolled smartphone use. Pearson correlation analysis shows a significant relationship between effective parenting patterns, such as monitoring and providing alternative activities, with the frequency of smartphone use by children. These findings underscore the importance of a balanced and proactive parenting approach in managing smartphone use to prevent addiction and other negative impacts on children.

KEYWORD: Parenting patterns, smartphone addiction, digital technology impact, parental supervision, migrant challenges

I. INTRODUCTION

In the current era of globalization, digital technology has permeated every aspect of life, transforming how individuals interact, communicate, and manage daily activities. Smartphones, in particular, have become indispensable tools, influencing various aspects of human behavior, including child-rearing practices. As technology advances, parents increasingly face the challenge of integrating digital devices into their daily routines while ensuring healthy child development. This dynamic is particularly pronounced among migrant workers, who often face unique socio-economic pressures and cultural adjustments. Indonesian migrant workers in Malaysia represent a significant demographic in this context, facing complexities in maintaining family bonds and managing digital consumption from afar.

Research findings from five Southeast Asian countries, including Thailand, the Philippines, Singapore, Malaysia, and Indonesia, show that 67% of children aged 3-8 have used their parents' smartphones, 18% use family-owned devices, and 14% already own their own smartphones (Unantenne, 2014). A similar trend is observed in England, where 21% of children aged 3-4 have personal smartphones (Straker et al, 2014). In the United States, 35% of children aged 0-8 use smartphones, with an average usage of 14.2 hours per week, especially among children under 2 years old, coinciding with an increase in smartphone ownership from 55% in 2011 to 98% in 2017 (Rideout, 2017). Meanwhile, in Australia, children aged 2-5 spend 25.9 hours per week using smartphones (Straker et al, 2014). High-intensity and long-term use is significantly associated with and risks various negative effects, especially for children, particularly on mental, psychological, behavioral, and physical development when addiction occurs (Tariq et al, 2019). Kim et al. (2018) reported that 17.9% of 1.63 million adolescents in Korea experience smartphone addiction, and more than 24% of children are diagnosed with internet addiction requiring hospital treatment. In Indonesia, 48 adolescent and child patients were treated at Dr. Soeharto Herdjan Mental Hospital in Jakarta in 2016 for smartphone addiction, hyperactivity, and learning disorders (Selviani, 2019). According to a 2020 survey by the Indonesian Child Protection Commission (KPAI), approximately 71.3% of

The Influence of Parenting Patterns on Smartphone Addiction Among Children of Indonesian Migrant Workers in Johor Bahru, Malaysia

school-age children own gadgets and/or play with gadgets for a considerable amount of time daily, with 55% of them spending time playing online and offline games on their phones.

Indonesian Migrant Workers (PMI) working in Malaysia, according to 2022 data from the Ministry of Foreign Affairs, number 1.67 million, equivalent to 48.13% of the total Indonesian migrant workers across various countries. Migrant workers in Malaysia generally work in informal sectors such as oil palm plantations, rubber plantations, and factories. Meanwhile, migrant workers in Johor Bahru work in construction sectors and as domestic helpers with minimum wages. Migrant workers typically have only completed junior high school education, with some being elementary school graduates or even dropouts. This educational background is also common among parents of students at the Indonesian School in Johor Bahru (SIJB), with the majority having only completed elementary school before becoming migrant workers in Malaysia. The predominantly low educational background of PMI directly correlates with parenting patterns towards children, especially in the digital era.

The rapid proliferation of smartphones has raised concerns about their impact on children, particularly regarding addiction and its implications for development and behavior. Parents, especially those working abroad, struggle to monitor and regulate their children's smartphone use. Indonesian migrant workers in Johor Bahru, Malaysia, often experience limitations in direct supervision and face additional pressures related to their migrant status. This scenario highlights the urgent need to understand the extent of smartphone addiction among their children and the parenting strategies employed to mitigate negative impacts. Previous research has highlighted the dual nature of technology, offering both benefits and challenges in the context of parenting (Lim, 2016; Walsh et al., 2020). Extensive literature has explored various aspects of digital parenting, emphasizing the need for a balanced approach that harnesses the benefits of technology while minimizing its risks. Studies have identified effective parenting strategies that include setting clear boundaries, promoting healthy digital habits, and encouraging open communication about online activities (Livingstone & Blum-Ross, 2020). Furthermore, research indicates that parental involvement and supervision are crucial in reducing the risk of smartphone addiction in children (Hawi & Samaha, 2016). These findings suggest that proactive parenting can play a significant role in shaping children's digital behaviors and preventing negative consequences associated with excessive smartphone use.

While existing literature provides valuable insights into digital parenting practices, there remains a dearth of research focusing on the specific experiences of migrant workers and the unique challenges they face. The context of Indonesian migrant workers in Malaysia presents a distinct set of circumstances that influence parenting practices and children's digital behaviors. Factors such as long working hours, limited physical presence, and cultural differences necessitate tailored strategies for managing smartphone use among children. Additionally, existing studies have largely focused on the general population, with little attention given to the nuanced experiences of migrant families (Kabayadi & Zulkarnain, 2019). This gap underscores the need for research that explores the intersection of migration, parenting, and digital technology, providing a comprehensive understanding of how these elements interact and influence each other.

This research aims to address this gap by examining the relationship between parenting patterns and smartphone addiction among children of Indonesian migrant workers in Johor Bahru, Malaysia. By focusing on this specific and underrepresented demographic, the study offers new insights into the challenges and strategies of digital parenting within the context of migration. Additionally, this research aims to test the hypothesis that there is a positive correlation between effective parenting patterns and lower levels of smartphone addiction in children. This hypothesis is based on the understanding that effective parenting, characterized by clear guidelines, supervision, and communication, can mitigate the risks associated with excessive smartphone use (Zhou & Lee, 2017). By exploring these dimensions, this study contributes to the broader discourse on digital parenting, offering practical recommendations for migrant families and informing policy interventions aimed at supporting children's well-being in the digital era. The findings are expected to provide a foundation for developing targeted strategies that address the specific needs and challenges of Indonesian migrant workers, thereby enhancing their ability to foster healthy digital habits among their children. Ultimately, this research aims to bridge the gap between general digital parenting literature and the unique experiences of migrant families, providing a more nuanced understanding of how migration influences parenting practices and children's digital behaviors.

II. METHOD

This research was conducted on July 21-22, 2023, at the Elementary School of Sekolah Indonesia Johor Bahru, Malaysia. This location was chosen due to its relevance and direct connection to the Indonesian migrant worker population in Malaysia, as well as its role as a central point for migrant workers' children attending school abroad. The school provides an appropriate environment to study the interaction between digital parenting and smartphone addiction among migrant children.

Respondents in this study consisted of parents of students and teachers at the Elementary School of Sekolah Indonesia Johor Bahru. The selection of respondents was conducted using random sampling technique to ensure fair representation and avoid bias. The total number of respondents was 76 parents, representing about 80% of the total elementary school students from Sekolah Indonesia Johor Bahru, and 3 teachers. The parent respondents were those with children enrolled in this school, while the teacher

The Influence of Parenting Patterns on Smartphone Addiction Among Children of Indonesian Migrant Workers in Johor Bahru, Malaysia

respondents were those who teach and interact directly with the children at the school. This number of respondents was chosen to obtain sufficiently representative data on parenting patterns and levels of smartphone addiction among children.

Data collection techniques included interviews and questionnaires. Interviews were conducted to obtain in-depth and qualitative information about parenting patterns and teachers' and parents' perceptions of children's smartphone use. Interviews were conducted directly with respondents consisting of teachers and randomly selected parents, while questionnaires were distributed to 76 parents to collect quantitative data that could be statistically processed. The questionnaire was designed using a Likert scale to measure various aspects related to smartphone use and parenting patterns. Questions in both interviews and questionnaires covered topics related to the frequency and use of smartphones, types of content and applications frequently used, parental supervision, the impact of smartphone use on children's behavior and academic performance, as well as efforts made by parents to reduce the risk of addiction.

Data Analysis was conducted by analyzing the collected data from interviews and questionnaires using qualitative and quantitative methods. Qualitative analysis was performed on interview data to identify main themes and parenting patterns that emerged from conversations with teachers and parents. This process involved transcription of interviews, coding, and data interpretation to discover insights relevant to the research objectives. Quantitative data from questionnaires were analyzed using descriptive and inferential statistics. Descriptive statistics were used to describe the frequency distribution and percentages of various variables studied, such as frequency of smartphone use, types of content accessed, and parenting patterns. Inferential analysis, such as correlation tests, was used to test the research hypotheses.

III. RESULT AND DISCUSSION

In this study, data obtained from respondents provided deep insights into the frequency of smartphone use by children of Indonesian migrant workers in Johor Bahru, Malaysia, as well as the level of monitoring conducted by parents. Based on the descriptive analysis results, as shown in Figure 1(a), the data revealed that 19% of parents gave smartphones to their children very frequently, while 37% did so quite frequently, 7% frequently, and 37% infrequently. This indicates a significant variation in the patterns of smartphone provision among parents. This suggests that smartphones are an integral part of children's daily lives, potentially influencing various aspects of their development. However, data on the frequency of parental monitoring of smartphone use, as displayed in Figure 1(b), shows an imbalance between use and monitoring. Although the majority of parents (70%) monitored their children's smartphone use very frequently, 18% quite frequently, 7% frequently, with 5% not monitoring at all. This high level of supervision reflects parental awareness of the potential negative impacts of uncontrolled smartphone use. This imbalance indicates a high potential risk of smartphone addiction in children, given the lack of adequate supervision from parents.
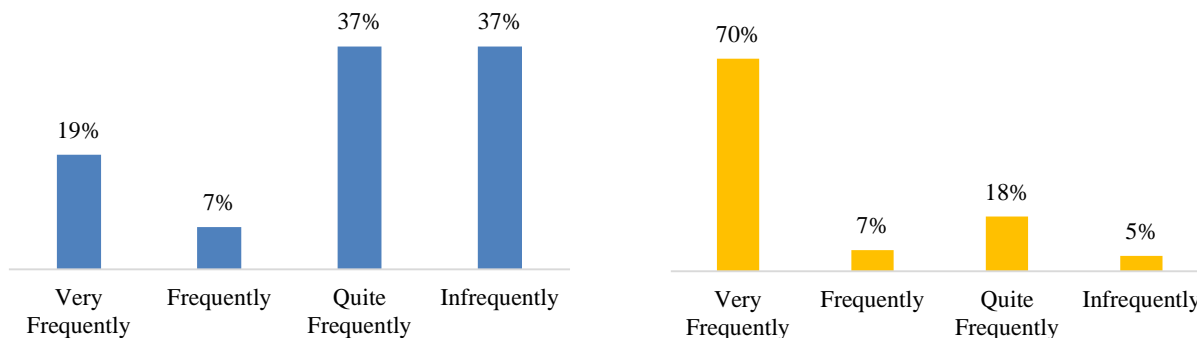

Figure 1. (a) Frequency of smartphone use and (b) Frequency of smartphone use supervision

Parental awareness regarding the importance of monitoring their children's smartphone use was also analyzed in this study. Data from Figure 2 shows that most parents (83%) were highly aware of the importance of supervising their children's smartphone use, while 5% were aware, 5% quite aware, and 7% not aware. This demonstrates that the majority of parents have a high level of awareness regarding the importance of supervision. This reflects a gap in parental understanding and awareness about the negative impacts of uncontrolled smartphone use. This low awareness can be attributed to several factors, including a lack of knowledge about the potential dangers of excessive smartphone use and ignorance about effective monitoring strategies. In the context of migrant workers, factors such as long working hours and physical limitations in supervising children may also contribute to this low level of awareness.
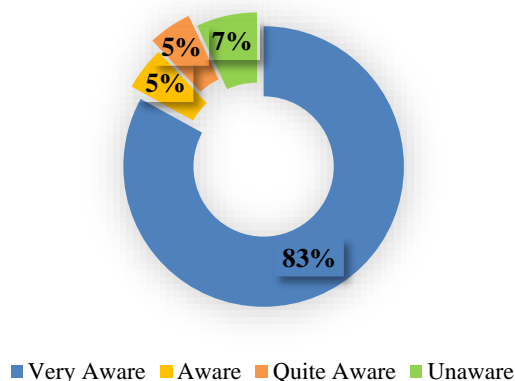
The Influence of Parenting Patterns on Smartphone Addiction Among Children of Indonesian Migrant Workers in Johor Bahru, Malaysia

Figure 2. Level of parental concern in supervising smartphone use

The level of parental attention to content accessed by children through smartphones is an important factor in reducing the risk of addiction and other negative impacts. Based on the data in Figure 3, the majority of parents show a high level of attention to the content accessed by their children, with 63% paying very close attention and 14% paying attention. However, there is also a small portion of parents who pay less attention (9% pay moderate attention and 14% do not pay attention). This high level of attention demonstrates awareness among some parents about the importance of monitoring the digital content consumed by their children. However, the existence of parents who pay less attention indicates that there is still a need to increase awareness and understanding about the importance of monitoring digital content. Factors such as parental education, access to information, and support from schools and communities can play important roles in increasing parental attention to the content accessed by their children.
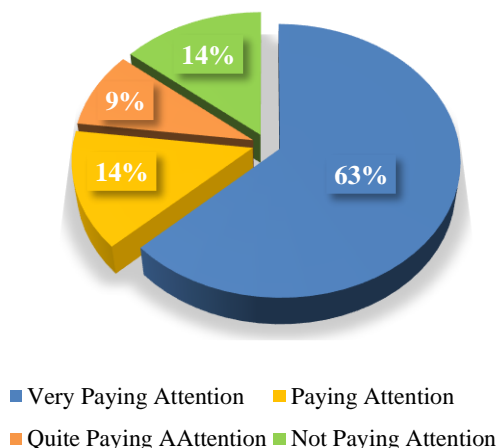

Figure 3. Level of parental attention to accessed content

One effective strategy in reducing children's dependence on smartphones is providing attractive alternative activities that do not involve these devices. Data from Figure 4 shows that most parents very frequently provide alternative activities (65%) and frequently (14%). However, there are also some who provide alternative activities quite frequently (7%) and rarely (14%). The provision of adequate alternative activities indicates that some parents are trying to divert children's attention from smartphones to more beneficial and constructive activities. However, the quite frequent and rare frequencies in providing alternative activities show that there is still room for improvement in this practice. Parents need to be given adequate guidance and resources to identify and implement alternative activities that are attractive to children, such as sports, arts, and social activities that can develop their skills holistically.
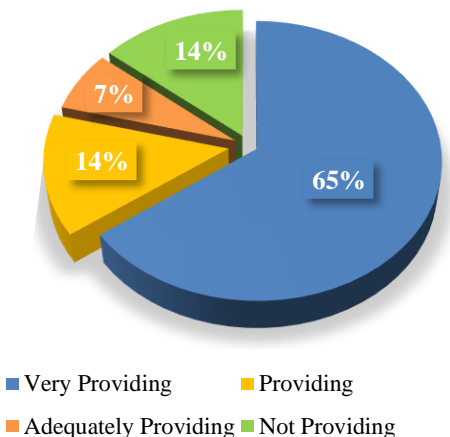
The Influence of Parenting Patterns on Smartphone Addiction Among Children of Indonesian Migrant Workers in Johor Bahru, Malaysia

Figure 4. Level of provision of other activities without involving smartphones

Based on the results of inferential analysis in this context, effective parenting patterns were measured through the frequency of monitoring smartphone use and providing alternative activities, while smartphone addiction was measured through the frequency of smartphone use. Furthermore, in testing the hypothesis, Pearson correlation test was used to examine the relationship between these variables. The results of the Pearson correlation analysis show that the correlation between the frequency of parental monitoring of smartphone use and the frequency of smartphone use by children is 99%, and the correlation between the frequency of providing alternative activities without involving smartphones and the frequency of smartphone use by children is 98%. The very high correlation between these two variables indicates that there is a very strong relationship between effective parenting patterns (in this case, monitoring and providing alternative activities) and the frequency of smartphone use by children. Thus, the alternative hypothesis (H1) is accepted, which means there is a positive relationship between effective parenting patterns and smartphone addiction in children. Therefore, the descriptive analysis results show a wide variation in smartphone use and monitoring, as well as parental awareness and attention to their children's digital activities. The inferential analysis indicates that there is a strong positive relationship between effective parenting patterns and smartphone addiction in children.

The results of this study have several important implications for parents, educators, and policymakers. First, there is an urgent need to increase parental awareness and knowledge about the impact of excessive smartphone use on children. Educational campaigns and training programs for parents can help them understand the importance of supervision and effective strategies for managing their children's smartphone use. Second, schools can play an important role in supporting parents by providing information and resources about healthy technology use. Educational programs that teach children about responsible smartphone use and the negative impacts of addiction can also be implemented in schools. Third, policymakers need to consider developing policies and regulations that support healthy digital parenting. This could include initiatives to reduce long working hours for migrant workers so they can have more time to supervise their children, as well as the development of infrastructure that supports access to beneficial alternative activities for children. Based on various studies regarding the positive and negative impacts of smartphone use, several important considerations for parents are summarized in Table 1.

Table 1. Age limits and the impact of smartphone use

Age (Years)	Smartphone Use (per day)
0-2	No exposure to smartphones
>2-5	Maximum of 1 hour
>5-17	Maximum of 2 hours
Teenagers	Maximum of 4 hours

For children aged 0-2 years, it is recommended to avoid exposure to smartphones altogether. If unavoidable, a tolerance is allowed for children aged 1.5 years, provided they are supervised by a parent. For children aged >2-5 years, smartphone use is permissible with a strict limit of no more than 1 hour per day, under parental supervision, to ensure that after this time, children engage in physical play with real objects that stimulate fine and gross motor skills. For children aged >5-17 years, smartphone use is allowed with agreed-upon rules and should not exceed 2 hours per day, with exceptions only for tasks requiring internet access. Finally, teenagers may own and use smartphones following agreed-upon rules and should not exceed 4 hours if the task requires internet

access. For recreational use, social media, or gaming, it is recommended that children and adults limit use to no more than 2 hours per day, as this is sufficient to meet entertainment needs amidst their daily activities.

Referring to the Ministry of Education and Culture of the Republic of Indonesia on the Series of Parental Education: Educating Children in the Digital Era, 1st Edition (July 2016), several parenting patterns can be applied by parents in educating and accompanying children using smartphones as a step in effective parenting based on age range:

1. If unable to prevent children aged 1-3 years due to various reasons, some activities that can be done together are: (a) Utilizing digital media in audio form to increase vocabulary, numbers, songs, and religious messages, (b) Avoiding digital media programs containing elements of violence, sexuality, and frightening content such as ghosts, (c) Avoiding programs that use inappropriate and aggressive language as children can remember and imitate, and (d) Avoiding the use of digital media and devices as a substitute for parental roles.

2. For ages 4-6 years, in addition to those mentioned in point one above: (a) Having mutual agreements that are understood and can be implemented by children, monitoring implementation, being consistent in applying agreed consequences and appreciation, (b) Utilizing school readiness programs with basic knowledge, (c) Utilizing programs/applications that teach friendship behavior, respecting differences, and religious values, (d) Guiding children to recognize facts and fantasy, and (e) Improving skills in distinguishing between good and bad.

3. For ages 7-12 years: (a) Utilizing programs/videos that show various positive experiences that stimulate imagination, (b) Discussing good and bad behaviors of characters in media familiar to children, (c) Discussing various roles of males and females and the differences between them, (d) Avoiding digital media programs that display aggressiveness, antisocial, and other negative behaviors including body part jokes, and (e) Providing understanding through viewed media related to healthy lifestyle patterns in terms of social interactions, food, and lifestyle.

4. For ages 13-18 years: (a) Introducing diversity of race, ethnicity, religion, and economic situations, (b) Encouraging children to think critically about information displays by asking questions like "What do you find most interesting about this photo/video?" or "What's your opinion on this photo/video?", (c) Utilizing various media writings to train children to think critically and guide them to express their thoughts in discussions or writings, (d) Encouraging children to further explore their interests and talents, (e) Instilling positive communication ethics in social media, and (f) Paying attention to privacy settings in digital media, especially social media.

Based on these points, parents can apply parenting patterns that are wise, positive, effective, constructive, and transformative. The main parenting pattern is effective parenting (Santosa, 2015). Parenting is closely related to mentality and character, especially of parents who must continuously practice to become role models and easily applied in educating children. This is because parental characteristics such as personality, patience, intelligence, attitude, education level, and maturity have a very large influence on the applied parenting pattern. One parenting pattern that can be applied is democratic parenting by providing opportunities for children through discussion and agreement in every rule applied in the family environment (Rahmat, 2018).

IV. CONCLUSION

This study demonstrates that smartphone use among children of migrant workers in Johor Bahru is very frequent, yet parental monitoring varies and is often inadequate, which may increase the risk of smartphone addiction in children. Although most parents are aware of the importance of supervision and strive to provide alternative activities without smartphones, there are still gaps in understanding and practicing effective parenting. The high level of attention to digital content and awareness of the negative impacts of uncontrolled smartphone use reflects parents' efforts to reduce addiction risks. However, factors such as long working hours and lack of knowledge about effective monitoring strategies remain challenges. Therefore, enhanced education and support for parents are crucial to address the negative influence of smartphone use on parenting patterns and child development in promoting healthy digital parenting.

REFERENCES

1) Hawi, N. S., & Samaha, M. (2016). Hubungan antara kecanduan media sosial, harga diri, dan kepuasan hidup pada mahasiswa universitas. *Social Science Computer Review*, 34(3), 280-294.

2) Kabayadi, A. S., & Zulkarnain, A. (2019). Pola komunikasi keluarga dan kecanduan smartphone anak: Peran mediasi mediasi orang tua dalam keluarga pekerja migran Indonesia. *Journal of Child and Family Studies*, 28(3), 799-809.

3) Kementerian Pendidikan dan Kebudayaan Republik Indonesia tentang *Seri Pendidikan Orang Tua: Mendidik Anak di Era Digital, Cet. I*. Jakarta:Kementerian Pendidikan dan Kebudayaan, Juli 2016.

4) Lim, S. S. (2016). Melalui kaca tablet: Pengasuhan transenden di era media seluler dan komputasi awan. Journal of Children and Media, 10(1), 21-29.

5) Livingstone, S., & Blum-Ross, A. (2020). Mengasuh untuk Masa Depan Digital: Bagaimana harapan dan ketakutan tentang teknologi membentuk kehidupan anak-anak. Oxford University Press.

6) Rahmat, S, T. (2019). Pola Asuh yang Efektif untuk Mendidik Anak di Era Digital. Jurnal Pendidikan dan Kebudayaan Missio, Volume 10, No 2, Hal 137-273

7) Rideout, V.The commonsense census: media use by kids age zero to eight. San Francisco (CA): Common Sense Media; 2017

8) Santosa, T. Elizabeth. 2015.Raising Children in Digital Era – Pola Asuh Efektif untuk Anak di Era Digital. Jakarta: PT Gramedia

9) Selviani, W., & Solicha. (2019). Prediktor adiksi smartphone pada remaja di DKI Jakarta. Universitas Islam Negeri Syarif Hidayatullah, Jakarta

10) Straker, L., Pollock, C., Piek, J., Abbott, R., Skoss, R., & Coleman, J. (2014). Mobile Touch Screen Device Use and Musculoskeletal Symptoms in Adolescents. Applied Ergonomics, 45(2), 370-375.

11) Tariq, Q., Kim, J., Ahmad, M., & Iqbal, R. (2019). The impact of smartphone addiction on children's mental, psychological, and physical health. *Journal of Behavioral Addictions*, 8(3), 437-445.

12) Unantenne N. Mobile device usage among young kids: a Southeast Asia study. Singapore: The Asian Parent and Samsung Kids Time; 2014

13) Walsh, J., White, K. M., & Young, R. M. (2020). Paradoks smartphone: Bagaimana peningkatan penggunaan smartphone menjadi solusi dan masalah bagi pengasuhan. *Parenting Science and Practice*, 20(1), 1-15.

14) Zhou, S., & Lee, K. (2017). Dampak penggunaan smartphone oleh orang tua pada interaksi orang tua-anak: Tinjauan kritis literatur. *Journal of Child and Family Studies*, 26(1), 158-167.