An Analysis of Some Variables Influencing Parental Attitudes towards Technology and Application Use and Digital Game Playing Habits in the Preschool Period

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Abstract

The study was conducted in order to investigate young children's interaction with digital technology in relation to a range of variables. The study population consisted of young children between 0 and 72 months of age who lived in the city of Sivas in 2017 as well as the parents of these children. 414 voluntary parents were included in the sample by means of random sampling method. "A Scale for Measuring Parental Attitudes towards Digital Game Playing and Application Use Habits in the Preschool Period", a tool developed by the researchers, and the personal information form that involved demographic information were used as data collection tools. SPSS 17 was applied for statistical analysis of the data. As to the types of digital tools, 99% of the participants had a smart phone, 70.8% had a tablet computer and 12.1% had a game console in their houses. Besides, 39.6% of the participant children owned a personal digital device. As a result of the study, children's favorite digital device was found to be smart phones. Children who lived within a nuclear family and spent most of their time using a smart phone and who had a personal digital device were found to use digital devices more than did their peers in families which did not engage in outdoor activities or read stories together.

Keywords: Preschool, digital technology use habits, parental attitudes

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Okul Öncesi Dönem Çocukların Teknoloji ve Uygulama Kullanma ve Dijital Oyun Oynama Alışkanlıklarına Yönelik Ebeveyn Yaklaşımlarının Bazı Değişkenlere Göre İncelenmesi

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Öz

Araştırma, okul öncesi dönem çocukların dijital teknolojileriyle etkileşiminin bazı değişkenler yönünden incelenmesi amacıyla yapılmıştır. Araştırmanın evrenini, 2017 yılı Sivas ilinde yaşayan 0- 72 aylık çocuklar ve ebeveynleri oluşturmuştur. Araştırmanın örneklemine evren içinden tesadüfi örnekleme yöntemi ile seçilen araştırmaya katılmaya istekli toplam 414 ebeveyn dâhil edilmiştir. Araştırmada veri toplama aracı olarak, Kanak ve Özyazıcı (2017) tarafından geliştirilen "Okul Öncesi Dönem Çocukların Dijital Oyun Oynama ve Uygulama Kullanma Alışkanlıklarına Yönelik Ebeveyn Yaklaşımları" ile demografik bilgilerin yer aldığı kişisel bilgi formu kullanılmıştır. Verilerin istatistiksel analizi SPSS 17 paket programı ile yapılmıştır. Katılımcıların evlerinde bulunan dijital araçlardan en fazla akıllı telefon %99, tablet %70,8, en az ise oyun konsolu Play station %12,1 bulunduğu bunu yanında kişisel dijital aleti olan çocukların oranın ise %39,6 olduğu görülmüştür. Elde edilen bulgulara göre evde en yaygın bulunan ve çocukların vakit geçirmeyi en çok sevdiği dijital alet akıllı telefondur. Çekirdek ailede yaşan, en çok akıllı telefon ile vakit geçiren ve kendine ait dijital aleti olan çocukların, ailece açık hava aktiviteleri yapmayan, ailece hikaye okumayan ailelerde çocukların daha fazla dijital aletler ile vakit geçirdiği görülmüştür.

Anahtar Kelimeler: Okul öncesi, dijital teknoloji kullanma alışkanlığı, anne-baba yaklaşımları

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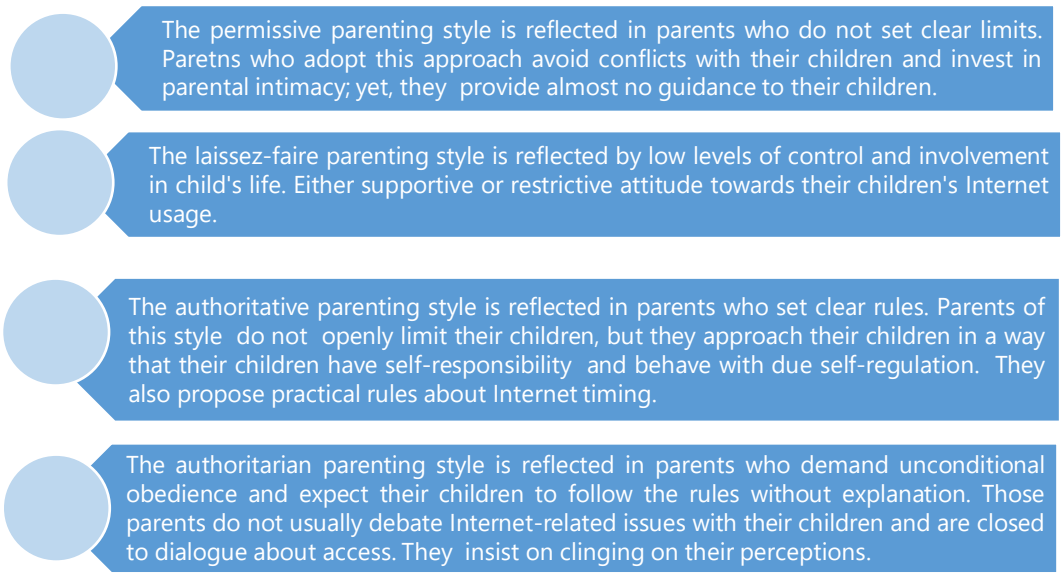
INTRODUCTION

Culture is a cumulative deposit of knowledge that is acquired by a relatively large group and is composed of such factors that affect the society as beliefs, values, attitudes and meanings. The culture of the society they live in is integrated in people's lives and covers all areas of life. Children begin to acquire their cultural heritage, habits and traditional practices as of early ages. Scientific and technological advances have both broadened and altered the concept of culture. The proliferation of digital devices and the vast variety of software applications have brought about the concept of "digital culture." The reality of digital age has created revolutionary ways of altering and affecting societies. Digital technology is so effective and widespread that it is not only important, but also necessary to ensure children's safe access to this technology. It is parents' responsibility to increase their children's awareness regarding the use of digital technology (Ihmeideh and Alkhawaldeh, 2017). Today's young generation is the first generation that has never lived in a world where communication and information technology didn't exist and is described as "digital natives." The generation born before the natives, on the other hand, is named digital immigrants. Digital immigrants are less skilled and knowledgeable in relation to those new skills that digital natives acquire and excel in. Instead, immigrants acquire these skills slowly and gradually. Digital immigrants socialized and learned in different ways than their kids and are now in a process of learning a new language (Prensky, 2001). Today's children are the learners of the "Digital Native Language" of our time. All the educational problems that are experienced today can actually be associated with the differences between these digital native language learners and their digital immigrant teachers (Prensky and Berry,2001). It gains significant importance to guide and impress children who have their own ways of socialization, learning and even thinking. Livingstone and Bober (2004), point at a material and symbolic responsibility of parents to raise electronically mature children. Parents' "material role" involves such activities as buying computers and providing Internet access at home. "Symbolic role", on the other hand, is linked to defining the rules for home Internet usage. Parents are expected to adopt their material and symbolic roles so as to contribute to the education of responsible cyber citizens.

Parents' attitudes towards digital media use at home and children's digital screen time can be explained by means of two distinct theoretical perspectives. Firstly, Bandura (1977), argues that learning and behavior occur through observation of behaviors. In their early years, young children usually learn through observing their parents and elder siblings in their home environments. Children routinely observe their parents as they make dinner, communicate with each other or use digital media devices. Young children probably see their parents use media on different devices for several times a day. For instance, one parent might use a smartphone to check a recipe online and following this, their child might imitate this behavior by using a tablet during the dinner. Secondly, according to Bronfenbrenner (1979), child development consists of a series of ecological systems. According to this, the microsystem is a system that has a direct influence on the child and includes family, peers and school. Its significance stems from the way a child engages in a range of interactions, activities or roles in their microsystem. Some behaviors or actions are believed to have particular influence on development. Considering adults' large expenditure on technological devices and their digital media use, it is highly likely that a child witnessing such behavior will learn and internalize it. This is particularly true when parents themselves are also heavy users of digital media. In addition to the microsystem, children are also affected by the mesosystem, exosystem and macrosystem. Although less direct, other systems also have some effects on children. All the ideas and beliefs that filter through the systems via parents might have an impact on parents' ideas and values pertaining to media in the home environment. From this point of view, parental attitudes and digital media use habits of families play a role in children's technology use (Lauricella, Wartella and Rideout, 2015). Similarly, it is suggested that parental attitudes towards digital media devices at home and their self-control are reflected on their practices of controlling screen times of their children and that those factors might also have an effect on the quality of digital media use. Researchers emphasize that parents whose attitudes towards technology use at home are strict (eg. harmful effects of the media) state they used digital tools less frequently during their youth. Parents who believe technology is harmful are more likely to establish some rules to limit their children's access to technology and to adopt enforcement strategies. As to those with more positive attitudes towards digital technology use, they admitted having relatively longer screen times in their youth (Sanders, Parent, Forehand, Sullivan and Jones, 2016).

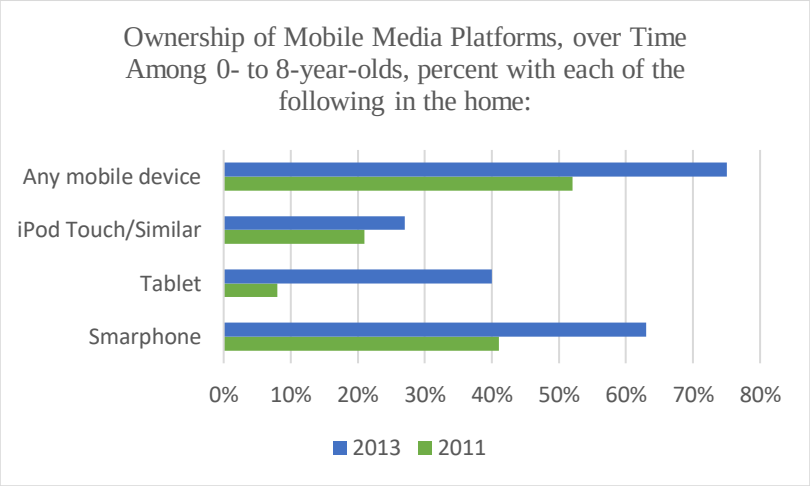
Parenting style, in addition to parental roles, is another factor that influences Internet use. Parenting style describes the involvement and intimacy that parents adopt when taking care of their children. Theory of parenting style is mainly centered on the control dimension. Four parenting styles as defined by Maccoby and Martin (1983), are as follows:



In a study by Valcke, Bonte, De Wever and Rots (2010), the level of significance of the relationship between parental control and parental warmth was investigated and most parents were observed to adopt authoritative parenting style, which was followed by permissive, authoritarian and laissez-faire parenting styles. Findings also revealed a mid-level significant positive relationship between parental control and parental warmth. According to findings, parents who adopt a certain level of control usually have warmer relationships with their kids. Parent's gender also plays an important role. Mothers were found to be the dominant parent who control and guide their children and support them. Findings suggest a similar situation in relation to parental warmth as well. That is, mothers show more parental warmth than do fathers. Furthermore, parents' age also leads to considerable differences in Internet control and parental warmth towards their children. Parents between the ages 25-44 were found to exert more control and warmth attitudes than do parents between the ages 45-54. Parents' educational background was also observed to affect parental warmth and control. Those with high school education were found to show less control and warmth when compared to those with a higher education background. Mothers are the primary decision makers as to what the child is supposed to do on the Internet while they are followed by children and fathers, respectively. Besides, findings also indicate that children who use the Internet mostly for learning stuff are raised by two-parent families headed by relatively older parents (Álvarez, Torres, Rodríguez, Padilla and Rodrigo, 2013). Research on parent-child interaction focuses mainly on mother-child interaction. Mother's communication with the child and ability to make their love for children felt have an effect on the child's development. The reciprocity of the mother-father-child interaction has positive influence on the child. Reciprocity is an important factor that entails "experience, showing love and sharing" and affects child development from the moment a child is born. Accordingly, it is indicated in a study that children's needs, desires and psychological wellbeing should be a priority for their parents and that parents should motivate their children. This warm relationship between children and their parents is a significant factor for the social development of children in the early childhood (Diken, 2009).

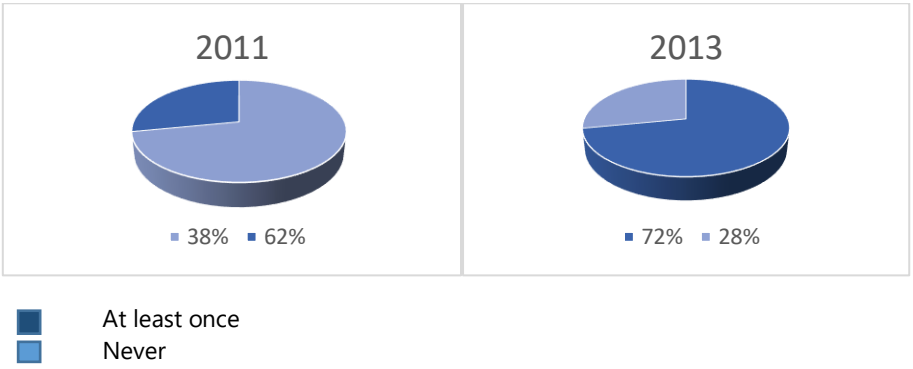
A study was conducted with 1,463 African-American parents with children under the age 8 to explore the first encounter with digital media and to investigate screen times for children who grew up with a digital culture. The study revealed that the number of children who used mobile media nearly doubled and the average time they spent using mobile devices tripled when compared to two years ago.

Figure 1: Increased ownership of mobile media platforms among 0- to 8-year-olds as percentages for 2011 and 2013



(Holloway, Green, Livingstone, 2013).

Figure 2: The percentage of 0- to 8-year-olds who had used such mobile devices as smartphones and tablets at least once



38% of the mobile media users between the ages 0 and 8 consisted of children under the age 2 and these children had used mobile devices at least once in their life. In this age group, any digital device use was 10% two years ago; however, this rate was seen to rise from 39% to 80% for 2- to 4-year-olds and from 52% to 83% for 5- to 8-year-olds. For children of this age category top mobile media activity was playing games and 63% of them had already used a digital device. The rate for this was 33% in 2011 and nearly doubled in 2013. The most widely used digital device was smartphones. 51% of children had used a smartphone at least once in their lifetime. While 44% of the 0- to 8-year-olds used tablets before, this percentage reached 50% in 2013. The percentage of those who used devices only for games of entertainment was 42% and those who used devices for such creative activities as drawing, music or photos constituted the 38% (Holloway, Green and Livingstone, 2013). In a similar study, a questionnaire form was used to explore parents' attitudes towards media use. The study was conducted with 168 parents with children whose ages ranged from 6 months to 5 years. Parents exposed their children to media during the first 6 to 12 months of their babies. Parents justified their permissive behavior towards letting their children use digital media through the fact that their children enjoyed using digital media devices and that these devices promoted education. Besides, parents also admitted they used media as rewards for their children so that they could stay calm and quiet or let their parents do their personal chores. Parents gained the required free time to do their chores while their kids had enjoyable times watching their favorite shows. Apart from these, parents with positive attitudes towards digital media were seen to be more permissive towards their children's digital device use and to care less about the negative aspects of digital device use. If all these results are taken into consideration, it is seen that today's children can easily access and use media. In view of these, it is clear that working or busy parents regard digital devices as a convenient babysitter (Cingel and Krcmar, 2013). A study by Boston University Medical Center Institutional Review Board conducted a cross-sectional analysis with healthy children aged 15-36 months to investigate the possible risks linked to smartphone or tablet use. As result, young children were seen to experience social-emotional difficulties. Besides, low income families were understood to be

more likely to use mobile technology to calm their children down or to keep them quiet (Radesky, Peacock-Chambers, Zuckerman and Silverstein, 2016). The aim of the study is analyzing to some variables influencing parental attitudes towards technology and application use and digital game playing habits in the preschool period. Answers to the following sub-objectives will be sought for this purpose.

1- Is there a significant relationship between parents' education level and children's having a digital device?
2- Is there a significant relationship between children's having their own digital devices and doing outdoor activities together with their family members?
3- Is there a significant relationship between children's ages and having their own digital devices?
4- Is there a significant relationship between children's having their own digital devices and living together with someone out of the immediate family in the same house?
5- Is there a significant relationship between children's having their own digital devices and reading stories with their family members?

METHOD

Research Model

General screening model, a quantitative research method, was utilized in the present study. It is a research method that aims to describe a past or present phenomenon as it is (Karasar, 2006).

Study Sample

The sample consisted of 436 parents of young children aged 0-72 months. 16 forms were excluded from the research as they were incomplete or the same option was marked throughout the forms. As a result, only 420 scales were included in the data set. Simple random sampling, a random sampling method, was used for defining the sample. Simple random sampling offers all the members of a given population equal and independent opportunity to be included in the sample. Equal opportunity to be chosen means that each member has the same likelihood of being included in the sample while independent opportunity refers to the fact that selection of one member does not exert any effect on the selection of another (Kumar, 2014; Özen and Gül, 2007).

Participant children's distribution by gender, age and length of participation in formal schooling are presented Table 1.

Table 1.

The Sample Group's Distribution by Gender, Age and Length of Participation in Formal Schooling

Groups		n	%
Gender	Female	214	51.7
	Male	200	48.3
Age	0-23 months	7	1.7
	24-35 months	6	1.4
	36-47 months	25	6.0
	48-59 months	110	26.6
	60-71 months	179	43.2
	72 months or older	87	21.0
Length of Participation in Formal Schooling	Does not participate in formal schooling	38	9.2
	1-12 months	190	45.9
	13-24 months	139	33.6
	25 months or longer	4	11.3
	Total	414	100

As it is clear from the table, 51.7% (214) of the participant children were female and 48.3% (200) were male. Of the children, 1.7% (7) were 7-23 months old and 1.4% (6) were 24-35 months old. Those aged 36-47 months made up the 6.0% (25) and 48-59 months old participants constituted the 26.6% (110) of the participants. %43.2 (179) were 60-71 months old and 21.0% (87) were 72 months old or older. 9.2% (38) of

the children in the study sample did not participate in formal schooling. 45.9% (190) had been participating in formal schooling for 1-12 months, 33.6% (139) for 13-24 months and 11.3% (4) were children who had been participating in formal schooling for 25 months or longer.

Table 2 presents a cross-tabulation of the educational attainment of the participant parents and their tablet, computer or gaming console ownership at home.

Table 2.
Parents' Educational Attainment and Digital Device Ownership Levels

Groups		Tablet				Computer				Gaming Console			
		Yes		No		Yes		No		Yes		No	
		f	%	f	%	f	%	f	%	f	%	f	%
Primary School	Mother	25	71.4	10	28.6	25	71.4	10	28.6	3	8.6	32	91.4
	Father	16	72.7	6	27.3	14	63.6	8	36.4	1	4.5	21	95.5
High School	Mother	66	71	27	29	62	66.7	31	33.3	10	10.8	83	89.2
	Father	55	75.3	18	24.7	49	67.1	24	32.9	4	5.5	69	94.5
Associate Degree	Mother	35	74.5	12	25.5	36	76.6	11	23.4	6	12.8	41	87.2
	Father	30	66.7	15	33.3	31	68.9	14	31.1	5	11.1	40	88.9
Graduate Degree	Mother	128	72.3	49	27.7	157	88.7	20	11.3	21	11.9	156	88.1
	Father	143	71.9	56	28.1	173	86.9	26	13.7	22	11.1	177	88.9
Post-grad. Degree	Mother	39	62.9	23	37.1	55	88.7	7	11.3	10	16.1	52	83.9
	Father	49	65.3	26	34.7	68	90.7	7	9.3	18	24	57	76
Total	Mother	293	100	121	100	335	100	79	100	50	100	364	100
	Father	293	100	121	100	335	100	79	100	50	100	364	100

As the table clearly shows 71.4% (25) of the mothers with primary school education, 71% (66) of the mothers with high school education, 74.5% (35) of the mothers with an associate degree, 72.3% (128) of the mothers with a graduate degree and 62.9% (39) of the mothers with a post-graduate degree had a tablet at home. Besides, 71.4% (25) of the mothers with primary school education, 66.7% (62) of the mothers with high school education, 76.6% (36) of the mothers with an associate degree, 88.7% (157), of the mothers with a graduate degree and 88.7% (55) of the mothers with a post-graduate degree had a computer at home. 8.6% (3) of the mothers with primary school education, 10.8% (10) of the mothers with high school education, 12.8% (6) of the mothers with an associate degree, 11.9% (21), of the mothers with a graduate degree and 16.1% (10) of the mothers with a post-graduate degree had a gaming console/PlayStation at home. 72.7% (16) of the fathers with primary school education, 75.3% (55) of the fathers with high school education, 72.3% (30) of the fathers with an associate degree, 71.9% (143), of the fathers with a graduate degree and 65.3% (49) of the fathers with a post-graduate degree had a tablet computer at home. Besides, 63.6% (14) of the fathers with primary school education, 67.1% (49) of the fathers with high school education, 68.9% (31) of the fathers with an associate degree, 86.9% (173), of the fathers with a graduate degree and 90.7% (68) of the fathers with a post-graduate degree had a computer at home. 4.5% (1) of the fathers with primary school education, 5.5% (4) of the fathers with high school education, 11.1% (5) of the fathers with an associate degree, 11.1% (22), of the fathers with a graduate degree and 24% (18) of the fathers with a post-graduate degree had a gaming console/PlayStation at home.

Data Collection Tools

In the study, the scale developed by the researchers to measure "Parental Attitudes towards Digital Game Playing and Application Use Habits in the Preschool Period" and the "Personal Information Form" were used as data collection tools. The scale aimed to discover whether parental attitudes towards digital game playing and application use had an effect on children's behaviors of spending time on digital devices. In this 5-point Likert-type data collection tool, items were measured using responses ranging from "Never=1", "Rarely = 2", "Sometimes = 3" and "Often = 4" to "Very Often = 5". The scale was comprised of ten items and two sub-dimensions. The first sub-dimension was "parent(s)' opportunity to have some relaxation and relief for a given period of time." As to the second sub-dimension, it was "child's opportunity to have some relaxation for a given period of time."

For the reliability coefficient and factor analysis procedures, SPSS software package was used. The first sub-dimension of the scale accounted for 41.1% of the total variance and had a Cronbach's alpha coefficient of α=.76. The second sub-dimension accounted for 11.5% of the total variance and had a Cronbach's alpha coefficient of α=.68. The scale accounted for 52.7% of the total variance, and it had a high level of Cronbach's alpha with a value of α=.81. Given the Cronbach's alpha values, it is clear that the scale had a high level of reliability. The suitability of the data set for factor analysis was measured through Kaiser-Meyer-Olkin test (KMO=.856), and the Bartlett's sphericity test value was found to be x^2=733.734; df=45 (p=.000). The fact that the KMO value was higher than .60 and that Bartlett's sphericity test results were statistically significant prove the suitability of the data set for factor analysis (Büyüköztürk, 2007).

In the study, the personal information form was used to gather information concerning the participant parents and children. The form helped gather information about the age of the participant child (in months), gender of the child, parents' ages, parents' educational attainment, the number of siblings, the length of time spent playing outdoors, the types of digital devices at home, digital device ownership of the child, favorite digital device of the child, the child's participation in a social activity/club or sports activity, the child's top activities on digital devices, and activities that the family engaged in together.

Analysis of the Data

In the analysis of the 420 data in the study, the data set was first scanned for extreme values and missing data. The assumptions were verified, and as a result of the extreme values and missing data scanning, 6 data were excluded from the data set. The significance value of .05 was adopted as the threshold value in the evaluation of the significance of the findings. Crosstabs were used to describe the frequency and percentage distributions of the categorical variables for the participants. The relationship between the independent variables was examined via chi-square analysis. Chi-square explores whether there exists a significant relationship between categorical variables (Büyüköztürk, 2007). Mann Whitney U-Test was used to evaluate the differences between two groups. It is an analysis method used to compare two independent groups in terms of a quantitative dependent variable (Büyüköztürk, Çokluk and Köklü, 2012).

FINDINGS

Araştırma The data gathered from the scale for measuring parental attitudes towards digital game playing and application use habits in the preschool period were analyzed and presented in tables.

Table 3.

Children's Ownership of Personal Digital Devices and Engagement in Outdoor Activities with the Family

Groups		Does your child own a personal digital device?					
		Yes		No		Total	
		f	%	f	%	f	%
Do you engage in outdoor activities with your family?	Yes	127	30.7	210	50.7	337	81.4
	No	37	8.9	40	9.7	77	18.6
	Total	164	39.6	250	60.4	414	100

The significance of the relationship between children's personal digital device ownership and engagement in outdoor activities with the family was checked via crosstabs. In view of the table, it is seen that 30.7% (127) of the children who owned a personal digital device engaged in outdoor activities with their family and 8.9% (37) of them did not engage in any outdoor activities with their family. 50.7% (210) of the children who did not own a personal digital device engaged in outdoor activities with their family and 9.7% (40) of them did not engage in any outdoor activities with their family.

Table 4.
Children's Ownership of Personal Digital Devices by their Age Groups Chi-Square Test Results

Groups		Age							
		0-35 Months		**36-59 Months**		**60- 72 Months**		**Total**	
		f	%	f	%	f	%	f	%
Does your child own a digital device?	Yes	2	0.5	39	9.4	123	29.7	164	39.6
	No	11	2.7	96	23.2	143	34.5	250	60.4
	Total	13	3.1	135	32.6	266	64.3	414	100

x2=14.56, sd=2, p =.001

Children's ownership of personal digital devices by their age groups was analyzed using chi-square test. It is clear from the table that 0.5% (2) of the 0- to 35-month-old children, 9.4% (39) of the 36- to 59-month-old children, and 29.7% (123) of the children who were 60 months old or older had a personal digital device. There was a significant relationship between the ages of the participant children and their ownership of a personal digital device x^2(sd=2, n=414)=14.56, 2, p <.05).

Table 5.
Children's Ownership of Personal Digital Devices and the State of Having Person(s) Outside the Nuclear Family Members residing in the Same Household Chi-Square Test Results

Groups		Does another person outside your nuclear family live in your house?					
		Yes		No		Total	
		f	%	f	%	f	%
Does your child own a digital device?	Yes	21	5.1	143	34.5	164	39.6
	No	16	3.9	234	56.5	250	60.4
	Total	37	9.0	377	91.0	414	100

x^2 =4.99 sd=1 p=.025

The relationship between children's ownership of personal digital devices and the state of having person(s) outside the nuclear family members residing in the same household was explored by means of chi-square test. In the light of the table, it is seen that 5.1% (21) of the children who owned a personal device shared their house with at least one relative outside their nuclear family while 34.5% (143) of those children did not have any other relative living in their houses except for the members of their nuclear families. 3.9% (16) the children who did not have a personal digital device shared their house with at least one relative outside their nuclear family while 56.5% (234) of those children did not have any other relative living in their houses except for the members of their nuclear families. It was concluded that there was a significant relationship between children's ownership of personal digital devices and living with a nuclear family x^2(sd=1, n=414)=4.99, p=.05.

Table 6.
Children's Ownership of Personal Digital Device

Does your child own a digital device?	N	Mean Rank	Sum of Ranks	U	p
Yes	164	238.15	39057.00	15473.000	.000
No	250	187.39	46848.00		

The Mann-Whitney U test was used because the normality distribution assumption could not be met. As a result of the Mann-Whitney U test, the differences between mean ranks in relation to children's ownership of personal digital devices were found to be statistically significant. (u=15473.000, p<.05). When the mean ranks were taken into consideration, the scores of the children with personal digital devices were seen to be significantly higher than those of other children who did not have personal digital devices.

Table 7.

Do you engage in outdoor activities with your family?

Do you engage in outdoor activities with your family?	N	Mean Rank	Sum of Ranks	U	p
Yes	337	199.21	67133.50	10180.500	.003
No	77	243.79	18771.50		

Mann-Whitney U test revealed statistically significant differences in terms of engagement in outdoor activities with the family (u= 10180.500, p<.05). The mean ranks of the children who engaged in outdoor activities with their families were significantly lower than those of the children who did not engage in outdoor activities with their families.

Table 8.

Do you read stories with your family?

Do you read stories with your family?	N	Mean Rank	Sum of Ranks	U	p
No	150	231.55	34733.00	16192.000	.002
Yes	264	193.83	51172.00		

The Mann-Whitney U test was used because the normality distribution assumption could not be met. Mann-Whitney U test found out statistically significant differences in terms of reading stories with the family (u=16192.000, p<.05). Parents who read stories with their families had considerably different mean ranks than their peers who did not read stories with their families.

CONCLUSION AND RECOMMENDATIONS

99% of the participant families had smartphones, 70.8% had tablet computers at home, 80.9% had computers and 12.1% had a gaming console at home. In 39.6% of the families, on the other hand, children had their own personal digital devices. In the study, mean ranks of the families with children who enjoyed using smartphones the most were higher than those of families whose children used other digital devices. Families whose children did not enjoy spending time with digital devices got the lowest mean rank values from the scale. Nearly all families owned smartphones and families in which mothers held an associate or graduate degree had considerably higher digital device ownership rates. Contemporary families have at least one or more types of digital technology devices. In modern societies, adults live on their smartphones. Therefore, today's children are called "digital natives" as they are born into and live with digital technology devices (Ihmeideh and Alkhawaldeh, 2017). A review of recent studies shows that video and computer games usage has surpassed TV usage. Children of both low and high income families are believed to be at risk if they exceed the acceptable limits of video and computer games usage (Christakis, Ebel, Rivara and Zimmerman, 2004).

Another finding of the study showed the rate of digital device ownership among children to rise significantly as of 60-72 months of age. Children with personal digital devices were seen to spend more time using digital devices. In their study, Lauricella, Wartella and Rideout (2015), underline the fact that today's children can easily access a variety of digital devices that allow them to play games, do internet searches and engage in other screen-based activities. They also emphasize the fact that use of digital technology has become dramatically widespread and that it is important to control screen time and supervise children. In a study by Cingel and Krcmar (2013), digital screen use was revealed to have risen significantly. In the same study, 1-year-old children were found to have access to videos, web sites, computer games, electronic story books and video games. 70% of children younger than 12 months and 91% of those aged between 2 and 3 years, on the other hand, were understood to spend at least a couple of times weekly on their digital devices.

Unsupervised use of digital devices and long screen times might lead to violence and obesity and can cause extensive and increasingly growing prosocial problems in young children. Therefore, parental attitudes have great importance. Attitudes towards media use in the early childhood are very important for understanding the variables that affect digital device use in this age group. There is a range of factors that influence the number of digital devices in households and the amount of time they are actively used. Having relatives other than the members of nuclear family residing in the same house with children might have an effect on children's personal digital device ownership rates. Before the digital age began, children had a household surrounded by parents, grandmothers and grandparents with one single television. Today, however, 96% of families have at least one television at home and 36% of children under age 8 have their own televisions in their bedrooms (Lauricella, Wartella and Rideout, 2015). In addition to these, increasing rates of digital media device purchases in recent years requires particular attention. According to a study, access to smartphones in low income families has increased from 27% to 51% over the last two years and as to the ownership of tablets, it has risen from 2% to 20% in the same population group. Two years ago, the rate of low income children who had ever used a mobile device was 22%, yet, today this rate has reached 65%. For example, 20% of children in low income families have their own tablets and this rate is 63% in high income families. 35% of parents in low income families download educational applications for their children while this rate is 75% in high income families (Holloway, Green and Livingstone, 2013).

In the study, it was found out that the mean ranks of the parents who did not read stories or engage in outdoor activities with their families were higher than those of the participant parents who read stories and engaged in outdoor activities with their families. In his book Emille, Rousseau (2005); points out that spending time outdoors with children is essential and that, in this way, children regain the energy and vitality that they lost when spending time indoors or in crowded places. Changing living conditions have altered the family life, as well. Late parenthood, a common phenomenon in our age, leads to some changes in family life or child rearing. Besides, children lack sufficient and necessary time to communicate with their parents due to such reasons as working mothers or long, stressful and irregular working hours. As the time spent with kids has decreased, families' child rearing practices have changed significantly. Lack of opportunity to make friends outside the school and the decreasing levels of social relations stemming from the lack of convenient places where they can develop have isolated children from the society. As a direct consequence of this change, children are deserted to digital devices. Spending time with their family and building a healthy amount of communication with them, which are activities that are suitable for all children by nature, are actually fundamental children's rights that are accepted by both national and international declarations (Çalışkan, Sağlam and Ulutaş, 2015; Pembecioğlu, 2006). In a recent study conducted by Connell, Lauricella and Wartella (2015) with more than 2,300 parents to define 0- to 8-year-old children's styles of digital screen use and screen times, the way children spent time with their parents in a typical week was examined. 52% of the children were found to spend time with their mothers on a typical weekday while this rate was 21% when it came to fathers. During a typical weekend, 94% of the mothers and 84% of the fathers were revealed to spend either the whole day or a considerable part of the day with their children. 92% of the parents stated that the most common activity they engaged in with their children was reading books. Gender, race, age and educational background of parents, particularly those of parents who lived together, were understood to influence the likelihood of doing activities with children. Besides, parents who admitted using their smartphones or tablets frequently or occasionally when they were together with their children made up the 63% and 64% of the participants, respectively. Parents' gender was observed to lead to significant differences in terms of the digital devices that were shared with children. In addition, it was the gender variable that increased mothers' likelihood of sharing books with their children and fathers' likelihood of using video games with their children. This also confirms the findings of past studies which, in general, suggest that fathers are more likely to engage in more enjoyable activities with their children than are mothers. It also indicates that older children tend to play more video games with their fathers than they do with their mothers.

Technological digital devices have been integrated in our daily lives within a short time and children have become addicted to digital devices despite the fact that unsupervised and excessive use of these devices has a variety of negative outcomes. Parents should create a family media plan to ensure responsible use of digital media. Experts warn parents that there should be clear limits to the use of digital devices in a way that it is appropriate for children's level of development and is balanced so that children have enough time for other

daily needs. Parents should educate their children about the use of media and should use media together with their children. Using media as a babysitter or as a reward or punishment tool should strictly be avoided (Shifrin, Brown, Hill, Jana and Flinn, 2015). In a similar study, parents were recommended to keep their children under the age of two away from digital media. Experts also advise that when introducing digital media to children, parents should use high-quality programs with their kids. According to experts, screen time for children 2 to 5 should not be longer than an hour per day (Hill and et al., 2016). American Academy of Pediatrics (AAP, 2015) prepared a guideline about children's digital media use as follows. In a world where children "grow up digitally", parents' role is critical. Adults as parents can build stronger bonds with their child by touching and hugging them or by romping and playing physical games with them instead of watching a screen together. Language development is promoted more effectively when children engage in face-to-face conversations with an adult instead of engaging in one-way communication (passive listening) in front of a screen. Apart from these, you can encourage screen-free and unplugged family dinner conversations or arrange special family interaction times. Monitor the games your kids play and get to know their friends if they happen to make friends during these games. Check the applications and websites that your child use rather than allowing them to use technology in an uncontrolled way. Accompany your child when he/she is playing digital games. In this way, you can give them the opportunity to learn through fun and have the chance to share your own experience with your child and guide them through this process. As a natural result of these, your interaction with your child increases and your bonds are strengthened. All the offline and unstructured games parents play with their children contribute to the development and creativity of children. If your child plays digital games, please follow your everyday parenting style when monitoring your child's media use. Ensure that there are reasonable time limits for games and encourage your child to remain within these limits. As a parent, provide a good role model to your child by restricting your own media usage. Technology can be an effective way to keep your child calm and quiet; however, parents should not treat technology as a pacifier. Parents should prefer activities that are more appropriate for child development by attracting their children's attention to different activities to entertain or pacify them.

In the 21st century, it is not quite possible to completely ban children from screen-based games in daily life. Digital games have visually become more attractive and realistic through time. In addition, interactive games have become more widespread and players' active role in the game has gained importance. Features that promote visual reality challenge the sense of self in a way characterized by immersion, distorted time perception and temporary loss of one's sense of self (Wallenius, Rimpelä, Punamäki and Lintonen, 2009). Researchers strive to find solutions to curb the negative effects of technology, apps and digital games usage when it is not possible to restrict their use. Barnett, Bangay, McKenzie and Ridgers (2013) argue that applications which combine games with physical activity can make these games more health friendly. Live processing of the video stream from the camera via motion sensors can make it possible to control all the overlaid digital images. According to another approach, location-based games like GPS can be an opportunity to encourage children to engage in physical activities when accessing game scores. For example, children can make active yet irrelevant movements to do the exercises in the right way and to gain extra game time. Indeed, general physical activity can be promoted during the games, children can be rewarded for this and in return, these practices would work as an alternative solution to physical inaction. Therefore, in future studies, it would be useful to discover what would provide the optimal environment that would act as the best developmental stimulant to young children.

RECOMMENDATIONS

In view of the study findings, some recommendations can be made. Parents can be advised to establish rules regarding technology, application and digital games use, which are set initially and are binding for all family members. Determining these rules together with their children and adopting a consistent attitude in terms of family members' obedience to these rules will be helpful. Previously defined rules will play a significant role in reducing unpleasant behaviors associated with using digital devices. If parents, when possible, use digital devices together with their children and guide their children throughout this process, possible unpleasant outcomes will be easier to prevent. For parents, it is also wise not to allow children use digital devices without due supervision and control. It is also important to help children develop healthy digital

gaming habits as of early ages. Apart from that, it is a known fact that ownership of digital devices has been continuing to increase steadily. Therefore, digital device ownership and the intended use can be considered to be significant factors that affect their use in family settings.

In future studies, the sample group and hence the scope of the research can be extended in a way to include families from different geographical areas. Face-to-face interviews can be conducted not only with parents and senior members of families but also with preschool teachers.

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