

Mothers' Perceptions of Toddler Gadget Use in Primary Care Settings : A Descriptive Phenomenological Study in Indonesia

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Abstract

Background: The rapid advancement of digital technology has increased toddlers exposure to gadget, making them an integral part of daily life. While gadgets may offer educational benefits when used appropriately, excessive and unsupervised use can negatively affect children's physical, cognitive, language, social, and emotional development. Mothers, as primary caregivers, play a crucial role in regulating toddlers' gadget use, guided by their perceptions and parenting practices.

Methods: This study employed a qualitative descriptive phenomenological design to explore mothers' perceptions of gadget use among toddlers in the working area of Banjarbaru Selatan Public Health Center. Twelve mothers with toddlers were selected using purposive sampling until data saturation was achieved. Data were collected through in-depth interviews and analyzed using Colaizzi's method, including familiarization with transcripts, identification of significant statements, formulation of meanings, theme clustering, comprehensive description, and participant validation to ensure trustworthiness.

Result:Five main themes emerged: mothers' responses to gadget use, reasons for providing gadgets, duration of gadget use, perceived impacts of gadget use, and strategies to divert children from gadgets. Mothers perceived gadgets both as helpful tools for calming and entertaining children and as potential sources of developmental risks. Gadget use was often driven by situational needs, such as parental busyness or limited caregiving support. Prolonged use was associated with behavioral changes, emotional dysregulation, and delayed language development, particularly when parental supervision was limited. Conversely, active parental involvement, content selection, and time regulation were perceived as protective factors. Mothers also reported various diversion strategies, including interactive play, outdoor activities, and the provision of alternative toys.

Conclusion: Gadget use among toddlers is increasingly unavoidable; however, its impact largely depends on maternal perceptions, supervision, and regulation practices. Strengthening mothers' awareness and caregiving strategies is essential to minimize negative effects and promote optimal toddler development.

Keywords:

Toddlers, Gadget Use, Mothers' Perceptions, Phenomenological Study

BACKGROUND

Technological development has advanced rapidly in recent years, particularly in the use of gadgets (1,2). Along with these developments, children's play activities involving gadgets have become increasingly difficult to separate from their daily lives. Gadgets are electronic devices designed with specific functions (3). They provide various features, such as communication media and applications that allow access to diverse sources of knowledge. Gadgets also offer applications such as games and YouTube. The wide range of features available on gadgets attracts users a cross groups, including parents and children (4,5). Global data show that children have widespread access to digital devices 90% having access to smartphones and 73% to laptops, indicating early and intensive exposure to technology. This condition suggests that even toddlers are increasingly familiar with gadget use in their daily lives (6).

As time passes, gadgets have become an inseparable part of children's play and daily routines. Data indicate that gadget use among early childhood populations continues to increase, with more than 25% of children owning a gadget before 8 and 93.52% among school-aged children (7). In Indonesia, the proportion of gadget users among early childhood populations is reported to be 33.44%, consisting of 25.5% of children aged 0–4 years and 52.76% of children aged 5–6 years. In Kalimantan, recent statistics show that 25.5% of children aged 0–4 years have used mobile phones (8). Gadget use among early childhood populations continues to rise, with more than 75% of children in both urban and rural areas using mobile phones. Based on data from Banjarbaru, this trend is evident as well. Excessive gadget use may affect children's physical and cognitive development, particularly during the critical age of 0–2 years, when brain development reaches approximately 60% of its total growth (9).

Gadget use among toddlers is a complex phenomenon with both positive and negative impacts. Mothers' perceptions play a crucial role in shaping children's gadget use patterns (10). Parental assistance and supervision are essential to ensure that gadget use provides educational benefits without disrupting children's social and emotional development (11). This study emphasizes the need for education and policies that support wise gadget use among toddlers (12).

Managing gadget use among toddlers requires a multidimensional approach involving parents as supervisors and role models, firm time restrictions, the provision of alternative educational and physical activities, open education for children, and support from health professionals as well as government policies. Through such comprehensive strategies, gadgets can be optimally utilized as learning tools without compromising children's growth, development, and well-being (13).

Inappropriate maternal parenting practices such as providing children with gadgets may interfere with child development, particularly language development, making it essential for mothers to limit gadget use. Gadgets may hinder the development of children's psychomotor abilities, as children who should be physically exploring their environment through play instead become preoccupied with gadgets. This condition may deprive children of opportunities to develop optimally across four developmental domains: language, social skills, fine motor skills, and gross motor skills (14). In addition to developmental aspects, excessive gadget use in children may also cause eye damage. A study examining the effects of permissive parenting (using gadgets) on eye damage in infancy found that permissive parenting involving gadget use contributed to eye damage during play and learning activities (15).

Many parents still believe that gadgets are safe and easily supervised media for children's play. However, it is important to recognize that the most sensitive period of child development occurs during toddlerhood, when information is easily absorbed. Children may imitate everything they see, which can form the foundation of their personality and cognitive development. Therefore, parents need to pay close attention to the content their children consume on gadget (12).

The negative impacts of gadget use among early childhood populations can be minimized by maximizing parental involvement in monitoring children, as parents are the closest caregivers and primary protectors. Parents are encouraged to accompany children and provide guidance and supervision when using gadgets so that children can use gadgets wisely (16). Mothers are the primary caregivers for children; therefore, it is essential that they have appropriate perceptions of their children's gadget use. Perception is the process of organizing and interpreting stimuli received by individuals and represents the final stage of observation that beginning with sensory processing (17). Appropriate maternal perceptions regarding gadget use can prevent children from experiencing negative consequences of excessive gadget exposure.

Several previous studies in Indonesia have examined parent's perceptions of children gadget use. For example, Indriyani, Sofia, and Anggraini (18) explored parents' perceptions of gadget use in early childhood and found that parents generally perceived gadgets as having more negative than positive impacts on children. More recently, Asmiah (19) investigated the perceptions of mothers of children addicted to gadgets in Pengambangan Village, Banjarmasin, revealing that maternal perceptions were influenced by cognitive, affective, and conative factors.

However, these studies primarily focused on general parental perceptions or mothers of children with gadget addiction and were conducted in community settings without specific attention to healthcare contexts. To date, there is a lack of research exploring mothers' perceptions of toddler gadget use in primary care settings, particularly using a descriptive phenomenological approach that captures mothers' lived experiences. This study is important because primary care settings are the first point of contact for child health services, and mothers' perceptions can directly influence guidance, supervision, and early interventions regarding to toddlers' gadget use. By addressing this gap, the present study provides context-specific insights that can inform health education and counseling strategies in primary healthcare services in Indonesia.

Although numerous studies globally have examined the prevalence, duration, and developmental impacts of gadget use among young children, limited attention has been given to mothers' lived experiences and subjective perceptions of gadget use in toddlers, particularly within specific sociocultural and healthcare contexts. Most existing studies predominantly employ quantitative approaches, resulting in a theoretical gap in understanding how mothers interpret, negotiate, and assign meaning to their toddlers' gadget use in everyday life. Therefore, a phenomenological approach is appropriate, as it enables an in-depth exploration of mothers' lived experiences, perceptions, and meanings regarding gadget use among toddlers, providing rich contextual insights that quantitative methods alone cannot capture.

To date, no studies have examined mothers' perceptions of gadget use among toddlers in the working area of Banjarbaru Selatan Public Health Center; therefore, the authors are interested in exploring mothers' perceptions of gadget use among toddlers in this area (14). Accordingly, the aim of this study was to explore mothers' perceptions of gadget use among toddlers in the working area of Banjarbaru Selatan Public Health Center using a descriptive phenomenological approach.

METHODS

This study employed a qualitative research design with a descriptive phenomenological approach to explore and understand mothers' lived experiences and subjective perceptions of gadget use among toddlers. A phenomenological approach was considered appropriate because mothers' perceptions are shaped by personal interpretations, meanings, and everyday experiences that cannot be adequately captured through quantitative methods. The study was grounded in a constructivist–interpretivist philosophical stance, which assumes that reality is socially constructed and understood through individuals' lived experiences and social interactions.

The study was conducted in the working area of Banjarbaru Selatan Public Health Center in April 2025. Participants were recruited using purposive sampling based on predefined inclusion criteria: mothers of toddlers, who could communicate effectively, provided informed consent, and were willing to share their experiences and perceptions regarding toddler gadget use. Mothers who experienced illness at the time of data collection were excluded. A total of 13 mothers were approached to participate in the study; one declined due to time constraints, and no participants dropped out after consenting. Data saturation was reached with 12 participants, as no new themes emerged during the final interviews.

In this qualitative study, the primary research instrument was the researcher. Data were collected through in-depth, face-to-face interviews guided by a semi-structured interview guide developed by the authors based on relevant literature and the study objectives. The interview guide consisted of open-ended questions and probing prompts to facilitate an in-depth exploration of mothers' perceptions and experiences. Prior to data collection, the interview guide was pilot-tested with one mother who met the inclusion criteria but was not included in the final analysis; minor revisions were made to improve question clarity and flow.

Examples of interview questions included: "Can you describe your experience in allowing your toddler to use gadgets?", "What are your perceptions of the benefits and risks of gadget use for your child?", and "How do you manage and supervise your toddler's gadget use in daily life?". Interviews were conducted in a quiet and comfortable setting, either at the participants' homes or at the public health center, according to participants' preferences, to ensure privacy and encourage open communication. Each interview lasted approximately 30–60 minutes and was audio-recorded with participants' consent. Field notes were taken during and after the interviews to capture contextual information and nonverbal cues.

All interviews were transcribed verbatim by the researcher. Transcripts were returned to participants for review and correction (member checking) to enhance credibility and ensure that the findings accurately reflected participants' experiences and perspectives. Participants were given the opportunity to clarify or modify their statements, and no substantial changes were requested.

Data analysis was conducted using Colaizzi's method, which involved reading transcripts repeatedly to gain an overall understanding, extracting significant statements, formulating meanings, clustering meanings into themes, validating the themes against the original data, and developing an exhaustive description of the phenomenon. The findings were continuously compared with the interview data to ensure rigor and consistency. This study adhered to the Consolidated Criteria for Reporting Qualitative Research (COREQ) 32-item checklist to ensure transparency and methodological rigor in reporting qualitative findings.

Ethical approval was obtained from the Health Research Ethics Committee of Sekolah Tinggi Ilmu Kesehatan Intan Martapura (Certificate No. 076/KE/YBIP-SI/XI/2025). Written informed consent was obtained from all participants prior to data collection.

RESULT AND DISCUSSION

Participant Characteristics

Table 1. Participant Characteristics

Participant Code	Participant's Age	Education	Occupation	Child's Age	Number of Children
P 1	51 years old	Senior High School	Housewife	2 years old	3
P2	22 years old	Senior High School	Housewife	11 months old	1

P3	40 years old	Senior High School	Housewife	2 years old	3
P4	24 years old	Vocational High School	Domestic Helper	11 months old	1
P5	30 years old	Vocational High School	Housewife	5 months old	2
P6	26 years old	Bachelor's Degree	Housewife	22 months old	1
P7	33 years old	Bachelor's Degree	Honorary Worker	a years old	3
P8	34 years old	Senior High School	Seller	2 years old	3
P9	25 years old	Senior High School	Housewife	15 months old	1
P10	28 years old	Elementary School	Housewife	7 months old	2
P11	37 years old	Elementary School	Shopkeeper	5 months old	3
P12	30 years old	Bachelor's Degree	Nurse	18 months old	1

The participants were mothers of toddlers aged up to 2 years in the working area of the Banjarbaru Selatan Public Health Center. A total of 12 participants were involved in this study. The participants' ages varied, with the youngest being 22 years old (P2) and the oldest 51 years old (P1). The highest educational attainment among participants ranged from elementary school to senior high school and a bachelor's degree. Most participants were housewives (n = 7), while others worked as domestic helpers, honorary workers, traders, shopkeepers, and nurses. The number of children per participant range from 1 to 3, with ages ranging from 5 months to 2 years. Table 1 presents the characteristics of participants based on the criteria of mothers with toddlers.

Comprehensive interviews conducted with 12 participants generated several themes related to the research problem. Data analysis identified five main themes: mothers' responses to gadget use, reasons for gadget use, duration of gadget use, perceived impacts of gadget use, and mothers' strategies to divert children from gadget use.

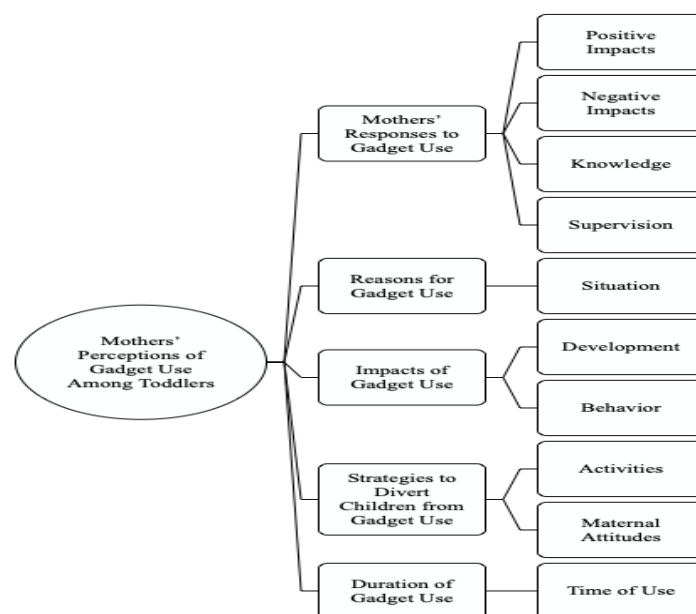


Figure 1. Mind Map of Mothers' Perceptions of Gadget Use

The figure 1 illustrates thematic structure of the study, with the main theme identified as mothers' perceptions of gadget use among toddlers. This theme is further elaborated into several subthemes, including mothers' responses to gadget use, impacts of gadget use, duration of gadget use, reasons for gadget use, and strategies to divert children from gadget use. Mothers' responses to gadget use encompass categories such as positive impacts, negative impacts, knowledge, and supervision. The impacts of gadget use are reflected in children's development and behavior, while the duration of gadget use is described through the time of use. Reasons for gadget use are associated with situational factors. Additionally, strategies to divert children from gadget use include engaging activities and maternal attitudes.

The results of data analysis presented in the mind map indicate the presence of various important findings related to the research topic, namely mothers' perceptions of gadget use among toddlers. These findings were analyzed and systematically organized into research themes. In this study, five main themes were identified: mothers' responses to gadget use, reasons for gadget use, duration of gadget use, impacts of gadget use, and strategies to divert children from gadget use. Mothers' responses to gadget use included evaluations of both the benefits and potential adverse effects of gadgets, knowledge appropriate gadget use, and supervision of toddlers' gadget-related activities. Reasons for gadget use included calming children, substituting other activities, serving as a learning medium, and providing entertainment. The duration of gadget use referred to the amount of time toddlers spent using gadgets. The impacts of gadget use encompassed changes in children's behavior and development. Meanwhile, strategies to divert children from gadget use involved maternal attitudes and the provision of alternative activities for children.

Mothers' Responses to Gadget Use

The findings of this study indicate that mothers' responses to gadget use among toddlers vary. Some mothers perceived gadget used as not beneficial, others considered it beneficial when accompanied by supervision, and some viewed gadgets as learning tools when appropriate content was selected and parental assistance was provided. These perspectives were expressed by P1, P2, P3, P4, P5, P6, P8, P10, P11, and P12.

Table 2. Participant Response Quotations

Participant Code	Question Quotation	Response Quotation	Voice Expression / Intonation
P1	In your opinion, are gadgets beneficial for toddlers?	"No, in my opinion they are not beneficial."	Firm tone
P2	In your opinion, are gadgets beneficial for toddlers?	"Not beneficial..."	Soft voice
P3	In your opinion, are gadgets beneficial for toddlers?	"...There are some benefits."	Gentle voice
P4	In your opinion, are gadgets beneficial for toddlers?	"Sometimes they are beneficial, but not good if used too often."	Cautious tone
P5	Positive and negative effects of gadgets	"There are benefits, but they can also be harmful."	Moderate tone
P6	Have you ever read/received information about gadget impacts?	"Yes, I have read about both positive and negative impacts..."	Informative tone
P7	Have you ever read/received information about gadget impacts?	"Yes, I have read."	Confident voice
P8	Have you ever read/received information about gadget impacts?	"I have received education..."	Confident tone
P9	Have you ever read/received information about gadget impacts?	"Yes..."	Soft voice

P9	How do you supervise gadget use?	“Yes, it is supervised.”	Firm tone
P10	How do you supervise gadget use?	“Sometimes it is supervised, sometimes not.”	Neutral tone
P11	Do you accompany your toddler when using gadgets?	“Yes, I always accompany.”	Confident tone
P12	Busyness or other factors	“Supervised even though I am busy selling.”	Flat tone

Based on these findings, it can be concluded that some mothers reported having read about the positive and negative impacts of gadget use, which encouraged them to regulate and limit gadget use to prevent excessive exposure. Conversely, others acknowledged limited access to information and occasional time constraints that resulted in suboptimal supervision. Several mothers also expressed concerns about potential negative effects, such as viewing addiction, and hoped that gadget use could be restricted according to their children’s needs.

Reasons for Gadget Use

The findings indicate that gadget use among toddlers most commonly occurs during leisure time, serving as an easily accessible form of entertainment for children. Gadgets are also frequently used by parents as distraction tools when children require activities to calm themselves or reduce restlessness. Additionally, in situations where children rarely go outside, gadgets become the primary entertainment option to fill their leisure time. These findings were reported by P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, and P12.

Duration of Gadget Use

The findings indicate that mothers’ views regarding the duration of gadget use among toddlers varied, ranging from short-term use to longer durations. Several mothers reported that toddlers used gadgets for up to 30 minutes. When the duration reached approximately one hour, the intensity of gadget use began to increase significantly. Furthermore, when gadget use extended to around two hours, the activity became longer and more continuous. Meanwhile, at durations of three to four hours, gadget use occurred continuously over an extended period. These findings were reported by P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, and P12.

Impacts of Gadget Use

The findings of this study indicate that gadget use has various effects on children’s development. Some children who were not yet fluent in speech tended to experience speech delays, while children who were already fluent in speaking showed different responses to gadget use. Children often appeared happy and calm while using gadgets; however, some became easily bored and exhibited aggressive behaviors. In addition, children tended to imitate behaviors observed during gadget use. These findings were reported by P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, and P12.

Mothers’ Strategies to Divert Children from Gadget Use

The findings of this study indicate that mothers employed various strategies to divert children’s attention from gadget use. Some mothers more frequently provided toys as alternative activities and encouraged children to spend more time outdoors to reduce gadget use. In addition, mothers engaged in direct play with their children and attempted to gradually reduce the duration of gadget use. These findings were reported by P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, and P12.

Table 3. Participant Response Quotations

Participant Code	Question Quotation	Response Quotation	Voice Expression / Intonation
P1	In what situations do you usually give gadgets to your toddler?	“During short leisure time.”	Flat voice, low tone
P1	What is your reason for giving gadgets? / Opinion about content watched by toddlers	“There are no outdoor activities... the child is talked to, taught, and introduced to things.”	Soft voice, lengthy explanation
P2	Reason for giving gadgets / 2j. Due to busyness or other factors?	“Doesn’t go out much...”	Soft, declining voice
P2	Is gadget use for entertainment or distraction?	“Only when the child is fussy...”	Flat voice, slightly tired
P3	Entertainment or distraction?	“Yes, for entertainment.”	High tone, slightly cheerful
P4	Situation of gadget use	“During leisure time when gathering with family.”	Stable voice, positive tone
P5	Reason for giving gadgets / 2j. Other factors besides busyness	“There are no activities...”	Low voice, resigned tone
P6	Distraction	“So the child can calm down for a while.”	Gentle tone, soft voice
P6	Situation of gadget use	“Mostly at home...”	Soft voice, declining tone
P7	Reason for giving gadgets / 2i. Distraction	“Because the child is already bored with playing.”	Flat voice, tired tone
P8	Entertainment	“So it becomes entertainment...”	Stable, relaxed voice
P9	Distraction	“Also as a distraction.”	Confident voice, moderate tone
P10	Situation of gadget use	“During leisure time...”	Flat voice
P11	Entertainment / time filler	“For entertainment and also as a way to fill time.”	Informative, stable tone
P12	Due to busyness or other factors?	“Forced... when I’m busy and there is no one to take care of the child.”	Tired voice, low tone
P12	Reason for giving gadgets/Environmental and activity factors	“Because there is no time to go out except on holidays.”	Declining voice, feeling guilty

Table 4. Participant Response Quotations

Participant Code	Question Quotation	Response Quotation	Voice Expression / Intonation
P1	Duration of gadget use	“At most half an hour.”	Flat voice, confident but brief tone
P2	Duration of gadget use	“At most 30 minutes.”	Firm tone, stable voice
P3	Duration of gadget use	“...In the morning, only about one hour...”	Soft tone, slightly explanatory
P4	Duration of gadget use	“...Only for a very short time...”	Low tone, statement sounds minimizing
P5	Duration of gadget use	“...Sometimes up to 3 hours, even 4 hours.”	Hesitant tone, slightly declining (expressing guilt)
P6	Duration of gadget use	“...Usually watches for about 3 hours...”	Flat voice, resigned tone
P7	Duration of gadget use	“...Maybe around 1 hour...”	Hesitant tone, uncertain voice
P8	Duration of gadget use	“Yes, usually about 1 hour, up to 2 hours at most.”	Firm voice, stable tone
P9	Duration of gadget use	“Around 30 minutes.”	Brief response, confident tone
P10	Duration of gadget use	“Sometimes 30 minutes, sometimes up to 1 hour.”	Neutral tone, explanatory voice
P11	Duration of gadget use	“Usually from 7 to 9 in the evening.”	Flat tone, slightly tired voice
P12	Duration of gadget use	“A maximum of 1 hour, but sometimes it can be longer.”	Soft tone, slightly hesitant

Table 5. Participant Response Quotations

Participant Code	Question Quotation	Response Quotation	Voice Expression / Intonation
P1	Impact on speech ability	“He has just started saying ‘mama’ and ‘papa’.”	Soft voice, worried
P1	Changes when using gadgets	“When watching, he looks happy.”	Cheerful, high-pitched voice
P2	Behavioral changes while watching	“...He laughs when watching TV...”	Cheerful, light tone
P2	Emotional response	“He mostly cries when he wants something.”	Low voice, tired tone
P3	Impact on imitation & social interaction	“The child can imitate expressions from movies.”	Flat tone, explanatory
P3	Impact on speech ability	“His speech is fluent.”	High tone, confident
P4	Speech ability & communication response	“...He can answer when asked...”	Flat tone, slightly hesitant
P5	Physical changes (sleepiness)	“He often feels sleepy when the TV is on.”	Soft, declining tone
P5	Impact on speech	“He has just started saying ‘ma’.”	Low tone, uncertain
P6	Improved speech ability	“My child talks a lot.”	Proud tone, high pitch
P6	Calming effect / behavioral change	“So that he can calm down for a while.”	Weak voice, resigned tone
P7	Impact on speech ability	“He can talk, although slowly.”	Soft, gentle tone
P8	Positive impact on speech	“...Learning to speak...”	Soft tone, positive
P8	Negative impact (emotion/tantrum)	“He can have tantrums if his wishes are not fulfilled.”	High tone, worried
P9	Imitating words from gadgets	“...Imitating conversations...”	Flat tone, explanatory
P9	Impact on imitative behavior	“Sometimes he imitates...”	Soft tone, hesitant
P10	No significant changes	“...It’s just normal...”	Low tone, unenthusiastic
P10	Speech delay	“He is not yet fluent in speaking.”	Soft tone, worried
P11	Negative impact on language & behavior	“There is an influence; sometimes he uses harsh words even though I correct him.”	Firm tone, slightly annoyed
P11	Social & emotional response	“He usually cries and laughs when playing with his older sibling.”	Light tone, storytelling
P12	Speech delay	“He can only say one letter while pointing.”	Low tone, worried
P12	Positive impact (quick imitation)	“The child becomes quick to imitate.”	High tone, proud

DISCUSSION

Mothers' Responses to Gadget Use

The findings indicate that mothers' responses to gadget use among toddlers varied and were influenced by their knowledge, perceptions, and family circumstances. In general, these responses could be categorized into three main perspectives: (1) perceiving gadget use as not beneficial, (2) perceiving gadgets as beneficial when accompanied by supervision, and (3) perceiving gadgets as learning tools when appropriate content and parental assistance are provided in accordance with toddlers' developmental needs. These variations reflect differences in mothers' levels of digital literacy and awareness of the potential impacts of gadgets on early childhood development. Mothers who were informed about the effects of gadget use tended to be more selective and applied stricter controls, whereas those with limited access to information appeared less confident in setting boundaries. In addition to knowledge, socioeconomic conditions, parental workload, and parenting styles. Mothers perception's and management of their children's gadget use were influenced by this factors. Consistent with this study, previous research reported that some mothers considered gadgets ineffective when used without supervision, while others viewed gadgets as effective learning tools when content and implementation were well managed, emphasizing the importance of active maternal involvement in regulating screen time and content (20). However, limited knowledge and daily responsibilities often led to suboptimal supervision, consistent with findings that educational level and access to information significantly affect parental supervision effectiveness (21). Concerns regarding potential negative effects such as addiction and exposure to inappropriate content were also expressed, supporting studies that highlight the dual perception of gadgets as both educational tools and behavioural risks (22). Overall, mothers' responses to gadget use cannot be viewed dichotomously, as decisions regarding gadget provision are shaped by multiple internal and external factors. Despite awareness of potential negative impacts, practical household conditions often lead mothers to rely on gadgets as a coping strategy.

Reasons for Gadget Use

The study revealed that gadget use among toddlers was primarily driven by situational family needs rather than developmental or educational purposes. Gadgets were commonly used during leisure time, as entertainment, or as distraction tools when children were fussy or bored. Some mothers admitted to providing gadgets, particularly when they were busy working or lacked caregiving support. In such cases, gadgets served as practical solutions to keep children calm and manageable. This pattern suggests that limited caregiving support within families and communities contributes significantly to the use of gadget.

These findings are consistent with previous studies showing that gadgets are frequently used as entertainment and distraction tools, especially when outdoor play opportunities are limited (23). Literature reviews also emphasize that gadgets are often use to soothe children, though excessive use may reduce physical and social interactions, underscoring the need for parental support and balanced screen time (24). Similar observations indicate that gadgets function as time fillers when children have limited opportunities for outdoor play, particularly when parents are occupied (25).

Duration of Gadget Use

The duration of gadget use among toddlers varied considerably across families, ranging from brief, controlled exposure to prolonged and continuous use. These differences were influenced by parenting styles, parental availability, and the ability to regulate children's access to gadgets. Longer usage durations were associated with greater difficulty controlling children's behaviour, suggesting that screen time is closely linked to family time management and parenting practices. Extended gadget use

increased the risk of addiction, sleep disturbances, and reduced physical activity, while shorter durations reflected greater parental awareness and boundary-setting.

Previous studies reported that many children used gadgets for 90–120 minutes per day, exceeding recommended limits and increasing the risk of social and behavioural problems (26). Other findings emphasized that appropriate duration regulation and strict parental supervision are essential to maximize benefits while minimizing adverse effects, including sleep problems, language delays, and behavioural disturbances (26,27).

Impacts of Gadget Use

Gadget use produced varied impacts on child development, depending on language ability, frequency and duration of use, and parental involvement. The effects were particularly evident in language development, emotional behavior, and imitation skills. Studies conducted at Dr. Ario Wirawan Hospital, Salatiga, reported that prolonged exposure to gadget among infants aged 6 months to 2 years significantly increased the risk of speech delay. Children exposed to gadgets tended to prefer movement over verbal communication and experienced difficulties following verbal instructions.

In terms of behaviour, children who used gadgets for more than 1 hour per day demonstrated increased aggressive behaviour and emotional dysregulation, reduced social responsiveness, and increased frustration when demands were unmet (28). These findings highlight the importance of active parental supervision and appropriate content selection to prevent negative social and emotional outcomes (29).

Mothers' Strategies to Divert Children from Gadget Use

Mothers employed various strategies to divert children's attention from gadgets, aiming to reduce dependency and promote activities that support motor, social, and cognitive development. Most mothers provided alternative activities, such as playing together, offering toys, or engaging children in outdoor play. Direct involvement in play not only prevented excessive gadget use but also strengthened mother–child relationships and emotional bonding.

Supporting studies emphasise the importance of offering engaging alternatives, such as outdoor play, art activities, reading, and family exercise, along with consistent parental role modelling of healthy technology use (30). Other research also confirms that strict parental supervision and gradual reduction of screen time are effective in preventing gadget dependency and supporting children's social and physical development (31,32).

CONCLUSION

This study demonstrates that gadget use among toddlers has become an increasingly common and unavoidable phenomenon in daily family life. Mothers' perceptions play a pivotal role in shaping patterns of gadget use, including decisions related to purpose, duration, content, and supervision. The findings reveal that mothers' responses to gadget use are diverse and influenced by knowledge, digital literacy, family conditions, and caregiving demands. Gadget use is often driven by situational needs, such as calming children or managing parental busyness, rather than purely educational intentions. Variations in duration of gadget use reflect differences in parenting styles and family time management, with prolonged use posing risks to toddlers' language development, emotional regulation, behaviour. Conversely, active parental involvement, appropriate content selection, and time regulation are perceived as protective factors. Overall, gadget use among toddlers presents both potential benefits and risks, emphasising the importance of informed maternal perceptions and consistent supervision to support optimal child development.

Based on the findings, several recommendations are proposed. Mothers are encouraged to enhance their knowledge and digital literacy regarding age-appropriate gadget use, including content selection and time limitations. Active parental supervision and engagement during gadget use should be strengthened to maximize educational benefits while minimizing negative impacts. Health professionals, particularly nurses and community health workers, are recommended to provide regular education and counseling for parents on healthy screen time practices during early childhood. Public health centers may integrate guidance on gadget use into maternal and child health programs. Additionally, policymakers and early childhood education stakeholders are advised to develop clear, evidence-based guidelines and policies on safe gadget use for toddlers. Future research is recommended to explore fathers' roles, broader family dynamics, and the long-term developmental outcomes of gadget exposure among young children using longitudinal or mixed-method approaches.

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Nabila Dwi Handayani: Conceptualization & Writing Original Draft. Filia Sofiani Ikasari: Conceptualization, Methodology, Manuscript Review & Editing. Raihana Norfitri: Supervision. Tiara Lani: Formal Analysis & Manuscript Review.

CONFLICT OF INTEREST

The authors declare no conflict of interest/or conflict

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

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