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Teachers' Views on Digital Addiction among Preschool Students

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Abstract

In this study, it is intended to reveal the views of teachers about the digital addiction of preschool students. To this end, a qualitative study was performed. A series of interviews were held with 20 preschool teachers working in kindergartens in Denizli city center in the 2021-2022 academic year. Specifically, the interviews sought to answer the following research questions: "What are the family- related causes of digital addiction?"; "What are the environmental causes of digital addiction?"; "What are the negative effects of digital addiction on students?" and "What precautions should be taken to prevent digital addiction?" The results denoted that causes of digital addiction among pre-school students are related to bad parental role models, parental indifference and lack of parental guidance.

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INTRODUCTION

The remarkable and rapid inclusion and spread of technology along with digital platforms in human life has deeply affected young people, adults, especially children, and they were hooked to the screens. Children are trapped in a virtual life and have begun to move away from reality. Attractive digital games with rich visual content have fascinated children. The fact that children, who are in the age of development, get lost in the virtual world and wrapped up in a different fantasy world has pushed them towards a completely different artificial world. Adults, families and environmental causes have a great impact on the emergence of this situation (Baldemir, 2021).

Environmental causes play a significant role in children's digital dependency. Due to the rapid urbanization, parks and playgrounds have narrowed and children have been confined to their homes. Children living under stay-at-home policies were deprived of physical environments and they failed to socialize. Therefore, children have become individualized and have begun to tackle their loneliness with digital games, smart devices, tablets, computers and televisions. In fact, the use of social media among adults has increased recently (Mustafaoğlu, Zirek, Yasacı, & Razak Özdinçler, 2018).

Another environmental reason for digital addiction in children is the pandemic process. With the Covid-19 outbreak, the amount of time that children spend in front of digital screens has increased even more due to the suspension of face-to-face classes, home confinement, restrictions and isolation. In the meantime, behavioral disorders and physical and cognitive problems tend to occur in children who were more exposed to digital tools. Disorders such as attention deficit, hyperactivity, aggressive behaviors, sleep disorders and obesity have occurred. The increase in the amount of physical inactivity, especially at home, has brought physical discomforts. Following the widespread use of technological tools and smart devices, negative effects of digital tools on children have increased. As a result, addictions to technological devices and smart devices, and unwanted behavioral disorders have been seen in children.

In pre-school education, which constitutes the first level of education, children develop rapidly in terms of physical, emotional, social and cognitive aspects. Thus, children need to acquire knowledge, skills, attitudes and basic habits, learn and use social judgments (Kandır, 2001). In such a critical period in development, digital addictions that occur as a result of the conscious use of digital tools without guidance adversely affects children and turns their lives upside down.

Families also have a huge impact on development of digital addiction in preschool children. It is known that children with lack of guidance and who cannot establish a healthy communication with their family members tend to play digital games more. The shortening of the time spent with the family and the decrease in communication affect the children adversely. Therefore, if children who spend time on digital platforms frequently are not supervised by their parents, the risk of abuse of virtual environments will increase (Young, 2009). Children see digital games as a relaxing and enjoyable time (İnal & Çağıltay, 2005). The excessive desire for these games, which are thought to relax people, and the desire to spend time with digital tools, has led to the emergence of the concept of digital addiction over time (Çakır, 2013; Irmak and Erdoğan, 2016). Today, despite the improving social and economic opportunities, digital addiction is reported as the cause of children's dissatisfaction and symptoms of depression (Twenge & Campbell, 2015). The proliferation of digital technology usage areas, and especially the fact that it has become an indispensable part of children's daily lives, causes the decrease in outdoor playgrounds and creates negative effects on children. For this reason, it is seen that the prolongation of screen addiction and the time allocated to the game on technological devices causes a decrease in the face-to-face communication of children with their peers and group games, while the games played alone cause an increase (Rosen et al., 2014).

Especially the negative effects that arise as a result of constantly interacting with today's technological products is another aspect of digital addiction (Arısoy, 2009). Recently, the internet and

digital tools have become an integral part of life, creating addiction in people and deeply affecting humanity. Therefore, the cultural and social lives of individuals were also negatively affected by this situation and problems have arisen (Beyatlı, 2012). Issues such as introversion, individualization, alienation from society, self-isolation and alienation may occur in individuals with digital addiction (Horzum, 2011). In the United States, more than a thousand parents report in a nationwide phone call that their children under the age of 6 use digital technology an average of 1.58 hours a day, play outside for an average of 2.01 hours, and spend 39 minutes reading. In the study, 36% of the children were found to be constantly watching television. It has been found out that they live in a house where it is open, 45% of parents use their children as a means of keeping them busy when they have important work to take them out, and 27% of their children aged 4-6 use computers every day (Rideout, Vandewater, Wartella, 2003).

The level of being affected by technological tools and the level of using digital platforms can give an idea about the level of digital addiction in individuals. In this respect, the level of digital addictions in individuals depends on attitudes and perceptions towards the use of digital media tools. The penetration of technology and the internet into human life is a development that affects and isolates people in the globalizing world. In this sense, after the remarkable development of digital technologies, people were fascinated by the tremendous change in home, car and communication tools, and as a result, digital addiction has emerged (Kanter, 2020).

Given that digital tools, devices and applications are being produced in different types, scopes and effects day by day and these tools are frequently used by children, it is necessary to dwell upon the digital addiction in students by employing current studies. It is thought that it will guide parents and educators in terms of identifying the causes and levels of digital addiction in students and its negative reflections. This study is of vital importance because it includes teachers' views on digital addiction. This study will provide invaluable insights with respect to the reasons of digital addiction and thus a series of suggestions can be made to reduce digital addiction. Findings from the study can shed light on future studies. In brief, this study strives to reveal the views of teachers about the digital addiction of preschool students. Further, it is expected to make an assessment on the data emerged and provide suggestions.

RESEARCH QUESTIONS

1)   What are the family- related causes of digital addiction?
2)   What are the environmental causes of digital addiction?
3)   What are the negative effects of digital addiction on students?
4)   What precautions should be taken to prevent digital addiction?

METHOD

The study investigates the views of preschool teachers about the digital addiction of preschool students. To this end, a qualitative research model was employed. The research was performed within the context of the case study pattern, one of the qualitative research designs. A case study is a qualitative research approach in which the researcher examines and defines the situations and the situation-related themes that are confined over time by using various data collection tools (e.g., observations, interviews, audio-visuals, documents, reports) including multiple sources. Case study pattern is used with the purpose of examining, understanding and describing the facts, events or situations without any intervention, and offers the researcher the opportunity to reveal the effects and consequences of the facts, events or situations that he/she examines for the participants" (Saban & Ersoy, 2019).

STUDY GROUP

The study group of the research is composed of 20 pre-school teachers working in official kindergartens affiliated to the Ministry of National Education in the central districts of Denizli province in the 2021-2022 academic year. All the participants were selected from among volunteer preschool teachers using the criterion sampling technique. Demographic data on the study group are presented in Table 1.

Table 1. *Demographic Data of the Study Group*

Variable	Level	Number (f)	Distribution (%)
Gender	Female	11	55
	Male	9	45
Total		20	100
Years of Service	0-4	2	10
	4-9	6	30
	9-14	8	40
	14-19	3	15
	20 years and above	1	5
Total		20	100
Education Level	Associate Degree	1	5
	Bachelor's Degree	16	80
	Master's Degree	3	15
Total		20	100

As can be seen in Table 1, 55% of the participants are female and 45% are male. The proportion of female participants is higher than male participants. Given the years of service of the participants, it is 0-4 years with a rate of 10%; 4-9 years with 30%; 9-14 years with 40%; 14-19 years with 15% and 20 years or above with 5%. The eight participants with the 9-14 years of service have the highest rate (%40). On the other hand, one participant with 20 years or above recorded the lowest rate (%5). 5% of the participants had associate degrees, 80% held a bachelor's degree and 3% held a master's degree. Majority of the participants are undergraduate graduates.

DATA COLLECTION TOOLS AND TECHNIQUES

The research data was obtained through semi-structured interview form titled "Teacher Views' on Digital Addictions of Preschool Students". Semi-structured interview questions have flexibility, certain standards and enable to collect in-depth knowledge on particular subject" (Yıldırım and Şimşek, 2005).

Prior to the questions that were created, the literature was scanned and qualitative research was examined. Then, the questions of the interview form were created by the researcher and developed with the support of the consultant so that they could answer the sub-problems of the research. The interview form consists of two parts. In the first part of the form, information about the purpose of the research and the gender, years of service and educational level of the participants are included. In the second part of the interview form, the following interview questions were included:

1) "What are your views and opinions on family-related causes of digital addiction?"
2) What are your views and opinions on environmental causes of digital addiction?"
3) What are your views and opinions on negative effects of digital addiction?"
4) What are your views and opinions on the precautions that should be taken to prevent digital addiction?"

DATA COLLECTION METHOD AND PROCESS

The research data were obtained through interview technique method. The research interview is one of the most important qualitative data collection methods (Büyüköztürk, Çakmak, Akgün,

Karadeniz, & Demirel, 2014). The main goal of the interview "is to try to understand the perspective of the individual by entering the inner world of the individual although it is an activity in which the participants in the study group express their views and thoughts on a determined subject" (Karataş, 2015).

The permission for the interviews was obtained from the Denizli Governor's Office. Using the interview form titled "Teachers' Views on Digital Addiction of Preschool Students", interviews were conducted with 20 preschool teachers working in official kindergartens in the central districts of Denizli province in September-January 2021. The interviews were made face to face using quarantine measures. The interviews lasted on average 20 minutes.

Participants were informed that their answers would entirely be used for academic purpose and would be kept strictly confidential. The views and thoughts of the participants were not directed. The interviews took place in the form of a sincere dialogue and mutual conversation at the schools after the lesson. The questions were asked to the participants in the same order. The answers given to the questions during the interviews were noted by the researcher and recorded in the interview form. The answers obtained were read again to the participants at the end of the interviews, and the answers were confirmed by asking whether there were any points they wanted to add, and the interviews were concluded.

DATA ANALYSIS

The data of the research, which was carried out in a qualitative design as a case study, were analyzed using descriptive analysis method. The descriptive analysis is used in the processing of data that does not require in-depth analysis" (Yıldırım & Şimşek, 2008, p. 89). "Description is the presentation of data by quoting and sometimes to strengthen the meaning and draw attention, without touching the essence of the views received from the people who participated in the research". "The data obtained as a result of the interviews with descriptive analysis are evaluated, and the data that are similar to each other and are closely related to each other are collected and analyzed under sub-themes (code) under the main theme" (Altunışık, Bayraktaroğlu, & Yıldırım, 2010).

A data set was created from the data obtained from the interview forms. The sub-problems of the research were associated with the interview questions. As a result of the descriptive analysis, data that are related and similar to each other were evaluated, codes were created under the main theme of each sub-problem, and the codes and participant information were provided in tables and interpreted. The opinions of the participants, who provide valuable insights, were written in the findings section without interpretation. In the data tables, the participants are indicated as T1-T20 (Teacher 1-Teacher 20). The frequency is denoted by the symbol (f).

FINDINGS

In this section, the findings obtained as a result of the descriptive analyzes of the data obtained within the scope of the research are presented.

FINDINGS RELATED TO FAMILY- RELATED CAUSES OF DIGITAL ADDICTION

The first research question of the research poses the question of "What are the family- related causes of digital addiction?". To this end, the participants were asked to answer to the following question: "What are your views and opinions on family-related causes of digital addiction?". Table 2 shows the themes and codes that emerged from the data analysis.

Table 2. *The Participants' Views on Family-related Causes of Digital Addiction*

Themes	Code	Number (f)	Participants (K)
Family-Related Causes	Negative Role Model	8	T2, T4, T7, T9, T10, T11, T16, T17,
	Indifference	6	T3, T8, T12, T13, T14, T19
	Lack of Guidance	4	T5, T6, T15, T18
	Free-range parenting	2	T1, T20

From the data given in Table 2, the participants' views under the theme of the family-related causes of digital addiction highlighted the following codes: "negative role model (*f*=8)", "indifference (*f*=6)", "lack of guidance (*f*=4)" and "free-range parenting (*f*=2)". Although the family-related causes of digital addiction vary, the most repeated code is the "negative role model" and the least repetitive code was the "free-range parenting". From the participants' point of view, families' behaviors have an impact on the digital addiction among children.

According to Table 2, 8 participants reported that families are "negative role models". This code might be produced because participants articulated that families did not pay attention to the use of digital tools. Some of the participants commented as follows:

…digital addiction is seen in all students. Families have an important impact on this situation. Families themselves are already dependent. That's why I don't blame children. (Interview Record: Participant 2).

…In recent years, children come to school very hyperactive and distracted. This is because children always spend their time at home with digital tools. I think it is quite normal for children to be addicted, since parents also show the same behavior (Interview Record: Participant 7).

…one of my students has an extreme gaming disorder. When I asked the child that do you play games all the time at home and your family doesn't say anything to you, the child replied, "they also play." Families cannot set an example for children (Interview Record: Participant 10).

…at parents' meetings, mothers themselves express and accept this, "We are not setting a good example for our children. We spend a lot of time at home on the phone in front of children. That's not really a good thing either." Families have a huge impact on children's digital addiction (Interview Record: Participant 11).

… First of all, parents should set an example so that children do not become addicted. I look at the quiet students in my class. Students who do not spend a lot of time with digital tools. When I listen to the families of these students, they report, "Teacher, we are very careful at home. We monitor our child and impose limitations. If children have addiction, families should first check themselves" (Interview Record: Participant 17).

As can be seen in Table 2, 6 participants pointed out the code of "indifference" with respect to the family-related causes of digital addiction in children. The participants underlines that if the families spare enough time for their children, they cause their children to become digital addicts. Some of the participants' opinions on this code are as follows:

… If both parents are working, they cannot allocate sufficient time to their children. Children also constantly spend time with digital tools and unfortunately become addicted (Interview Record: Participant 3).

…I think that families have a lot of influence on children's addiction. We are aware that the children of families who cannot take care of their children's education and needs have behavioral disorders due to addiction. If even we do not show interest in our student in the classroom, the

children begin to act on their own. This is most likely what happens in this house as well (Interview Record: Participant 13).

…children today spend a lot of time in technology. I think this would not have happened if the families were interested. It is necessary to monitor the children (Interview Record: Participant 14).

… I think parents enable their children to become addicted. If you are insensitive to your children, the child will spend time at home with other things. This is usually in the form of playing games on tablets and computers, and children become addicted individuals. I think that families should always be interested and in communication with their children (Interview Record: Participant 19).

As shown in Table 2, four participants produced the code of "lack of guidance" regarding the family-related causes of digital addiction. Participants report that families cannot provide their children with the necessary guidance and direction in the field of digital addiction. Some of the participants expressed their views as follows:

…the influence of parents on children is undoubtedly enormous. Families must provide true guidance in order for children not to become addicted. Because children of that age need proper guidance. I think it is necessary to talk to the children face to face about the use of tablets and phones and say they can play games or watch television as much as necessary and in a limited time (Interview Record: Participant 15).

…kindergarten students are at the age where they can distinguish right, wrong, good and bad. For this reason, it is necessary for families to give accurate information about addiction and to teach them the harms of excess. However, as we have seen from the children, this is not so much the case (Interview Record: Participant 18).

When Table 2 is examined, 2 participants identified the code of "free-range parenting". According to participants, families set their children free excessively, and consequently children become addicted. The participants' views on this code are given below:

…yes, unfortunately some of my students are digital addicts. The fact that families set children free has a great effect on the fact that students of this age have become this way. If you leave the children alone and free, the children will set their own rules. In this case, it is quite normal for children to show behaviors such as playing games all the time (Interview Record: Participant 1).

…of course, the influence of families on addiction is very high. Families leave their children extremely liberal when they want to be foster parents. Children in this situation are constantly playing games with phones and computers. This makes them addicted (Interview Record: Participant 20).

FINDINGS RELATED TO THE VIEWS ON ENVIRONMENTAL CAUSES OF DIGITAL ADDICTION

The second research question of the research poses the question of "What are the environmental causes of digital addiction?". To this end, the participants were asked to answer to the following question: "What are your views and opinions on environmental causes of digital addiction?". The themes and codes that emerged from the data analysis are presented in Table 3.

Table 3. *The Participants' Views on Environmental Causes of Digital Addiction*

Theme	Code	Number (f)	Participants (P)
Environmental Causes	Digital World	11	T1, T2, T3, T6, T8, T10, T12, T13, T15, T19, T20
	The Pandemic Process	7	T5, T7, T9, T11, T16, T17, T18
	Errors in Urbanization	2	T4, T14

Looking at the Table 3, it is seen that the participants' views under the theme of the environmental causes of digital addiction are associated with the following codes: "Digital World (*f*=11)", "The Pandemic Process (*f*=7)" and "Errors in Urbanization (*f*=2)". Environmental causes of digital addiction in children are grouped under three codes. Participants consider environmental causes as a factor that result in digital addiction in children.

According to Table 3, the most frequent code remarked by the participants is "digital world (*f*=11)". Participants imply that digital change and transformation in the world has an impact on children's digital addiction. Some participants articulate their views as follows:

… there is no place today where digital is not lived. There is digitalization in houses, shopping malls, in short, everywhere. This situation adversely affects children in this respect (Interview Record: Participant 1).

…there are digital screens everywhere around children. Technology, which is always seen in family, friends and wherever they go, causes addiction in children over time (Interview Record: Participant 6).

… the digital environment is incredible. There are also very interesting devices and games. It is not possible for a preschool child to withstand this situation. Because everything around him/her attracts him/her (Interview Record: Participant 12).

… we adults cannot keep up with this digital change. For children, this situation is perceived differently, of course. Children love to spend enjoyable time with digital tools. This causes habits in them over time (Interview Record: Participant 15).

…tools such as televisions, phones, tablets, and computers have become the world of children. These digital tools have surrounded children. Children are not happy without them. As they spend time constantly, they become addicted (Interview Record: Participant 20).

As seen in Table 3, the second most frequent code stated by the participants is "The Pandemic Process (*f*=7)". The participants argue that the pandemic process with the outbreak of COVID-19 causes digital addiction in children. Some of the participants who commented on this code reported as follows:

…as all teachers, we were very surprised when we saw this year's students. Almost all children have behavioral disorders. Children have become worse by playing games all the time during the curfew and pandemic. It is truly a sad state of affairs (Interview Record: Participant 5).

...I think the pandemic makes children addicted by hooking children up to the screen. The children were constantly at home for 2 years. Since they could not go out for health reasons, all of them spent time with digital tools. This made them addicted (Interview Record: Participant 9).

…I realized that during the pandemic process, children are negatively affected in terms of digital addiction. Even we watched television and followed social media as we got bored during the closures. Of course, this is same for children as well. Thus, the children became addicted in this process (Interview Record: Participant 16).

…I think that the negative situations that children have experienced in the last 2 years are effective in becoming addicted. During the curfew period and closures, children constantly spent time with digital tools at home. You can understand this from the students' situation (Interview Record: Participant 17).

Table 3 also indicates the third most frequent code expressed by the participants which is "Errors in Urbanization (*f=2*)". This code might be produced due to the decline in mainly urban playgrounds, the increasing number of shopping malls and the increase in concrete structures. T4 and T14 remarked as follows:

…there have been a major migration to Denizli in recent years. There is constant immigration from abroad, domestically and from villages. Consequently, only parks remained for the children's playgrounds, since the buildings were built continuously. Unfortunately, the place where you can take your children safely in Denizli, except for the Çamlık and some big parks, is unfortunately very scarce. In this case, the children who stay at home play games all the time and unfortunately they become addicted children (Interview Record: Participant 4).

… there are no playgrounds left for children in city centers. We imprisoned the children at home together. I think everyone has a responsibility. There are buildings everywhere, the streets are very narrow, there are no playgrounds, and there is no security if you let the children to play. Therefore, we imprisoned children in the digital and virtual world. Unfortunately, we enabled them to become addicted individuals (Interview Record: Participant 14).

FINDINGS RELATED TO NEGATIVE EFFECTS OF DIGITAL ADDICTION ON STUDENTS

The third research question of the research addresses to the question of "What are the negative effects of digital addiction on students?". In this respect, the participants were asked to answer to the following question: "What are your views and opinions on negative effects of digital addiction?". The themes and codes that emerged from the data analysis are tabulated in Table 4.

Table 4. *The Participants' Views on Negative Effects of Digital Addiction*

Theme	Code	Number (f)	Participants (P)
Negative Effects	Physical Effects	9	T3, T4, T5, T7, T8, T12, T13, T14, T15
	Behavioral Effects	8	T2, T6, T9, T11, T16, T17, T19, T20
	Social Effects	3	T1, T10, T18

Given the Table 4, the participants' views on the negative effects of digital addiction on students were grouped under the following codes: "negative effects", "physical effects (f=9)", "behavioral effects (f=8)" and "social effects (f=3)". From the participants' point of view, the most common effects of the digital addiction on students are negative physical effects. This is followed by behavioral and social effects.

According to Table 4, 9 participants expressed an opinion on the "physical effects (*f*=9)" code of the "negative effects" theme of digital addiction. The participants report that digital addiction causes negativities such as obesity, sleep disorders, speech disorders and eye disorders in children. Some participants stated as follows:

… I observe excessive eating behaviors in my digitally addicted students. I observe excessive weight gain in my students who do not know how much they eat and feel full while watching the screen. If there is no intervention, there will be serious problems (Interview Record: Participant 3).

…I see eye disorders and perception problems in many of the students in my class. As the children stared at the screens, they began to experience discomfort in their eyes. I've never had students

wearing glasses like this year. In addition, children's perceptions are very low (Interview Record: Participant 5).

… my students come to school without getting enough sleep. When I talk to their families, I get answers like: they sleep late, they can't sleep and they want to play online games at night. Digital addiction caused disruptions in children's sleep schedule (Interview Record: Participant 7).

…I see obesity in some of my students this year. They overeat at lunch time. Since they did not know how much they ate in front of the TV and computer, they started to eat more. Besides, some of my students have wrist problems. I learned that it is because of using the mouse all the time. Addiction caused discomfort in the students' bodies (Interview Record: Participant 13).

As can be seen in Table 4, 8 participants expressed an opinion on the "behavioral effects (f=8)" code of the "negative effects" theme of digital addiction. Participants claim that digital addiction causes behavioral problems in children and behaviors such as hyperactivity, violent behaviors, inability to control anger and excessive irritability occur. In this sense, some participants remarked as follows:

I observe an increase in undisciplined behaviors in the classroom. Students move very fast. The rapid transitions of the cartoon characters they watched and the games they played influenced the students. Although children are not hyperactive, they also exhibit behaviors such as speaking and moving quickly in the classroom (Interview Record: Participant 6).

…digital addiction has increased violent behaviors among students. They show behaviors such as fighting and getting angry. I think that these behaviors are caused by the violent virtual games played (Interview Record: Participant 11).

… my students have problems such as getting angry and being aggressive, even shouting and crying when they are angry. When I talked to the families about this situation, I learned that they showed the same behavior when they could not win in the games they played on the computer. The games they played negatively affected the mental wellbeing of the children (Interview Record: Participant 17).

From Table 4, it is seen that 3 participants highlighted the "social effects" (*f*=3)" code with respect to the "negative effects" theme of digital addiction. In this sense, participants claim that digital addiction leads to social maladjustment in children and causes behaviors such as communication difficulties, loneliness and alienation. In particular, the statements of T1 and T10 are noteworthy:

…digital addiction has had an extremely negative social impact on students. Students are isolated and individualized. They find it difficult to establish friendships. Children lost in the virtual world have difficulty in communicating with their other friends (Interview Record: Participant 1).

…children are constantly talking about the characters in the games in the classroom. I observe that their efforts to establish friendships and help each other decrease. I even have two students in my class. They still stand in the classroom with timid behavior, without speaking much. They behave as if they are strangers in the classroom. It is very possible to see the harms of digital addiction in the social sense. As a mother, I feel very sorry for this situation and I try to improve this situation by contacting families (Interview Record: Participant 10).

FINDINGS RELATED TO THE PRECAUTIONS THAT SHOULD BE TAKEN TO PREVENT DIGITAL ADDICTION

The fourth sub-problem of the research addresses to the question "What precautions should be taken to prevent digital addiction?". The participants were asked to answer to the following question: "What are your views and opinions on the precautions that should be taken to prevent digital addiction?". The themes and related codes that emerged from the data analysis are shown in Table 5.

Table 5. *The Participants' Views on the Precautions that Should Be Taken to Prevent Digital Addiction*

Theme	Code	Number (f)	Participants (P)
Precautions	Raising Awareness Among Parents	11	T2, T3, T5, T7, T8, T11, T12, T15, T17, T18, T20
	True Guidance and Direction	5	T1, T6, T10, T14, T19
	Time Limitation	4	T4, T9, T13, T16

Looking at the Table 5, it is seen that the participants' views under the theme of the precautions that should be taken to prevent digital addiction are associated with the following codes: "Raising Awareness Among Parents (f=11)", "True Guidance and Direction (*f*=5)" and "Time Limitation (*f*=4)". While the majority of the participants expressed their views on the "Raising Awareness Among Parents (f=11)" code, this was followed by "True Guidance and Direction (*f*=5)" and "Time Limitation (f=4)" codes. Participants claim that precautions should be taken in different code titles.

As can be seen in Table 5, 11 participants expressed their opinions on the code of " raising awareness among parents (*f*=11)" of the theme of "the precautions that should be taken" to prevent digital addiction. Participants consider that parents should be made aware first in order to prevent digital addiction. In this respect, some participants said:

Dependency in students is increasing day by day. This situation needs to be solved urgently. I think families first should take precautions. Families need to know what to do in order to take precautions. For this reason, I think families should receive training in order to acquire the necessary knowledge and experience (Interview Record: Participant 2).

…families should be a model to prevent digital addiction. At the same time, it is necessary to know how to prevent addiction. If families are conscious, children will also be careful about their behaviors (Interview Record: Participant 7).

… education begins within the family first. In terms of this kind of addiction, the situation of children is not very promising. I really feel sorry for their situation. Families need to know what to do to solve this issue. Otherwise, serious irreversible consequences may be encountered (Interview Record: Participant 11).

According to Table 5, 5 participants shared their thoughts on the "True Guidance and Direction (*f*=5)" code of the theme of " precautions that should be taken" to prevent digital addiction. From the participants' point of view, true guidance and direction should be provided to children in order to prevent digital addiction. Some participants commented as follows:

…I think that if our pre-school students are guided properly, addictions will decrease. For this to happen, there must be a social orientation. I think that this guidance should be made starting from the family, at school and on television. Children should be allowed to spend some of their time there by finding fun activities and directing them (Interview Record: Participant 1).

…help can be obtained from guidance services in the school in order to prevent digital addiction I think it would be even better if this training was given with families. In addition to that, if students are directed to sports and different courses, addiction may reduce (Interview Record: Participant 10).

… addiction can be prevented with various measures. I think our students need proper guidance. Children are addicted because they are set free. This issue can be resolved with the necessary guidance and direction (Interview Record: Participant 14).

According to Table 5, 4 participants expressed an opinion on the "time limitation (*f*=4)" code of the theme of "precautions that should be taken" to prevent digital addiction. According to

participants, limitations should be made on the amount of time children spend with digital tools. The statements of T13 and T16 are as follows:

> *… the time students spend with computers, phones or television should be limited in order to prevent digital addiction. This is the first thing to do. As long as we cannot do this, it is not possible to reduce addiction. At this point, families are of vital importance (Interview Record: Participant 13).*

> *…children should be allowed to play in a planned and timed manner to combat addiction. It is not possible to fully prevent children today at this point. Because everything around them is digital. Since it cannot be completely prevented, I think it is necessary to impose restrictions and turn their directions to other areas (Interview Record: Participant 16).*

DISCUSSION, CONCLUSION AND IMPLICATIONS

In this study, it was intended to reveal the views of teachers about the digital addiction of preschool students. To this end, a series of interviews were held with 20 preschool teachers. The interviews sought to answer the following research questions: "What are the family- related causes of digital addiction?"; "What are the environmental causes of digital addiction?"; "What are the negative effects of digital addiction on students?" and "What precautions should be taken to prevent digital addiction?".

The impulse to play comes from a natural desire for preschool children (Gökşen, 2014). Today, this impulse to play has been moved to digital platforms with various effects. The fact that virtual games are in line with the child's play nature is effective on digital addiction. In this respect, children's psychology should be well managed by families so that it does not turn into addiction. However, the results implied that pre-school students' digital addition is related to their families who fail to be good role models and pay little attention to their children and as well as their lack of guidance. At this point, it is important to note that families should adjust themselves well, be good role models, spend quality time with their children and take care of them by showing an example of adulthood to their children. The findings of this research is consistent with the results found by Toran, Ulusaoy, Aydın, Deveci, and Akbulut (2016). They revealed that children take adults around them as role models in terms of virtual games and children tend to be motivated to play digital games because parents cannot spare time for their children. In a similar vein, the studies carried out by Çavuş, Ayhan, and Tuncer (2016) and Taylan, Kara, and Arif (2017) yielded similar results and they concluded that " the family-related causes of the children's digital addiction tendencies include lack of knowledge, lack of control, not setting rules and monitoring the child , indifference and doing whatever is desired". Likewise, the findings obtained from the present study are consistent with the Budak's study (2020) which the results demonstrated that "letting go of children leads them to digital platforms and parents who use free-range parental guidance strategies have increased children's tendency of digital game addiction".

According to another result of the research, the pandemic process, the attractiveness of digital tools, the diversity of digital platforms and virtual games can be associated with environmental causes of digital addiction. Environmental causes seem to be effective in children's addiction. The home confinement of children and their inability to go out during the pandemic process may have pushed children into virtual environments and triggered addiction. At this point, it is very vital to create an environment to stimulate children at home. The pandemic process has an adverse effect on children's addictions. In the literature, the result of the study by Aktaş and Daştan (2021) confirms the participants' views in the present study arguing that "Comparison of the digital game play times of the students before and during the pandemic showed that this time increased significantly".

Today, virtual games have been replaced by existing games. Children prefer more virtual games than ever. Preschool teachers participating in the research think that the digital world keeps children

hooked by means of rich and visual content and addiction emerges. Further, the literature confirms the participants. The results that the visual and auditory richness of the games attracts the attention of children more (Malta, 2010); games have enjoyable aspects (İnan & Dervent, 2016); virtual games trigger the desire to play by creating physical pleasure (Karakuş, İnal, & Çağıltay, 2008) and the sounds and graphics that arouse interest in children make virtual games an enjoyable element for children (Killi, 2005) support the findings of the present study.

The result of the research is significant because it clearly reveals what needs to be done to avoid digital addiction among children. Based on the results, it has been understood that raising awareness among families, encouraging students to participate in sports and social activities, and limiting the amount of time spent with digital tools can be effective in combatting digital addiction. Kanter's study (2020) stressed that "the internet and digital devices should be kept out of child's bedroom and the time children spend with digital tools should not exceed 2 hours and be limited" and Çakır (2013) suggested that "the time interval children spend in front of the computer should be kept under control". These results support the present study.

Based on the results of the research, it is suggested that parents should not exhibit free-range parenting behaviors and should organize activities to spend time with their children. Parents should place consistent limits on the time spent using digital tools. They should organize physical activities with their children and plan outdoor activities. Children's emotional state should be constantly monitored by parents and teachers. Social and sports activities should be encouraged in schools. Programs in the fields of media literacy and conscious use of digital tools should be incorporated into preschool programs. Children should be prevented from playing violent virtual games. Parents should be good role models and be aware of digital addiction. Parents can be guided in the use of digital tools and role models; seminars and courses can be organized and consultancy services can be provided. With respect to the researchers, it is suggested that since this research was conducted with pre-school teachers in the province of Denizli in a qualitative design, study groups can include teachers from all education levels and other branches, and new researches can be carried out in different designs. Experimental studies based on observation can also be administrated to students.

In conclusion, especially parents need to receive consultancy services about digital addiction and parents' awareness need to be increased. Therefore, it is thought that parents, sociologists, child psychologists, schools, teachers and all relevant stakeholders should carry out joint studies by taking the necessary precautions and that children should be saved from digital addiction, which is the new age disease of the 21st century.

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