

Eduaction for Parents of Children with Gadget Addiction

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ARTICLE REVIEW

EDUCATION FOR PARENTS OF CHILDREN WITH GADGET ADDICTION

Edukasi Pada Orangtua Anak dengan Adiksi Gadget

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ABSTRACT

Background: Inappropriate and excessive use of gadgets can cause addiction and interfere with physical, psychological, and emotional health, increase social isolation, and negatively affect development, especially in children. The resulting impact will be greatly influenced by the role of parents, family and the environment. **Purpose:** This study aims to understand what education can be provided to parents of children with gadget addiction, along with how parents can choose toys and alternative games for children to reduce this gadget addiction. **Methods:** The design used in this article was a narrative review that involved collecting and analyzing journals using the keywords "addiction", "children", "education", "parent" and "gadget"; this obtained 10 journal articles from PubMed, two journal articles from ScienceDirect, 14 journal articles from Google Scholar published between 2015–2020, three books, and one collection of survey data from the web. **Results:** There were several strategies that could be applied in managing the use of gadgets by children. The authoritative type of parenting style, good parent-child relationships, parent-child attachment and family environment conditions could also affect the use of gadgets and its impact on children. Parents could additionally provide toys and alternative games suitable for the children's age, developmental ability and safety needs. **Conclusion:** Parents are expected to understand how to manage children with gadget addiction and how they can choose toys and alternative games for children to reduce gadget addiction.

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ABSTRAK

Latar Belakang: Penggunaan gadget yang tidak tepat dan berlebihan dapat mengganggu fisik, psikologis, kesehatan emosional, isolasi sosial, dan perkembangan terutama pada anak-anak, yang salah

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satunya dapat menyebabkan kecanduan. Dampak yang muncul akan sangat dipengaruhi oleh bagaimana peran orang tua, keluarga dan lingkungan. Tujuan: Penelitian ini bertujuan untuk memahami edukasi apa yang dapat diberikan kepada orangtua anak dengan adiksi gadget dan bagaimana orangtua dapat memilih mainan dan alternatif permainan pada anak untuk mengurangi adiksi gadget. Metode: Desain dalam artikel ini menggunakan tinjauan narasi dengan mengumpulkan dan menganalisis jurnal menggunakan kata kunci "adiksi", "anak", "edukasi", "gadget", "orangtua" yang memperoleh 10 jurnal dari Pubmed, 2 jurnal from Science Direct, 14 jurnal dari Google Scholar diterbitkan pada 2015-2020, 3 buku, dan 1 data survei dari web. Hasil: Ada beberapa strategi yang dapat diterapkan dalam penggunaan gadget oleh anak-anak. Jenis gaya pengasuhan otoritatif, hubungan orangtua anak yang baik, keterikatan anak orangtua dan kondisi lingkungan keluarga juga dapat memengaruhi penggunaan gadget dan dampaknya terhadap anak-anak. Orang tua juga dapat memberikan mainan dan permainan alternatif sesuai dengan kebutuhan anak. Kesimpulan: Orangtua diharapkan dapat memahami bagaimana tatalaksana yang dapat dilakukan pada anak dengan adiksi gadget dan bagaimana orangtua dapat memilih mainan dan alternatif permainan pada anak untuk mengurangi adiksi gadget.

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INTRODUCTION

In today's world, technology has become an important part of human life and provides many benefits, such as entertainment, educational support, and supporting work to be more effective and efficient. Data shows that the number of smartphone users globally continues to increase from year to year. In Indonesia, the number of smartphone users is growing rapidly. Digital marketing research institute Emarketer estimated that, in 2018, there would be more than 100 million active smartphone users in Indonesia, and that Indonesia would be home to the fourth highest number of active smartphone users in the world after China, India and America (Ministry of Communication and Informatics RI, 2013).

A survey of parents in Indonesia stated that 90% of the types of gadgets most frequently used by their children aged 4–6 years of age are smartphones and tablets; moreover, 11% of them already have a personal smartphone or tablet, and 26% of children show signs of gadget addiction according to their parents. The data also states that 28% of children aged 4–6 years use smartphones and tablets for educational purposes, 22% for playing games, and 50% for education and games, with an average usage per day of 62 minutes. The types of games that are often played by children

typically contain elements of fighting and violence (Zaini & Soenarto, 2019). Another study showed that gadget use among children from 3–8 years of age was reported by 98% of 2,714 parents, a large number associated with a large impact (Suryameng, 2019). Based on other survey data released by the Asosiasi Penyedia Jasa Internet Indonesia (APJII), in 2018, out of 171.17 million people who have used the internet, 60.80% of them were children aged 5–19 years (Yusuf et al., 2020). Parents allow their children to use gadgets for the purposes of education, entertainment, introducing technology early on, and keeping children quiet or busy, with an average duration of use of more than one hour at a time. Another study states that 23% of children in kindergarten use the internet: the most popular use is between the ages of 5–9 years, with around 20.50% of this for playing games and 11.70% for homework, while children aged 8–10 years are the most likely to have a video game device in the bedroom and spend about 60 minutes a day playing games. In the future, young children will grow up dependent on technology, bearing in mind that children aged 3–4 years have been using the internet a lot in their daily lives (Arokiasamy, Kanan, & bin Ismail, 2018).

The increasing use of gadgets has both positive and negative effects. The average child

spends time on digital media every week for between 6–9 hours per day. Excessive use of digital media is associated with obesity, developmental delays, and impaired academic or learning functions (Coyne et al., 2017). Excessive use of the internet can also affect the brain and cause biological changes (Arokiasamy, Kanan, & bin Ismail, 2018). Due to a diminished capacity for self-control, children are said to be more susceptible to internet addiction than adults. Formally speaking, internet addiction is the excessive use of time spent on internet activities that can cause a decrease in the psychological condition of individuals (both mental and emotional), behavioral disorders, and negative impacts on social interactions, work and daily life. Many children spend time with gadgets rather than socializing, making children in the current era prefer to use gadgets as their “playground” rather than playing outside with friends (Hsieh et al., 2018).

Parents have the important role of teaching children to use technology appropriately. The impact of gadget use on children will be greatly influenced by the role of parents, family, and environment. Proper parental attitudes, parent-child relationships, and behavioral guidance are needed (Arokiasamy, Kanan, & bin Ismail, 2018). This study aims to understand what education can be provided to parents of children with gadget addiction, along with how parents can choose toys and alternative games for children to reduce gadget addiction.

METHODS

To compile a narrative review, a search was carried out using several databases (namely PubMed, ScienceDirect, and Google Scholar) to find articles relevant to the topic. Search strategies involved using the keywords "addiction", "children", "education", "gadget", and "parent". The results were then compiled and analyzed comprehensively to create a narrative review. The search included articles in English and Indonesian. Results of the search for articles containing key phrases yielded 10 journal articles from PubMed, two journal articles from ScienceDirect, 14 journal articles from Google Scholar published between 2015–2020, three books, and one collection of survey data from the web.

RESULTS

Education for Parents of Children with Gadget Addiction

Gadgets can have a variety of negative effects on children, which are strongly influenced by the role of parents (Coyne et al., 2017). Parent mediation involves the interaction between parents and their children about the use of media, including gadgets, based on three core strategies: restrictive, active, and co-use/co-viewing (Hwang, Choi, Yum, & Jeong, 2017). Parents can also use software and technical tools to filter, restrict, and oversee children's online activities by establishing technical boundaries (Livingstone, Mascheroni, Dreier, Chaudron, & Lagae, 2015). There are three patterns of parental guidelines for media, namely restrictive, evaluative, and unfocused (Wu et al., 2016). Authoritative parents tend to pay more attention to their child's online content than parents who are authoritarian and neglectful (Arokiasamy, Kanan, & bin Ismail, 2018). A safe family environment reduces the risk of internet addiction (Hsieh et al., 2018). Parents who have a weak attachment relationship with their children are at risk of increasing internet addiction and risky online behavior in children (Arokiasamy, Kanan, & bin Ismail, 2018).

How Parents Choose Good Toys and Alternative Games for Children

The existence of various types of toys available on the market requires parents to choose the right toys for children. Creativity in play is also needed to assist the assimilation stage and accommodation for children's cognitive development (Bhagat, Haque, & Jaalam, 2018; Slutsky & DeShetler, 2017). Children begin to play at an early age and have multiple opportunities for play (Bento & Dias, 2017). Parents can also choose toys wisely: not necessarily the newest or the most expensive, but those that are safe and can encourage children to be mentally and physically active. Time spent using gadgets can disrupt play activities and reciprocal interaction between children and parents (Healey, Mendelsohn, & Council on Early Childhood, 2019). Each game can be used in different ways depending on the child's age, needs, abilities and interests. Table 2 presents a discussion of children's toys organized by age-appropriateness. Traditional games are also quite effective as a modality of management in children with internet addiction (Busana, 2013).

Table 1.

Narrative Review Education for Parents of Children with Gadget Addiction

Author	Research Title	Source	Results
Yusuf et al. (2020)	Digital parenting to children using the internet	Journal	An authoritative parenting style is appropriate for parents in the digital age.
Arokiasamy, Kanan, & bin Ismail (2018)	A study on parenting styles and parental attachment in overcoming internet addiction among children	Journal	Clear parental control and support for children, a healthy home environment and secure attachments with parents is linked with less internet risk behavior and safer internet usage.
Coyne et al. (2017)	Parenting and digital media	Journal	Children's characteristics, the parent-child relationship, parental mediation practices, and parents' own use of media can influence children's media use.
Hsieh et al. (2018)	Internet addiction: A closer look at multidimensional parenting practices and child mental health	Journal	Authoritative parenting and positive parent-child relationships were negatively associated with internet addiction.
Hwang, Choi, Yum, & Jeong (2017)	Parental mediation regarding children's smartphone use: Role of protection motivation and parenting style	Journal	Authoritative parenting was positively related to perceived severity of smartphone use in children, responsiveness, and self-efficacy.
Gentile et al. (2018)	Internet gaming disorder (IGD) in children and adolescents: A systematic review	Journal	IGD has become an area in which additional research is clearly needed.
Livingstone, Mascheroni, Dreier, Chaudron, & Lagae (2015)	How parents of young children manage digital devices at home: The role of income, education and parental style	Book	Factors that guide parents' actions and approach include their already-established styles of parenting and family values.
Wu et al. (2016)	Parenting approaches, family functionality, and internet addiction among Hong Kong adolescents	Journal	Family-based prevention strategies should be aligned with the risk factors of internet addiction.
Horzum, Duman, & Uysal (2019)	Children's age and gender differences in internet parenting styles	Journal	Parental control and parental warmth with regard to the Internet was seen to decline substantially at the age of 12 in males and 14 in females.
Chou & Lee (2017)	The moderating effects of internet parenting styles on the relationship between internet parenting behavior, internet expectancy, and internet addiction tendency	Journal	Boys tended to perceive a permissive or neglectful Internet Parenting Style (IPS), while girls tended to perceive an authoritarian or authoritative IPS.
U.S. Consumer Product Safety Commission Washington, (1999)	Toys: Tools for learning	Book	Guidelines to help in selecting toys.
Venkatesh, Sykes, Chan, Thong, & Hu (2019)	Children's internet addiction, family-to-work conflict, and job outcomes: A study of parent-child dyads	Journal	The effects of parenting behaviors on children's internet addiction were moderated by the children's views of parent-child attachment.

(Continue)

Table 1

Continued

Author	Research Title	Source	Results
Sun & Wilkinson (2020)	Parenting style, personality traits, and interpersonal relationships: a model of prediction of internet addiction	Journal	There are interaction effects among parenting style, interpersonal relationships, and personality traits that produced a significant joint effect predicting Internet addiction.
Deviantony, Lestari, Anggalia, & Handayani (2020)	Lego sebagai permainan tradisional berbasis kelompok pada anak domino (disorder of gaming and internet addiction): a systematic review	Journal	Lego can stimulate the brain to think critically and to reduce the impact of games and the internet.
Healey, Mendelsohn, & Council on Early Childhood (2019)	Selecting appropriate toys for young children in the digital era	Journal	The consideration of potential benefits and possible harmful effects of toy choices on child development.
Bento & Dias (2017)	The importance of outdoor play for young children's healthy development	Journal	The importance of outdoor play for young children's healthy growth.
Bhagat, Haque, & Jaalam (2018)	Enrich schematization in children: Play as the tool for cognitive development.	Journal	Parents and teachers can use naturalistic play therapy with basic knowledge about Piagetian stages.
El-Nagger, Abo-Elmagd, & Ahmed (2017)	Effect of applying play therapy on children with attention deficit hyperactivity disorder	Journal	Play therapy had a positive effect on children with ADHD.
Halfon et al. (2016)	The non-linear trajectory of change in play profiles of three children in psychodynamic play therapy	Journal	Children express different psychic states in play.
Jensen, Biesen, & Graham (2017)	A meta-analytic review of play therapy with emphasis on outcomes measures	Journal	Play therapy interventions demonstrate a small to moderate effect.
Karaer & Akdemir (2019)	Parenting styles, perceived social support and emotion regulation in adolescents with internet addiction	Journal	The parents of adolescents with internet addiction were more frequently inadequate in acceptance/involvement, supervision/monitoring and emotional availability.
Salter, Beamish, & Davies (2016)	The effects of child centered play therapy (CCPT) on the social and emotional growth of young Australian children with autism	Journal	CCPT was an effective intervention for all children with autism in several areas of social and emotional functioning that showed positive improvement.
Schottelkorb, Swan, & Ogawa (2020)	Intensive child-centered play therapy for children on the autism spectrum: A pilot study	Journal	CCPT showed a statistically significant decrease in ASD core symptoms and behavioral symptoms.
Slutsky & DeShetler (2017)	How technology is transforming the ways in which children play.	Journal	Children spent longer playing with gadgets on weekends than weekdays.
Stewart, Field, & Echterling (2016)	Neuroscience and the magic of play therapy	Journal	Play therapy has the potential to create new neural pathways.
Winburn, Gilstrap, & Perryman (2017)	Treating the tiers: Play therapy responds to intervention in the schools	Journal	Play therapy can potentially be used as a school-based intervention for children who are experiencing behavioral difficulties.

(Continue)

Table 1

Continued

Author	Research Title	Source	Result
Busana (2013)	UNICEF education Kit handbook: Early guidance development Kit guidance	Book	Good early experiences help a child's brain develop well.
Suryameng (2019)	Pendampingan dialogis orangtua dalam penggunaan gadget pada anak usia dini	Journal	Gadget users among children aged 3–8 years was reported by 98% of 2,714 parents, a large number associated with a large impact.
Ministry of Communication and Informatics RI (2013)	Indonesia raksasa teknologi digital Asia	Web	There will be more than 100 million active smartphone users in Indonesia in 2018.
Zaini & Soenarto (2019)	Persepsi orangtua terhadap hadirnya era teknologi digital di kalangan anak usia dini	Journal	90% of the types of gadgets that children aged 4–6 years old most often use are smartphones and tablets; 26% of children display signs of addiction according to their parents; The types of games that are often played by children contain elements of fighting and violence.

DISCUSSION**Education for Parents of Children with Gadget Addiction**

It is important to understand how parental care can affect the use of gadgets in children. How parents behave when using gadgets around children, the home environment they create, and the gadget usage regulations in the family will all affect children (Coyne et al., 2017).

Co-viewing is the act of sitting in the same room with parents, talking (or not) to children about content when using a gadget. Co-use refers to watching or playing the media with children, without discussing the amount of time or type of media content (Hwang, Choi, Yum, & Jeong, 2017). A relational approach is the same as co-use but increases two-way interactions, builds parent-child relationships, and encourages children to support each other and share fun. Not only frequency but also the quality of communication plays a role (Wu et al., 2016).

The success of parental mediation can be predicted by threat perception (severity and vulnerability) and efficacy (response and efficacy), which are qualities found in authoritative parents. By contrast, permissive parents lack confidence in their ability to engage in parental mediation, while authoritarian parenting is not significantly related to efficacy because effective parental mediation requires responsiveness or warmth (Hwang, Choi, Yum, & Jeong, 2017).

Table 2

List of Children's Toys That Can Be Used

Games or Activities	Age Group (Years)		
	<1	1–3	4–6
Board Puzzle	√	√	
Chain Puzzle	√	√	
Board Book	√	√	√
Sponge Balls	√	√	√
Shape Sorter	√	√	√
Paper and Crayons	√	√	√
Stringing Beads	√	√	√
Puppets	√	√	√
Stack and Sort Kit	√	√	√
Dominoes	√	√	√
Construction Blocks	√	√	√
Modeling Clay		√	√
Puzzle Blocks		√	√
Memory Game		√	√
Counting Circle			√
Jigsaw Puzzle			√

Source: Busana (2013)

Restrictive mediation focuses on setting rules for media use, specifically regarding the amount of time and type of content permitted, when children can and cannot use the internet, what games can be played, what channels can be watched, etc. It can also be accompanied by a form of discipline or explicit regulation where the use of gadgets is allowed in return for good behavior and is prohibited if the behavior is bad. It is advisable for

parents to minimize the use of gadgets so that children have time to play directly. Parents can prevent media placement in the child's bedroom, disallow gadget use half an hour before bedtime, limit the total amount of time watching or using the gadget to 1–2 hours per day, and ensure family time free from media or gadgets. If possible, parents can recommend using a rating system for video games that are age- and content-appropriate (Gentile et al., 2018).

Impact of Parenting Style, Parent-Child Relationships, Parent-Child Attachment, and Family Environment Conditions on Children with Gadget Addiction

Children with internet addiction tend to feel less emotional warmth, too much parental involvement, more rejection, and more punishment from parents. Thus, internet addiction in children is experienced to the lowest extent by parents who engage in authoritative parenting, followed by authoritarian parenting, and is highest with permissive parents (Arokiasamy, Kanan, & bin Ismail, 2018). internet, especially gadgets, can also be used by children as a form of maladaptive or dysfunctional coping strategy (Hsieh et al., 2018). More reactive parental regulation with lower quality or frequency of communication about internet use is more associated with problems with internet use among children (Wu et al., 2016). Lower parental supervision, lack of emotional closeness, refusing care or less nurturing and monitoring, and being too intrusive and punitive have been identified as significant predictors of internet addiction. Moreover, a lack of communication, cohesion, and intimacy, along with weak family relationships with high levels of conflict, tend to result in more internet use (Karaer & Akdemir, 2019). Authoritative parenting and a safe family environment reduce the risk of internet addiction, whereas authoritarian parenting is associated with gadget addiction (Hsieh et al., 2018).

Children will attach to parents in the early years of their lives. Parental responses are seen as key to developing better decision-making abilities and self-regulation, which are further linked to lower levels of addictive behaviors (Arokiasamy, Kanan, & bin Ismail, 2018; Venkatesh, Sykes, Chan, Thong, & Hu, 2019). The better the child's social relationships and communication with others, the lower the likelihood of internet addiction (Sun & Wilkinson, 2020).

How Parents Choose Good Toys and Alternative Games for Children

Play has an important role in aiding children to improve their cognitive, emotional, and academic abilities. Many children today spend most of their time playing with gadgets or on the internet and a limited amount of time playing outside. Thus, it is important for parents to implement restrictions on children's use of gadgets (Slutsky & DeShetler, 2017). Children will learn through early life experiences they acquire with the help of their parents. One alternative approach is direct play. Types of play such as playing with Lego can prevent children from playing with gadgets excessively (Deviantony, Lestari, Anggalia, & Handayani, 2020). Children can also use toys as instruments for play and social interaction. Play can adapt to cross-cultural conditions, which can also adapt interpersonal development to shape and rearrange brain circuits (Stewart, Field, & Echterling, 2016).

According to Piaget's theory, play also has benefits at every stage of a child's development. Parents play a role in helping facilitate the use of creativity in play (Bhagat, Haque, & Jaalam, 2018). Play also can be useful as a game that is symbolic, functional, and has rules, which make up the components of children's knowledge and build interpersonal processes (Jensen, Biesen, & Graham, 2017), moreover, children will express different psychological states when playing; thus, play can be used as a form of psychotherapy (Halfon et al., 2016). Positive attachments formed when children play empowers children to work towards a healthy sense of self, allowing children to relate their skills and knowledge to current actions, and supporting the formation of new behavioral schemes necessary for social and emotional growth. Parents who participated in play also showed positive improvements in several areas of social and emotional functioning (Salter, Beamish, & Davies, 2016). Relational experiences during play occur through increased mutual attention, environmental exploration, and self-regulation (Schottelkorb, Swan, & Ogawa, 2020).

Play therapy can be integrated in a school environment to replace excessive use of gadgets. This helps students develop positive self-concepts, take personal responsibility, be more independent and accept themselves, and improve problem-solving skills (Winburn, Gilstrap, & Perryman, 2017). Exposure to sunlight and open air when playing outside are beneficial for better physical growth (Bento & Dias, 2017). There is a significant difference in the symptoms of

emotional disorders and behavior of children before and after play therapy (El-Nagger, Abo-Elmagd, & Ahmed, 2017).

Playing with toys can facilitate cognitive development, language interaction, symbolic and imitation games, problem control, social interactions, and physical activity in children. Conventional games such as blocks and puzzles can stimulate children to solve problems, while also supporting fine motor skills, language and cognitive development. Toys used in physical activities, such as balls, can help improve gross motor skills through self-regulation and peer interactions (Healey, Mendelsohn, & Council on Early Childhood, 2019).

Children can play from an early age, even in an unstructured way; deciding what to do, with whom, and how increases their self-esteem, autonomy, and positive self-confidence (Bento & Dias, 2017). The government has an important role in determining policies and regulations, establishing standards for making and using toys, and testing products to keep toys safe. The most important thing when it comes to playing with toys is to educate and facilitate healthy and supportive interactions and relationships. The most educational toys are those that foster interaction between caregivers and children in relationships that are mutually supportive, unconditional, appropriate, safe, and affordable. Parents should choose toys wisely, not necessarily selecting the newest or the most expensive items. Parents should also be able to distinguish between safe and unsafe toys, paying attention to elements of violence or negative social, racial, or gender stereotypes. Moreover, parents should choose toys that encourage children to be mentally and physically active. Parents should also set limits on the use of video games, computers, and television, with the provision of less than one hour per day for children aged two years or older and avoided for children aged 18 to 24 months. Children under five years of age should play only with computers or video games that are in accordance with their development, and must be accompanied by a parent or caregiver (Healey, Mendelsohn, & Council on Early Childhood, 2019).

Electronic toys prevent children from interacting with their parents or the environment. Time spent using gadgets can disrupt play activities and reciprocal interactions between parents and children. Moreover, the use of virtual toys to mimic or replace physical toys has the potential to increase the risk of gadget exposure; although there may be learning benefits from the

use of interactive gadget-based media, there are reduced benefits compared to those resulting from children playing actively, creatively, and directly with traditional toys. Interaction and reciprocal responses from children's parents are not obtained from playing with gadgets (Healey, Mendelsohn, & Council on Early Childhood, 2019). In Indonesia, moreover, there are several traditional games from various regions that can be used by children depending on their age as alternative children's play activities (Table 3). These can be used as a modality of management in children with internet addiction.

Table 3
List of Traditional Children's Toys That Can Be Used (by age) in Indonesia

Game Name	Origin	Children's Age (Years)
Gobag Sodor	Yogyakarta	5 – 18
Petak Umpet	Yogyakarta	5 – 15
Dakon	Yogyakarta	7 – 12
Enggrang	West Java	10 – 18
Bebantengan	West Java	6 – 15
Sunda Manda	West Java	6 – 15
Patok Lele	West Java	8 - 15
Allogo	Sulawesi	10 – 18
Lompat Tali	Sulawesi	10 - 18
Bola Bekkel	Java	> 4
Patah Kaleng	Papua	9 – 15
Gasing	South Sulawesi	> 4
Megoak-goakan	Bali	> 7
Meong-mengan	Bali	5 – 12

Toys function as tools for children to use in play; thus, it is necessary to provide children with the right toys. More specifically, it is necessary to choose toys that have the following qualities: suitable for their age, developmental ability and safety (not only looking at price or availability); well-arranged and durable; appealing to children; in accordance with their physical abilities, mental and social development, moreover, it is important to first read the information on the toy box to ensure the toy is not harmful, presents no risk of swallowing or choking, and is fire-resistant and non-toxic. Furthermore, parents should avoid buying toy guns that look too similar to real weapons, ensure that the toys cannot damage hearing, dispose of all toy packaging safely, check regularly for any safety issues, repair or dispose of damaged toys (rather than donating them), ensure the safety of toys in general, and avoid toys larger than younger children, and store toys safely (U.S.

Consumer Product Safety Commission Washington, 1999).

CONCLUSION

The increasing use of gadgets by children has both positive and negative impacts. Inappropriate and excessive use of gadgets, especially when addiction has occurred, can interfere with children's physical, psychological, and emotional health, increase social isolation, and cause problems with development. The impact of gadget use will be greatly influenced by the actions of parents. Education can be provided for parents to help them play a role in managing gadget addiction among children. An authoritative parenting style, good parent-child relationships, good parent-child attachment and positive family environment conditions could affect gadget use and its impacts on children. There are also several parental mediation strategies that parents can apply to the use of gadgets by children, such as co-viewing or co-use, active mediation, and restrictive mediation. Parents can additionally provide toys and alternative games that are useful in supporting the cognitive, physical, mental, and social development of children, so that the expected benefits are obtained.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTION

Each author helped in the preparation of reports by providing input on the contents of the article. The second and third authors also provided suggestions and input to the first author in preparing the article.

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