A qualitative case study about overuse of digital play at home

Nesrin Işıkoğlu[1] · Ahmet Erol[1] · Abdullah Atan[1] · Serkan Aytekin[2]

Abstract

The prevalence of digital play devices, including tablets and smartphones, has led to overuse among some young children. The purpose of this research is to examine the overuse cases among young children. Participants of this qualitative case study were five children aged five to seven years, their parents, and a psychiatrist. The data were mainly obtained through semi-structured interviews. Interviews were further supported by close observations, a collection of digital play diaries, as well as an interview with a psychiatrist who specializes in childhood gaming addiction. Then data analyzed using content analysis techniques. The results are presented in five themes: practices, reasons, feelings about overuse, restricting playtime, and content. The first three themes described the nature of the overuse, while the last two themes described the parents' efforts to restrict their children's digital play. Findings revealed that the joint effects of different factors triggered children's overuse, that parents and children felt a range of emotions from happiness to aggression, and that parents' restrictive mediation strategies were mostly infective.

Introduction

In today's digital societies, many young children have benefited from digital devices designed for education, entertainment, and play. The use of digital devices including tablets, smartphones, and electronic toys has increased significantly among early ages in Turkey (TurkStat, 2017). Recently, the digital game market was 878 million dollars (Digital Game Report, 2019) and the market is growing around 10 % each year in Turkey (ByNoGame, 2018). Approximately 90 % of the Turkish population has home internet access 70% of internet users play online games (Ilgaz Büyükbaykal & Cansabuncu, 2020; TUIK, 2020). A recent cross-cultural study compared results from Turkey, the USA, South Korea, and China revealed that the screen time of preschool children also varied from 2 h to 4 h per day and in all four countries 4–6 years old children spend the longest time watching TV, tablet usage took second place in USA, Turkey, and China, with smartphone usage second highest in South Korea. It is important to note that these research findings should not be generalized to the entire countries, Turkish children spend approximately an hour playing with computer /tablet games and forty minutes with smartphones (Isikoglu Erdogan, Johnson, Dong, & Qiu, 2019. Evidence revealed that Turkish preschool-age children interacted with screens for more than 30 min a day recommended by the Green Crescent Foundation, the national institution fighting technology addiction (Yeşilay, 2020). As the context of the research in Turkish culture, playing with young children is perceived as a valuable way of spending time (Ivrendi & Isikoglu Erdoğan, 2015). In a recent cross-cultural study, Turkish parents valued play as an important medium for children's learning and development (Ivrendi, Cevher-Kalburan, Hansen Sandseter, Storli, & Holla Sivertsen, 2019). Newly emerging digital play is also noteworthy since the use of digital devices as play tools have increased significantly among early ages in Turkey (TurkStat, 2017).

Although there is little evidence, children's screen time had increased and their physical activities decreased during the COVİD-19 pandemic (Guan, Okely, Aguilar-Farias, Del Pozo Cruz, Draper, El Hamdouchi, Florindo, Jáuregui,

✉ Nesrin Işıkoğlu
nisikoglu@pau.edu.tr

Ahmet Erol
ahmete@pau.edu.tr

Abdullah Atan
aatan@pau.edu.tr

Serkan Aytekin
saytekin@pau.edu.tr

[1] Department of Early Childhood Education Program, Pamukkale University, Denizli, Turkey

[2] Department of Primary Education Program, Pamukkale University, Denizli, Turkey

Katzmarzyk, Kontsevaya, Löf, Park, Reilly, Sharma, Tremblay, & Veldman, 2020). The ubiquity of such devices in the hands of children has created an emergent phenomenon called "digital play," which refers to using technologies as a primary form of play (Marsh, Plowman, Yamada-Rice, Bishop, & Scott, 2016). Digital play includes playing digital games and applications, watching, and making videos, and taking pictures. This new form of play has become an increasingly popular and cultural context for young children (Edwards, 2018; Işıkoğlu Erdoğan, 2019; Heider & Jalongo, 2015). Currently, researchers argue that digital play is just a play for children, and their traditional play activities and engagement with digital play become interwoven (Bird & Edwards, 2014; Edwards, 2018; Marsh, 2010).

On the other hand, there is an ongoing debate about nature and the role digital play may have in the lives of children. Some researchers argue that children need "free play"; a type of play that is divorced from watching and interacting with screens or digital tools (Jeong, Kim, & Lee, 2017; Levin, 2015; Slutsky, Slutsky, & DeShetler, 2014). Others claim that digital play has positive contributions, such as relaxation, abreaction, entertainment, learning and the development of many skills (Biddiss & Irwin, 2010; Marsh et al., 2016; Prot, Anderson, Gentile, Brown, & Swing, 2014). Existing research about the value of digital play indicates that digital play supports children's problem-solving, reasoning, analysis, and decision-making skills (Kim & Smith, 2017), academic achievement (Barr, 2019; Lieberman, Fisk, & Biely, 2009), hand-eye coordination, and motor skills (Lin & Hou, 2016). Studies also caution that the content of the games and adult mediation has important roles in gaining such advantages. However, a growing body of evidence links long hours in front of a screen to serious risks for young children including game addiction, violence, cyberbullying, and obesity, as well as an increased potential to view sexual content (Balkam & Dönmez, 2017; Livingstone, 2017; Neumann, 2015; Nikken & Schols, 2015b).

Recently, the American Academy of Pediatrics (AAP, 2016) recommended that parents should avoid digital media use (except video-chatting) in children younger than 18 to 24 months and use less than an hour per day for children aged 2 to 5 years. Similarly, Turkish Green Crescent an official public organization founded to combat addictions such as alcohol, drug, and technology defined technology addiction as a situation in which an addict felt deprived to access digital devices. This organization also recommended no more than 30 min per day for children aged 3–5 (Yeşilay, 2020). In line with these recommendations, more than two hours of daily use of digital devices was considered as overuse in this study. Several studies have also shown that young children are often exposed to the screen for more than the recommended time (Işıkoğlu Erdoğan, 2019; Lauricella, Wartella, & Rideout, 2015; Montag & Walla, 2016).

In the past decade playing with digital tools has increased among young children, much of the research in this area approaches age, gender and parental issues as major factors that construct children's play choices (Magladry & Willson, 2019). Whereas previous research mainly focused on adolescents or school-age children's game habits, recent studies began to examine digital play for children under the age of eight and this research mostly emphasized that young children's media use is mediated by parents and caregivers (Connell, Lauricella, & Wartella, 2015; Kucirkova, Littleton, & Kyparissiadis, 2018; Nevski & Siibak, 2016a). Specifically, McDaniel and Radesky (2017) revealed that parents introduce digital media to their toddlers or pre-schoolers during family activities such as meals, doctor visits, or car drives. Again challenging behaviors and emotional dysregulation have been shared by parents as reasons for young children's problematic digital media use (Domoff, Borgen, & Radesky, 2020). A child's gender is an important factor concerning access to digital tools and parental mediation of digital play. Children in a Digital World Report stated that the global gap in internet use between boys and girls widening and girls from twenty-two low and middle-income countries has less access to smartphones than boys (UNİCEF, 2017). In the UK, Ofcom (2017) has reported that boys aged 3–4 years had a handheld/ portable games player more than girls of the same age. A large survey study in the UK revealed parents of boys were more concerned about the health implications of their children's digital media use (Kucirkova et al., 2018).

The parental role is particularly important during a child's early life when parents are responsible for the majority of their child's experiences. Parents influence their children's play in terms of providing play materials, participating in games and taking time to play with them (Johnson & Christie, 2009). Drawing upon Vygotsky's socio-cultural theory of human learning, parental guidance is understood to be an essential component in scaffolding or supporting, the learning outcomes of children (Bodrova & Leong, 2015). According to Vygotsky, if the child is given appropriate support in the zone of proximal development (ZPD), a space between what the learner can do independently and a zone requiring adult support, he or she will reach the level to complete that duty. Moving from this, parents need to guide children during play with digital devices. Similar to other forms of play, parents need to supervise, monitor and engage in children's digital play. Within the ZDP, parents can play an important role in supporting the child's use of digital devices, particularly in how to take precautions and to set limits, by actively teaching, suggesting, guiding, modeling, and cooperating (Isikoglu Erdogan et al., 2019; Nikken & Jansz, 2014; Selwyn, 2017).

Common parental digital mediation strategies include active, restrictive and technical mediation (Livingstone, Mascheroni, Dreier, Chaudron, & Lagae, 2015; Nikken & Schols, 2015a; Wu et al., 2014). Active meditation involves practices such as talking about digital content and activities, sitting nearby and actively sharing the child's play experiences.

Restrictive mediation involves setting rules that limit time spent online, location of use, as well as directing content choices and activities. Technical restrictions contain technical tools to filter, restrict and monitor children's digital activities (Livingstone et al., 2015). Studies focused on parental mediation delineate between parents who worried about the potential negative effects of digital devices tended to apply time and content constraints, versus parents who believed in the positive effects of technology and tended to use the tools interactively/ cooperatively and preferred active guidance strategies (Nevski & Siibak, 2016a). While mothers mostly implement restrictive guidance strategies, fathers take a more active role in the guidance process than the mother in the sense that digital tools provide new life and learning opportunities. Contrary to fathers, mothers focus on situations such as technical constraints (using passwords), monitoring (controlling browser history), and setting content and time rules to ensure girls' online safety (Nevski & Siibak, 2016b). Besides, Nikken and Jansz (2014) mention parental guidance processes such as active guidance, collaboration, monitoring, and restrictive guidance in children's internet use. Research suggests that game addiction can increase in children when parents use digital tools as toys for children, and when they have followed inadequate guidance strategies (Park & Park, 2014). From this perspective, it is clear that parents can provide valuable digital experiences for their young children (Neumann, 2015). It is imperative, then, that parents learn how to use digital devices to encourage learning, enrich the play, and protect children from the potential risks of digital devices (Johnson & Christie, 2009).

Despite these facts, research in this area remains limited, especially on how the overuse of digital devices may directly affect the health and development of young children. Research in this area is mostly descriptive and is mainly conducted as investigations of social-cultural patterns and family factors related to the digital play (Bird & Edwards, 2014; Nevski & Siibak, 2016b; Nikken & Schols, 2015b). Moreover, the corpus of research on childhood digital device use is primarily focused on Western cultures (Lauricella et al., 2015). Therefore, this study expands a descriptive analysis of overuse cases by structuring interviews around children's experiences of digital play and their parents' guidance strategies. Interviews were further supported by close observations, collection of a digital play diary, as well as an interview with a psychiatrist who specializes in childhood gaming addiction. Close examination of overuse cases will provide significant contributions in understanding the nature of overuse and offer valuable suggestions to this issue, as well as providing potential applications specific to the context of overuse in Turkish society. The present study aims to examine the overuse cases among young children. Three questions guide the investigation: (1) What is the nature of overuse? (2) What are the reasons for the overuse of digital tools? and (3) How do parents' mediation strategies relate to the overuse? The answers to these research questions will be discussed from the perspective of sociocultural theory regarding the nature of overuse, reasons behind overuse, and parental mediation.

Method

This study is framed as a qualitative case study of five young children who experienced excessive digital play. According to Yin (1993), a qualitative case study is appropriate to cover contextual conditions that are relevant to the phenomenon under study. In this research, overuse cases were examined within their family contexts.

Participants and Research Context

The criterion sampling method was used to select participant children and families. According to Patton (2002), critical situations can be a source of criterion sampling because they are rich in information. Accordingly, the following criteria were taken into account when determining the participants; (a) kindergarten-aged children who play with digital games for more than two hours per day; (b) kindergarten-aged children who were treated at University's psychiatric clinic for game addiction.

Following institutional review board approvals, the purpose and process of the study was explained to six parents, all of whom had applied to the clinic for their children's game addiction and related behavioral problems. At the end of these procedures, only one child and his/her parents volunteered to participate in this study.

Later, the researchers contacted the public kindergarten to recruit more participants. The administrator of the school sent prospective parents a short survey related to their children's daily screen time. After identifying children who daily engaged in screen time for more than two hours, the parents were invited to participate in the study. At the end of this process, four children and their parents agreed to participate in the study. A total of five children and nine parents (4 mothers and 5 fathers) and one psychiatrist, from the clinic where a child was being treated for game addiction, participated in the study. In the study, legal permissions followed the framework of ethical principles, ensuring that the participants' identities were kept confidential and that the design of the questions did not inadvertently reveal the identity of any individual(s). Following the initial completion of the study, the questions and the results of the study were shared with the participants.

Participant children were one girl and four boys aged 5 to 7 years old. Three of the participant children attended a half-day kindergarten, and two of them attended a full-time kindergarten. None of the children received special education or inclusion. All the children came from families in which parents were living together. Four of the parents had a high school diploma and five parents had a college degree. All

parents worked outside the home in different occupations. The participant specialist was a professor in a psychiatric hospital, working in the department of child and adolescent mental health and illnesses.

Data Collection

The data were collected through interviews, observations, and documents (Merriam, 2009). Semi-structured interviews were held with five children, nine parents, and a specialist. Interviews with children were conducted in two stages on two different days by two researchers. During the interview session, while one researcher was interviewing the parent, the other interviewed and played with the child. In the first stage, one of the researchers visited the child's house and met with the child and family. During the interview, the researcher played with the child and asked questions about what he/she likes to play? This was seen as necessary for the children to feel safe and comfortable, allowing the interview to be conducted at the desired level. In the second interview, the children were asked questions such as, "I want to play games on the smartphone, but I do not know what to play?" "What should I do?" "How do you feel playing with the tablet and the smartphone?" "What do you say to me when I play games on the phone or the tablet all my spare time?" "If all the phones, tablets and computers in our house were broken, how would that be?" "How do your parents play with you?" The interviews lasted approximately 15–25 min and were tape-recorded with the child's permission. Working with the parent's schedules and preferences, interviews were held in the children's homes, the parents' workplaces, or at the school.

Semi-structured interviews with parents were conducted to learn about their thoughts, attitudes, and practices about their children's digital play. Interview questions focused on the parents' thoughts about their child's digital play, descriptions of their practices with digital tools, and their guidance strategies. Some of the sample questions: "Can you describe how your child starts to play with digital tools?" "How do you describe your child's digital play?" "How do you guide your child's digital play activities?" The interviews lasted from 30 to 45 min and were tape-recorded with the participants' permission. Participants were informed of the confidentiality of the recordings and the interview transcripts.

Lastly, a semi-structured interview was conducted with the specialist. During the interview information about game addiction, diagnosis and treatment, and the commonality of game addition in the early childhood period, provided a base of clinical characteristics commonly found amongst addicted children and their families. The interview lasted 45 min and was tape-recorded.

Observations Participant observations were conducted to closely examine the children's and their parent's digital play practices, along with recording the types of digital devices that they owned and used daily. During the observation, parents and children were asked to play with their digital tools (tablet, computer or smartphone). Parent and child play behaviors were observed for approximately 20 min.

Digital Play Diaries Within the scope of the study, the parents were asked to keep a digital play diary for one week. The diary contained information about the child's digital play beginning and finishing times, name of the game, and the behaviors child exhibited while playing (such as screaming, raging, laughing, jogging, running, crying and looking).

In this case study, the researchers played an active role in the data collection and analysis process (Creswell, 2009). During data collection, the researchers tried to be as objective as possible and they were careful to not embed, imply, or suggest an answer to a question they asked the participants.

Data Analysis and Trustworthiness

Analyses of the data were carried out in four stages. During the first stage, two researchers independently reread each participant's interview transcripts, observation notes, and collected documents. In the second stage, each researcher separately coded all the data. In the third stage, they compared their codes and categories to revise and resolve any differences. In the last stage, they identified and agreed upon the emerging themes, selected representative excerpts, and defined the categories within the themes (Seidman, 2006). Data source, method, and investigator triangulation (Patton, 2002; Stake, 2010) were employed to ensure that the information obtained was vigorously validated. Data source triangulation aims to compare the perspectives of all stakeholders' points of view including children, parents, and specialists. Methodological triangulation was ensured by collecting information through interviews, observations, and documents. Through investigator triangulation, two researchers closely examined the data. The interrater reliability of the study was calculated by Consensus / (Consensus + Disagreement) and was determined as 80%. It is expected to have reliability calculations above 70% (Miles & Huberman, 1994) and so that interrater reliability of the study was ensured. For the transferability of the study findings, rich and detailed descriptions were created, and participant quotations were provided. Additionally, except for word processors, no other software was used in the qualitative analysis.

Results

At the end of the detailed analysis of qualitative data, five major themes emerged: (1) practices about overuse, (2) reasons for overuse, (3) feelings about overuse, (4) restricting

playtime (5) restricting content. These themes are described and discussed in the following sections.

Practices about Overuse

Personally owning at least one digital device and spending more than an average of two hours playing with these devices stood out as a primary indicator of overuse and was evident in all of the participant children. Home observations and interview results showed that all of the participant children had a tablet, two of them had a computer and a tablet and, from time to time, all of them used their parent's smartphones. Parents' reported that their children started to play digital games at around age 2. Digital play diaries kept by the parents indicated that the children played an average of 235 min (about 4 h) of digital play per day. With 164 min per day, Child 2 spent the least time, while Child 1 spent the longest time (480 min) on the digital play. Father 1 explained his son's digital play as "*My son plays a lot on the weekends, maybe 10 hours in total.*" All participating parents agreed that their child played a lot with digital devices and they have had serious concerns about possible health risks including obesity, screen addiction, as well as eye and posture problems. Except for Child 1's parents, who were recruited from the clinic, the other parents did not believe that their child's digital device use was problematic.

Close examination of diary findings also indicated that the content of these games included strategy, education, violence, sports, and YouTube. All of the participant children watched YouTube videos every day. Children preferred various content on YouTube such as game videos, music, and cartoons. Four children often played strategy games such as Minecraft. Three children preferred to play violent games such as Grand Theft Auto (GTA), Shadow Fight, and Clash of Clans. Only two children preferred to play with educational games such as Alphabet blocks, Tangram, and Pipe Puzzle. The other two played with sports games such as a High Ball and Roll the Ball. Some of these games can be considered inappropriate because of violent content, inappropriate language, and advertisements.

Reasons for Overuse

In terms of reasons for overuse, the data revealed two main factors: (1) Children's interest and; (2) Parental issues. First, the children, their parents and the participating psychiatrist confirmed that children were interested in playing with digital games and simply loved to play them. Children used the following expressions to describe their love of digital play such as "*I love to play with the tablet (Child3)*" For some children, the digital play was their favorite form of play, and they preferred digital games more than playing with other things. They all shared a common perception that the child's interest was the main reason for overuse.

Second, participants raised several other issues caused by overuse. These issues included believing in benefits, being a bad role model, a lack of time for their children, and using it as a reward. Although participant parents had different views, many stated that digital play provides certain benefits for their children and they were not opposed to it. Mother 1 summed up her views as, "*Well, for me, every game is useful. After all, they are all made for a purpose. You can learn something. Since my son is playing strategy games, these games are useful in my eyes.*" Again, Mother 2 explained that digital games were useful for her daughter to learn chess and English. Logically, parents who believed that digital play was useful, allowed their children to overuse. Participant children highlighted that their parents were not good role models of technology use. For instance, Child 2 complained about her mother as "*Of course my mother, she always on the phone, always. Even in the bathroom. So I also play.*" Similarly, Child 1 mentioned that he often played games with his father.

> *I downloaded a game and I played it once. I said to my dad, "Come and play with me". He said, "OK, let's do it". When he lost, he played again, and again, and again, because he loved it. Then I downloaded the game on his smartphone. And he didn't delete it. When I turned on the phone and the game was there. This means he likes it too. So I play as well as he does.*"

The above comments suggest that children often replicate their parents' behaviors. When the children observed their parents using digital devices, they thought, "if they play, why shouldn't I?" Parents' behaviors of playing games and sharing the excitement with their children fostered a desire amongst the children to play more with these games. Besides these issues, parents claimed that their lack of time had an important impact on their children's overuse. Parents' time is often consumed with other activities, (e.g. work, cleaning, cooking, commuting, etc.), they turn to digital devices to, in effect, "babysit" their child. These issues were reflected below:

> *My idea is to give it (tablet) to the child and you can spend a day without any problems. More precisely it will be for me, not for the child… I think it is necessary to spend good quality time with children. Just give it to the child and say "play with it." The child may have a lot of fun, but it is not obvious how the child will be affected in the future. Everybody says that it will be bad." (Father 2).*

The above comments suggest that parents tended to use tablets for keeping their child occupied and quiet. Parents perceived

digital play as a helper or sitter. Even though they thought that overuse could be harmful to their child, they chose to take advantage of the convenience of digital play. Interestingly, instead of allocating playtime for his son, Father 1 stated, "*Loneliness is the real problem here. Loneliness. I wish he had a brother.*"

The other parental issue was using digital play as a reward. For instance, Mother 3 expressed "*if you behave well, you can play it (tablet).*" Similarly, Father 5 reported using expressions such as "*if you eat your meal, you can have it.*" This pattern was particularly present with parents who attempted to modify the child's behavior by using digital play as a reward. These behaviors raised the interest and penchant to overuse in children already predisposed to this type of play. Inadvertently, the parents supported the overuse of their children.

Feelings about the Overuse of Digital Play

Participants mainly expressed various emotions related to digital play including fun, happiness, anger, sadness, fear or uneasiness. Playing digital games has caused them to experience a variety of emotions, from happiness to anger. For example, Child 5 expressed his feelings as, "*I get crazy if I win a very difficult game. I feel really happy.*" At the same time, observational recordings of the same child captured him screaming while winning a game. Along with positive emotions, some children expressed negative emotions during digital play. Child 4 stated, "*I usually feel uneasy when I cannot win*". Child 2 expressed more negative feelings by stating that, "*I feel angry, furious and I throw the tablet.*" Home observations of Child 4 also indicated negative feelings, such as hitting the screen. Besides the frustrations of losing a game, the violent content of the games produced another source of negative emotions for the children. Child 3 expressed his feelings as "*I'm afraid, it'll come into my dream*", while Child 5 said that, "*if I use it too much, I become a game addict, I become hypnotized*". The participant psychiatric specialist summed up the relationship between playing violent games and the production of negative feelings:

> *When the content of the games is related to violence and fear, the anger increases in children's social lives, relations with the family deteriorate and aggression tendencies may increase in later periods. The intense experience of negative feelings can also have negative effects on family relationships and other social behaviors.*

Parents expressed different problems related to negative emotions. According to parents, they often had arguments with their child, or even with their spouse, due to the setting of time limits and rules about the digital play. Mother 4 stated, "*No matter what, we do not allow him to sit too close to the screen. I mean, there are health risks here. So I frequently warn my*

child and we constantly argue." Father 5 expressed that sometimes setting time limits caused negative emotions not only with the child but also within the whole family.

> *Sometimes we all get nervous. For example, my wife slapped him because of not quitting the game. But my wife's reaction was very wrong. I know she got very mad. But she shouldn't have done it. So I got mad at her and then we fought.*

Like their parents, children also voiced their complaints about negative emotions that resulted from the imposition of rules on game playing. Children felt a strong need to express that parent should treat them with respect and tolerance, as exemplified in the following statement:

> *While I am playing with my tablet, mom says "you played too much". Even before half an hour, she says angrily "Stop playing the tablet." She never says, "Can you please stop playing? So I feel angry at her.(Child 2)*

The above comments reflect that overuse of digital play can cause different emotions ranging from happiness to aggression. Such comments indicate that digital play, which is expected to give happiness and pleasure to children, can cause negative feelings for both children and parents when used excessively and inappropriately. Even the children expressed negative emotional reactions when playing digital games because they had played for an excessive amount of time and had become overly involved in the game.

Restrictive Strategies for Screen Time

All of the participant parents voiced a common concern that their children spent too much time engaged in digital play. They explained some strategies to reduce their child's digital playtime. These were setting time limits, reward-based managements, blocking or banning digital play, punishment, and redirecting to alternative activities. During home observations, the parents usually told their children how long they could play with digital games. Although setting time limits was the main strategy for parents, each family used various periods for digital play. For instance, Father 5 stated;

> *We're keeping track of time such as 15 minutes. We are showing the clock because he doesn't know how to read the clock. We are saying, "You're gonna play until that long line is on ten. Then, you're gonna stop playing with the tablet.*
> *Interviewer: When you tell him to stop, does he stop playing?*
> *It takes very long. He sometimes begs, "Please dad let me play until the game is over. Sometimes, he is not*

stopping. We often argued about the tablet. In some cases, I have to take the tablet by force. He cries when he gets forced.

The above comments reflected the fact that setting time limits were not easy for these parents. Children at this age are not cognitively mature enough to be responsible for self-determining the time restrictions. Perhaps, it was not a developmentally appropriate expectation from a 5-year-old boy to read the clock and stop playing by himself. Again, forcing the child or removing the tablet was not considered a positive discipline. While some parents also reported that they punished their child for not quitting the game, others yelled at them. For example, Mother 2 expressed, "*Sometimes I yell at him when he doesn't stop playing. Sometimes I raise my voice*". Father 2 mentioned that "*When it is necessary, I warn him with a loud voice*". Despite all these strategies to set time limits, parents have accepted that such efforts can be futile. As such, some parents simply tried to get their children to take short breaks while playing with the tablet. When these strategies did not work, parents said they had taken stricter measures. Father 5 declared, "*I remove the tablet and I do not allow him to play. It is hidden now*." Although parents tended to prevent their children from overusing digital devices, their restrictive mediation strategies were often ineffective.

Restrictive Strategies for Content

The content of digital play has emerged as another issue that parents were concerned about and tried to restrict. Echoing the concerns of many parents, Father 2 stated that he was aware of problems with the content of digital games. He expressed amazement over a violent version of an innocent game like chess.

> *In one digital chess game for children, when you capture a pawn with a queen, she takes its head off and everywhere soaks with blood. I don't know if you have ever seen this. There was a chess game like this, a different version. We didn't allow it. Because there were things like beheading, you know it is in everywhere. So we don't allow such games. The content is important. (Father 2)*

As in the example above, parents stated that they tended not to expose their children to violence in digital games. Although Father 4 shared similar views about violence in digital games, he interestingly explained that instead of completely banning fighting games, he allowed fighting games preconditioned on his observation, examination, and approval of the game content, stating that:

> *...but when my child plays fighting games and so on, I still look at the content of the game. I'm not saying you*

can't play a fighting game here. I don't let him play when I see something harmful" (Father 4)

Similarly, Father 1 checked the usage history after his child played with the tablet, "*I can control what games he played when I get the tablet. I mean, I can see and follow what he downloaded*." These comments revealed that there were differences in what parents understand about restrictive strategies about the content. Regardless of parental attempts to govern content, it appeared that children played games that contained various forms of inappropriate content, such as violence, deadly weapons, or blood. Child 3 openly expressed that, "*I take machine gun in GTA and kill the men*." Parents' strategies to restrict content did not prevent the children from playing violent games. Likewise, checking the search history was insufficient to prevent children from seeing inappropriate content.

Discussion and Implications

This study uncovered a range of issues related to young children's overuse of digital play at home from a non-Western cultural perspective. First, the study revealed that there were obvious features of overuse cases such as starting to play on devices at an early age, owning at least one device, spending a long time playing with it, and engaging in inappropriate content. Even though participant children aged five to seven and attending kindergarten, playing with digital devices dominated the lives of these children. Regardless of their age, they all preferred to play popular digital games, behave, and react similarly during their digital play. While the parents in this study recognized possible risks of overuse, their precautionary efforts were not been sufficient to regulate or prevent the situation. Plowman and Stephen (2014) argue that exploring children's digital play demands attention to the context in which the engagement occurs. In these cases, participant children were guided without planning where, how and what to play and circumstances playing with digital devices.

Overuse created a range of emotions from happiness to aggression, and that increases in negative, and unregulated, emotional states often lead to conflicts among parents and children. The majority of participant children felt a sense of accomplishment and happiness when they won the games, whereas they felt anger and frustration when they lost the game. These reactions seem natural but, in social play, children regulate their emotions according to their peers' reactions and this helps children to gain emotional regulation skills (Rubin, Coplan, Fox, & Calkins, 1995). In this study, children acted out their feelings rather than regulating them while playing with digital devices. The absence of these skills is a risk to children's well-being. Again, our findings identified that overuse caused negative emotions resulting in conflicts between children and parents. On one hand, parents

appreciated some of the positive aspects of digital play (e.g., baby sitter, keep them quiet), but on the other hand, they were aware of the risks (e.g., health, isolation). This dilemma made parents feel internally conflicted about their child's digital play and they occasionally struggled to limit it. When inconsistencies between parents were added to these conflicts, including arguments with their children, disrespectful behaviors and punishments increased. In line with Hiniker, Suh, Cao, and Kientz (2016) our study indicated setting limits on young children's digital can be a challenge for parents that can result in arguments and painful experiences. Therefore, parental education and support programs that provide concrete examples of solving conflicts about digital play habits, content, and time restrictions should be offered for parents. Specifically, pediatricians and early childhood institutions serve as a gatekeeper for providing such education programs or connecting parents to reach available programs.

Second, this study indicated that the joint effects of different factors triggered children's overuse. Children's interest in playing games and parental difficulties in mediating these desires had important impacts. Research studies have revealed similar results, indicating that children's interest and enjoyment are important factors affecting the excessive use of digital games (Abdul Aziz, 2013; Heider & Jalongo, 2015; Naisbitt, Naisbitt, & Philips, 2004). A child's interest, though, is not a sufficient cause for overuse. Several additional factors are contiguous to child interest, such as parental beliefs of digital play, their lack of time for their children, being a poor role model, and the allowance of digital playtime as a reward are all contributing factors to the phenomenon of overuse. These findings are compatible with previous research that found relations between parental factors and children's screen time (Lauricella et al., 2015; Nikken & Schols, 2015b). In this respect, examination and regulation of parental factors may be necessary to prevent children's overuse (Chiong & Schuler, 2010; Wartella, Rideout, Lauricella, & Connell, 2013). Vygotsky (1978) theorized that play creates the "zone of proximal development" in which parents must negotiate their role in digital play to support children's rich play experiences. Empowering parents to change these factors may be a useful strategy, including the dissemination of information about digital parenting that contains practices for reducing overuse.

Indeed, the emergence of digital overuse must be construed within what variously termed the digital era, the digital revolution, or the information age. Regardless of the choice of words, the digital era is one marked by disruptions to traditional economic and social practices. This analysis examines the effects of these disruptions concerning how specific technologies are produced for, and integrated into, the daily lives of children. Captured in this particular age of digital transformation, traditional forms of play have been disrupted in the lives of both children and their parents. This new generation of 'digital parents' wants to learn about the best practices for providing digital media to their young children (Livingstone et al., 2015). From a public health perspective, there is a strong need to have positive parenting programs or sharing lists of recommended imaginative, creative and educational sites and apps for parents (Özyurt, Dinsever, Çalişkan & Evgin, 2018). In dealing with the disruptions to traditional forms of play, parent training programs can provide a vital role in reducing parental screen time and increasing parent-child interactions.

Lastly, the results showed that parents mainly preferred restrictive mediation strategies to reduce the overuse of digital play activities. Research examining mediation strategies indicated that parents used a range of strategies from active to restrictive mediation (Nevski & Siibak, 2016a; Nikken & Jansz, 2014; Nikken & Schols, 2015a; Selwyn, 2017). These strategies included explaining to the children about rules and safety (active mediation), using educational and instructional programs with children (co-user), residing and observing when the child is using the tools (supervision /monitoring), and using filter programs (technical) (Nikken & Schols, 2015a). It is not sufficient to use only restrictive mediation to overcome the risks of overuse. Rather than restrictions, or just active mediation approaches, experts recommend an approach that mixes restrictive and active approaches to guide their children's media use (Livingstone et al., 2015). Parent-child discussions also enhance children's critical thinking development, which can assist children in choosing between appropriate and inappropriate media content (Wu et al., 2014). It is also important to note that there were also inconsistencies amongst the participating parents' behaviors about establishing rules about the time and/or content of the digital play. For these reasons, using appropriate mediation strategies can play a vital role in teaching children how to use digital devices. Specifically, in the context of Turkey, there is insufficient, inconsistent, or even conflicting information about mediation strategies and screen time. Again, the basic information about how much screen time is considered to be overuse, what are the risks and best practices for setting appropriate time and content restrictions should be disseminated to parents. Parental training programs are necessary for Turkey, and in similar countries, where there is a high percentage of the population owning and playing on a variety of devices, and where the overuse of digital play is now recognized as a serious public health issue. Currently, though, there is a dearth of government guidelines to inform parents about these mediation strategies. In a recent study, Sanders, Parent, and Forehand (2018) proved that a novel one-session intervention has the potential to limit screen time. Therefore, it is suggested that parental training in early childhood education centers, in family healthy offices or online platforms can provide valuable education for all parents about the risks of overuse and best practices for prevention.

Traditionally, "authoritarian" parenting is common among Turkish families and currently, industrialization, economic growth and women's entrance into the workforce influenced both family relations and child-rearing practices (Kagitcibasi, 1996). In recent times, there are notable tendencies in decreasing authoritarian parenting and increase democratic and permissive parenting styles (Sanlı & Öztürk, 2015). It is also important to consider such cultural factors to explain the reasons behind the participant parents' restrictive mediation strategies. As a part of traditional parenting, Turkish parents are expected to assume greater responsibilities, so they tend to require their children to do certain things including rules about digital play (Kagitcibasi & Ataca, 2005). When their child did not listen, the participant parents state that they raised their voices or used punishment. Culturally, these kinds of restrictive strategies are acceptable while raising children.

Overall, this study revealed the risky and often conflicted nature of overuse in Turkey and contributes to the literature about understanding this new phenomenon. Considering that young children are turning to more digital play due to the pandemic, the findings of this study will draw attention to the appropriate media mediation strategies of parents. Specifically, parents' use of active mediation as well as restrictive strategies will be effective in preventing excessive use of digital play of children. From a research design perspective, the research questions were narrowly focused on only examining cases of overuse in very young children. These parameters made recruitment difficult, but they also provided one of the strengths of this study. Producing qualitative information about overuse cases amongst very young children made this study unique and offered novel insights into how parents and children experienced digital play. Additionally, the robustness of the data collected from parents, children, and an expert in the psychiatric care and treatment of children suffering from game addiction and overuse greatly enhanced the validity of the study (Creswell, 2009). The study is, however, limited by the descriptive nature of the research. This case study provided detailed and descriptive information about overuse cases in families who had young children. Future research should be increasingly focused on examining a wide range of effective intervention strategies that produce solutions to overuse cases. Additionally, this study only focused on the overuse experiences of children aged five to seven and the participants were mainly boys because of criterion sampling. Future research should begin by selecting a randomized cohort of pre-school children, including those whose parents do not allow their children to use devices. Once selected, these cohorts can participate in a longitudinal study that examines childhood overuse patterns from pre-school to middle childhood, and then into adolescence.

More importantly, this is an exploratory study about the five young Turkish children who experienced excessive digital play at home. Due to the limited number of participants and the qualitative nature of the study prevent generalization of the results to all families having a young child play excessively with digital games. Happily, the results of this study are useful to understand the nature of children's overuse and the role of parents in this situation. Consequently, parents of young children should provide the same guidance and support to their children in digital play as they do in other play.

References

Abdul Aziz, N. A. (2013). Children's interaction with tablet applications: Gestures and interface design. *International Journal of Computer and Information Technology, 2*(3), 447–450.

American Academy of Pediatrics. (2016). Media and young minds. *Pediatrics, 138*(5), e20162591.

Balkam, S., & Dönmez, O. (2017). Çocuklarda çevrimiçi sorumluluk kültürünü oluşturmak. In H. F. Odabaşı (Ed.), *Dijital yaşamda çocuk* (pp. 47–64). Ankara: Pegem Akademi Yayıncılık.

Barr, R. (2019). Growing up in the digital age: Early learning and family media ecology. *Current Directions in Psychological Science, 28*(4), 341–346. https://doi.org/10.1177/0963721419838245.

Biddiss, E., & Irwin, J. (2010). Active video games to promote physical activity in children and youth. *Archives of Pediatrics & Adolescent Medicine, 164*, 664–672.

Bird, J., & Edwards, S. (2014). Children learning to use technologies through play: A digital play framework. *British Journal of Educational Technology, 46*(6), 1149–1160.

Bodrova, E., & Leong, D. (2015). Vygotskian and post-Vygotskian views on children's play. *American Journal of Play, 7*(3), 371–388.

ByNoGame (2018). Türk oyun piyasasının yükselişi. Retrieved December 11, 2020, from https://www.memurlar.net/haber/776018/turk-oyun-piyasasinin-yukselisi.html.

Chiong, C., & Schuler, C. (2010). *Learning: Is there an app for that? Investigations of young children's usage and learning with mobile devices and apps*. New York: The Joan Ganz Cooney Center at Sesame Workshop. Available at: https://dmlcentral.net/wp-content/uploads/files/learningapps_final_110410.pdf.

Connell, S. L., Lauricella, A. R., & Wartella, E. (2015). Parental co-use of media technology with their young children in the USA. *Journal of Children and Media, 9*(1), 5–21. https://doi.org/10.1080/17482798.2015.997440.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Digital Game Report (2019). Güvenli internet merkezi. Retrieved December 11, 2020 from https://www.guvenliweb.org.tr/dosya/RjARy.pdf.

Domoff, S. E., Borgen, A. L., & Radesky, J. S. (2020). Interactional theory of childhood problematic media use. *Hum Behav & Emerg Tech., 2*, 343–353. https://doi.org/10.1002/hbe2.217.

Edwards, S. (2018). Digital Play. Encyclopedia on early childhood. Retrieved from: http://www.child-encyclopedia.com/sites/default/files/textes-experts/en/4978/digital-play.pdf. Accessed 10 Jan 2020.

Guan, H., Okely, A. D., Aguilar-Farias, N., Del Pozo Cruz, B., Draper, C. E., El Hamdouchi, A., Florindo, A. A., Jáuregui, A., Katzmarzyk, P. T., Kontsevaya, A., Löf, M., Park, W., Reilly, J. J., Sharma, D., Tremblay, M. S., & Veldman, S. L. C. (2020). Promoting healthy movement behaviours among children during the COVID-19 pandemic. *The Lancet Child and Adolescent Health, 4*(6), 416–418. https://doi.org/10.1016/S2352-4642(20)30131-0.

Heider, K., & Jalongo, M. R. (2015). *Young children and families in the information age: Applications of technology in early childhood education*. New York: Springer.

Hiniker, A., Suh, H., Cao, S., & Kientz, J.A. (2016). Screen time tantrums: How families manage screen media experiences for toddlers and preschoolers. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (CHI'16). ACM, New York, NY, USA, 648–660. https://doi.org/10.1145/2858036.2858278.

Ilgaz Büyükbaykal, C., & Cansabuncu, A. (2020). Türkiye'de yeni medya ortamı ve dijital oyun olgusu. *E-Journal of New Media, 4*(1), 1–19.

Işıkoğlu Erdoğan, N. (2019). Dijital oyun popüler mi? Ebeveynlerin çocukları için oyun tercihlerinin incelenmesi. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 46*, 1–17. https://doi.org/10.9779/pauefd.446654.

Isikoglu Erdogan, N., Johnson, J. E., Dong, P. I., & Qiu, Z. (2019). Do parents prefer digital play? Examination of parental preferences and beliefs in four nations. *Early Childhood Education Journal, 47*(2), 131–142. https://doi.org/10.1007/s10643-018-0901-2.

Ivrendi, A., Cevher-Kalburan, N., Hansen Sandseter, E., Storli, R., & Holla Sivertsen, A. (2019). Children, mothers, and preschool teachers' perceptions of play: Findings from Turkey and Norway. *Erken Çocukluk Çalışmaları Dergisi, 3*(1), 32–54. https://doi.org/10.24130/eccd-jecs.1967201931119.

Ivrendi A., & Isikoglu Erdoğan, N. (2015). Play in Turkey. In Roopnarine, J. L., Patte, M., Johnson, J. E., & Kuschner, D. (Eds.). *International Perspectives on Children's Play*. Open University Press/McGraw Hill Education ISBN: 978-0335262885.

Jeong, E. J., Kim, D. J., & Lee, D. M. (2017). Why do some people become addicted to digital games more easily? A study of digital game addiction from a psychosocial health perspective. *International Journal of Human–Computer Interaction, 33*(3), 199–214. https://doi.org/10.1080/10447318.2016.1232908.

Johnson, J. E., & Christie, J. F. (2009). Play and digital media. *Computers in the Schools, 26*(4), 284–289. https://doi.org/10.1080/07380560903360202.

Kagitcibasi, C. (1996). *Family and human development across cultures: A view from the other side*. Mahway, NJ: Erlbaum.

Kagitcibasi, C., & Ataca, B. (2005). Value of children and family change: A three decade portrait from Turkey. *Applied Psychology, 54*(3), 317–337.

Kim, Y., & Smith, D. (2017). Pedagogical and technological augmentation of mobile learning for young children interactive learning environments. *Interactive Learning Environments, 25*(1), 4–16. https://doi.org/10.1080/10494820.2015.1087411.

Kucirkova, N., Littleton, K., & Kyparissiadis, A. (2018). The influence of children's gender and age on children's use of digital media at home.

British Journal of Educational Technology, 49, 545–559. https://doi.org/10.1111/bjet.12543.

Lauricella, A. R., Wartella, E., & Rideout, V. J. (2015). Young children's screen time: The complex role of parent and child factors. *Journal of Applied Developmental Psychology, 36*, 11–17.

Levin, D. E. (2015). Technology play concerns. In D. P. Fromberg & D. Bergen (Eds.), *Play from birth to twelve: Contexts, perspectives, and meanings* (pp. 225–232). New York: Routledge.

Lieberman, D. A., Fisk, M. C., & Biely, E. (2009). Digital games for young children ages three to six: From research to design. *Computers in the Schools, 26*(4), 299–313.

Lin, Y. H., & Hou, H. T. (2016). Exploring young children's performance on and acceptance of an educational scenario-based digital game for teaching route-planning strategies: A case study. *Interactive Learning Environments, 24*(8), 1967–1980. https://doi.org/10.1080/10494820.2015.1073745.

Livingstone, S. (2017). Çocuklar ve gençler çevrimiçi yaşamaktadırlar: Hakların, risklerin ve sorumlulukların yeniden yapılandırılması. In Yaz K. Kabakçı & H. F. Odabaşı, (Çev. Ed.), *Dijital yaşamda çocuk* (pp. 19–46). Ankara: Pegem Akademi Yayıncılık.

Livingstone, S., Mascheroni, G., Dreier, M., Chaudron, S., & Lagae, K. (2015). *How parents of young children manage digital devices at home: The role of income, education and parental style*. London: EU Kids Online, LSE.

Magladry, M., & Willson, M. (2019). Playing the game, or not: Reframing understandings of Children's digital play. *Cultural Science., 11*(1), 104–110.

Marsh, J. (2010). Young children's play in online virtual worlds. *Journal of Early Childhood Research., 8*(1), 23–39.

Marsh, J., Plowman, L., Yamada-Rice, D., Bishop, J., & Scott, F. (2016). Digital play: A new classification. *Early Years, 36*(3), 242–253. https://doi.org/10.1080/09575146.2016.1167675.

McDaniel, B. T., & Radesky, J. S. (2017). Technoference: Parent distraction with technology and associations with child behavior problems. *Child Development, 89*, 100–109. https://doi.org/10.1111/cdev.12822.

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco: Jossey-Bass, A Wiley Imprint.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks: SAGE Publications.

Montag, C., & Walla, P. (2016). Carpe diem instead of losing your social mind: Beyond digital addiction and why we all suffer from digital overuse. *Cogent Psychology, 3*, 1157281. https://doi.org/10.1080/23311908.2016.1157281.

Naisbitt, J., Naisbitt, N., & Philips, D. (2004). *İnsan ve Teknolojisi: Gelişim, Değişim ve Geleceği Anlama Anlayışı* Babakuş, S. (Çev. Ed). İstanbul: CSA Global Yayın Ajansı.

Neumann, M. M. (2015). Young children and screen time: Creating a mindful approach to digital technology. *Australian Educational Computing, 30*(2), 1–15.

Nevski, E., & Siibak, A. (2016a). The role of parents and parental mediation on 0–3-year olds' digital play with smart devices: Estonian parents' attitudes and practices. *Early Years, 36*(3), 227–241. https://doi.org/10.1080/09575146.2016.1161601.

Nevski, E., & Siibak, A. (2016b). Mediation practices of parents and older siblings in guiding toddlers' touchscreen technology use: An ethnographic case study. *Media Education Studies & Research, 7*(2), 320–340. https://doi.org/10.14605/MED721609.

Nikken, P., & Jansz, J. (2014). Developing scales to measure parental mediation of young children's internet use. *Learning, Media and Technology, 39*(2), 250–266. https://doi.org/10.1080/17439884.2013.782038.

Nikken, P., & Schols, M. (2015a). Developing scales to measure parental mediation of young children's internet use. *Learning, Media and*

Technology, 39(2), 250–266. https://doi.org/10.1080/17439884.2013.782038.

Nikken, P., & Schols, M. (2015b). How and why parents guide the media use of young children. *Journal of Child and Family Studies, 24*, 3423–3435. https://doi.org/10.1007/s10826-015-0144-4.

Ofcom (2017) Children and parents: Media use and attitudes report 2017. Retrieved from: https://www.ofcom.org.uk/research-and-data/media-literacy-research/childrens/children-parents-2017. Accessed 9 Jan 2020.

Özyurt, G., Dinsever, Ç., Çalişkan, Z., & Evgin, D. (2018). Effects of Triple P on Digital Technological Device Use in Preschool Children. *Journal of Child Family Studies 27*, 280–289. https://doi.org/10.1007/s10826-017-0882-6.

Park, C., & Park, Y. R. (2014). The conceptual model on smart phone addiction among early childhood. *International Journal of Social Science and Humanity, 4*(2), 147–150.

Patton, M. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

Plowman, L., & Stephen, C. (2014). Digital play. In L. Brooker, M. Blaise, & S. Edwards (Eds.), The SAGE Handbook of Play and Learning in Early Childhood (pp. 330-341). SAGE Publications Ltd. https://doi.org/10.4135/9781473907850.

Prot, S., Anderson, C. A., Gentile, D. A., Brown, S. C., & Swing, E. L. (2014). The positive and negative effects of video game play. In A. Jordan & D. Romer (Eds.), *Media and the well-being of children and adolescents* (pp. 109–128). New York: Oxford University Press.

Rubin, K. H., Coplan, R. J., Fox, N. A., & Calkins, S. D. (1995). Emotionality, emotion regulation, and preschoolers' social adaptation. *Development and Psychopathology, 7*, 49–62. https://doi.org/10.1017/s0954579400006337.

Sanders, W., Parent, J., & Forehand, R. (2018). Parenting to reduce child screen time: A feasibility pilot study. Journal of developmental and behavioral pediatrics. *Journal of Developmental & Behavioral Pediatrics, 39*(1), 46–54. https://doi.org/10.1097/DBP.0000000000000501.

Sanlı, D , Öztürk, C . (2015). Anne Babaların Çocuk Yetiştirme Tutumları ve Tutumlar Üzerine Kültürün Etkisi. *Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi , 8*(4) , 240–246 . Retrieved from https://dergipark.org.tr/en/pub/deuhfed/issue/46801/586845.

Seidman, I. (2006). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. New York, NY: Teachers College Press.

Selwyn, N. (2017). Çocuklar ve gençlerin dijital yaşamla mücadeleleri. In H. F. Odabaşı (Ed.), *Dijital yaşamda çocuk* (pp. 1–18). Ankara: Pegem Akademi Yayıncılık.

Slutsky, R., Slutsky, M., & DeShetler, L. M. (2014). Playing with technology:Is it all bad? *Dimensions of Early Childhood, 42*(3), 18–23.

Stake, R. E. (2010). *Qualitative research: Studying how things work*. New York: A Division of Guilford Publications, Inc..

TUİK (2020). Hanehalkı Bilişim Teknolojileri (BT) Kullanım Araştırması, Retrieved December 15, 2020 athttps://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-(BT)-Kullanim-Arastirmasi-2020-33679.

TurkStat (2017). Turkey in statistics 2017. *Turkish Statistical Institute*. Retrieved from: http://andaluciatijara.com/descargas-turquia/estadisticas.pdf. Accessed 9 Jan 2020.

UNICEF (2017). The state of the World's children 2017: Children in a digital world. Retreived from: https://www.unicef.org/publications/index_101992.html.

Vygotsky, L. S. (1978). Mind in society. Cambridge, MA: MIT Press.

Wartella, E., Rideout, V., Lauricella, A., & Connell, S. (2013). Parenting in the age of digital technology: A national survey. Report of the Center on Media and Human Development, School of Communication, Northwestern University. Retrieved from https://cmhd.northwestern.edu/wpcontent/uploads/2015/06/ParentingAgeDigitalTechnology.REVISED.FINAL_.2014.pdf.

Wu, C. S. T., Fowler, C., Lam, W. Y. Y., Wong, H. T., Wong, C. H. M., & Loke, A. Y. (2014). Parenting approaches and digital technology use of preschool age children in a Chinese community. *Italian Journal of Pediatrics, 40*, 44. https://doi.org/10.1186/1824-7288-40-44.

Yeşilay (2020).Teknoloji bağımlılığı. Retrieved from https://www.yesilay.org.tr/tr/bagimlilik/teknoloji-bagimliligi. Accessed 12 Jan 2020.

Yin, R. (1993). *Applications of case study research*. Newbury Park: Sage.