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RESEARCH ARTICLE

A Case Study of Primary School Students' Internet Addiction

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Abstract

This case study aimed to investigate the causes, results, and effects of internet addiction in primary school students, its effect on the social environment, and the studies that have been conducted to tackle this issue. Sample selection was determined with a purposeful sampling method. Within the scope of the research, a total of 21 interviews were conducted in the 2019–2020 academic year, including 8 students, 8 parents, and 5 teachers (four elementary teachers and one school counselor) from a primary school in Eskişehir. The data was examined via content analysis and divided into themes and categories. The findings were presented in line with the data obtained from teacher, student, and parent interviews, and from the school guidance curriculum. The analysis of the data from the students, teachers, and parents, revealed the students' use of the internet, the factors affecting their internet use, and the actions taken by the adults to prevent internet addiction. The findings of the study revealed that students and their parents are aware of conscious internet use, in order to protect children from harmful content on the internet and to benefit from the internet in a positive way.

Keywords: Case study, internet addiction, primary school students, technology

Introduction

Today, individuals use the internet in many areas of their lives, and it is now an indispensable need, becoming more widespread day by day. The data presented by the Digital 2021 provide a clear framework to reveal the current internet usage rates at local and global levels (Digital Report, 2021). An analysis of the global internet usage rates in 2021 reveals that 59.5% of the world population has access to the internet, and 53.6% actively use social media. The daily average duration of internet usage globally is 6 hours and 54 minutes. With regard to the internet usage data in Turkey, the proportion of internet users to the population is 77.7%, and the proportion of active social media users is 70.8%. The rate of internet usage in Turkey increased by 6% in 2021 compared to the previous year. The daily duration of internet use in Turkey is higher than the global average, at 7 hours and 57 minutes. All these figures support the duration and importance of internet use in human life during the day. Moreover,

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in the Digital 2021 report, attention was drawn to the COVID-19 epidemic and its impact on the internet access and use, and it was stated that the epidemic also affected the internet and social media usage rates (Digital Report, 2021).

The usage areas of the internet vary according to the need and demand. While the time spent by young people on the internet is mostly dedicated to playing games and meeting new people, the adults use the internet to gain knowledge or for business purposes (Madell & Muncer, 2004). According to Berson and Berson (2003), the internet is a technology that contributes to individuals' increased access to knowledge and problem-solving skills, when used consciously, accurately, and in alignment with their purpose. However, excessive and unconscious use of the internet causes stress and anxiety, with negative psychological effects (Horzum & Ayas, 2013).

The problems of spending too much time on the internet other than for its intended purpose, and the consequent disruption and neglect in the routines of daily life are defined as internet addiction (Young, 2007). Caplan, Williams, and Yee (2009) stated that people tend to spend more time on the internet due to reasons such as depressive mood, low self-esteem, high level of anxiety in daily life, and unhappiness over being unable to establish healthy social relationships, with the belief that this can be achieved more easily over the internet. Excessive use of the internet leads to decreased productivity in business life, disruption in daily life, and physical and psychological disorders. When people are addicted to the internet, they exhibit behaviors such as excessive worry, anxiety, deterioration in real-life functions, and lying about internet use (Young et al., 2000).

Excessive use of the internet is becoming a widespread phenomenon among students of all ages and levels. Today, with the ease of access to the internet among young individuals, pathological internet use has become widespread among children and youth rather than adults in our country (Arisoy, 2009). The easy accessibility from many places such as the school, home, and the library provides a great convenience to students for their lessons and homework, and this is a factor in the daily increase in internet usage. Students who cannot express themselves comfortably in the social environment and whose communication skills are weak, can express themselves freely on the internet without any limitations. This fact leads to the emergence of problems in friendship and family relations in the later stage. Excessive internet use, which starts at the primary school age, can lead to problems that will hinder the development of children if it is not controlled and if the underlying causes are not investigated. Yaman et al. (2017) stated that it would be beneficial to conduct studies and develop methods to prevent children from being harmed by inappropriate content and situations encountered on the internet.

The unconscious use of the internet by primary school students could lead to negative situations in their daily lives (Binali, 2015). Students may experience social problems due to excessive internet use, their academic performance may decrease, and they may encounter health problems. Ayas and Horzum (2013) mentioned that the excessive increase in the time spent on the internet by children, without parental control, increases the risk of internet addiction, and may cause chronic health problems as well as psychological disorders. Thus, from this perspective, it can be stated that unconscious use of the internet causes not only psychological, physical, and biological disorders, but also affects an individual's social functioning.

Studies reveal that the internet has rapidly become widespread globally and in our country, and many children and adolescents are affected, both in terms of the benefits from the opportunities that it offers, and by the negative consequences that it brings. In a review of the domestic studies on internet addiction, the studies by Eroğlu and Bayraktar (2017) and Derin and Bilge (2016) reveal that individuals addicted to the internet spend a lot of time chatting, playing games, or shopping online. In Cengizhan's study (2013), it was observed that due to their internet use, young people neglected tasks that require responsibility, such as homework and information research, and wasted time more than before. In the studies by Bayram and Gündoğmuş (2016) and Gökçearslan and Günbatar (2012), it was concluded that students who spend an average of 3–4 hours a day on the internet have a higher risk of internet addiction than students who spend 1–2 hours a day. In the studies of Tokel et al. (2013) and Özkan and Hira (2017), it was observed that parents restrict their children's use of technology and the internet in order to control their internet use, but families do not have enough awareness about how their children should use the internet consciously.

Examining the studies conducted abroad on internet addiction, Brand et al. (2014) found that factors such as depression, high stress, lack of self-confidence, and low self-efficacy in individuals increase the risk of general internet addiction. In Young's (1998) study, it was seen that users who have pathological internet addiction syndrome experience academic failure and physical problems due to internet use until late hours, and despite these negative results, the majority of internet-addicted individuals do not want to shorten the time they spend on the internet. In Mohammed's (2016) study, it was seen that internet addiction increased in parallel to the increase in the time spent on the internet, and that students whose activities online are not controlled or followed by parents are also more prone to internet addiction. In a similar study by (Chi et al., 2020), profiles of students diagnosed with internet addiction revealed that they had low academic achievement and had problems such as lack of communication within the family. Many studies in the literature show that internet addiction has a negative effect on the academic performance of students (Hossain

et al., 2017; Sharma & Sharma, 2017; Singh & Barmola, 2015). It was observed that studies conducted in the international literature have focused on the relationship between internet addiction and digital games in recent years (Chia et al., 2020; Tsai et al., 2020).

Based on the results these and other studies on internet addiction, the importance of proposing recommendations on preventive measures that reduce internet addiction, especially among school-age children, is evident. Thus, in this study, in addition to student, parent, and teacher interviews, an analysis of the primary school's third- and fourth-grade curriculum and the school guidance and psychological counseling framework plan used by the school counselor to handle internet addiction will also shed light on other studies to be carried out on the subject. Internet addiction is a phenomenon that harms the development of children and adolescents and is rapidly becoming widespread among children and youth, like other addictions. Especially starting at primary school age, internet addiction can lead to bigger problems if not controlled. In this direction, it is aimed to reveal the internet addiction situation in a holistic and multidimensional way in this study. The questions of this study on the internet use and internet addiction process of primary school students are as follows:

- (1) What are the causes of internet addiction in primary school students?
- (2) What are the effects of internet addiction on primary school students?
- (3) What effect does internet addiction have on the social environment of primary school students?
- (4) What are the studies conducted to prevent internet addiction in primary school students?

Method

Study Design

In this study on internet addiction among primary school students, a case study, which is one of the qualitative study approaches, and the single case with embedded units design were used as the study design. A case study is an in-depth examination and analysis in the authentic context in which one or several special cases occur (Yin, 2017). The case study aims to analyze one or more situations holistically, within the limits of environment and time. This study aims to make an in-depth study on the phenomenon of internet addiction seen in primary school students, and to provide detailed descriptions of this situation.

In a single case with embedded units design, there may be more than one sub-category in a single case, and therefore there will be more than one unit to be analyzed (Yıldırım & Şimşek, 2013). In this study, since more than one sub-unit is examined in a situation, the single case with embedded units design was used. In the study, a single case study of internet addiction in primary school students was discussed. The

case study discussed different analysis units such as parent, student and teacher interviews, and the curriculum (Figure 1).

Study Group

The study group comprised eight students who pursue their education in a primary school in the city center, eight parents, four classroom teachers, and a school counselor, in the fall semester of the 2019–2020 academic year. The purposive sampling method was used as the sampling method in this study. Purposive sampling is a type of non-random sampling in which the researcher uses various methods to identify all possible case studies of a specific and hard-to-reach population (Neuman, 2012). In this study, criterion sampling, one of the purposive sampling methods, was used. The basic understanding in this sampling method is to study the situations that meet a set of criteria created by researchers or are prepared beforehand (Yıldırım & Şimşek, 2013). The criteria for determining the students participating in this study were determined as (1) getting help from the school guidance service regarding internet addiction, (2) being able to express their thoughts and experiences clearly, and (3) their parents' willingness to participate in the study. Thus, the study group consisted of eight students who met the determined criteria, among the students who came to the school's guidance service seeking help related to internet addiction. In this study, third- and fourth-grade students were targeted, since primary school, first-, and second-grade students have just learned to read and write and express themselves limitedly. The parents of the students, their classroom teachers, and their school counselors were also included in the study group. The profiles of students, teachers, and parents in the study group are given below (Tables 1–3); the school counselor is shown as Counselor, the classroom teachers as Tchr, the parents as P, and the students as Std.

Data Collection Tools

In a qualitative study, data is generally collected through interviews, observations, and documents, and data related to the environment, process, and perceptions are targeted (Yıldırım & Şimşek, 2013). The semi-structured interview and document

Table 1.
Participant Teachers' Information

Teacher	Students	Grade Level	Gender	Experience (Years)
Counselor	-	1–4	Female	10
Tchr1	Std3	4	Male	36
	Std8			
Tchr2	Std7	4	Female	12
	Std5			
Tchr3	Std4	3	Female	34
	Std1			
Tchr4	Std2	3	Female	15
	Std6			

Table 2.
Participants' Parents' Information

Parent	Student	Relationship	Age	Gender
P1	Std8	Mother	45	Female
P2	Std1	Grandmother	58	Female
P3	Std4	Grandmother	55	Female
P4	Std6	Mother	42	Female
P5	Std5	Grandmother	60	Female
P6	Std7	Grandmother	56	Female
P7	Std2	Grandmother	43	Female
P8	Std3	Mother	45	Female

Table 3.
Student Participants' Information

Student	Grade Level	Age	Gender	Daily Usage of the Internet (Hours)
Std1	3	9	Male	4–5
Std2	3	9	Male	2
Std3	4	10	Female	2–3
Std4	3	9	Male	5
Std5	4	10	Female	2–3
Std6	3	9	Male	3–5
Std7	4	10	Male	3–4
Std8	4	10	Male	All day

analysis methods were used to collect the data for this study. Within the scope of the study, four different semi-structured interview protocols were prepared, for the classroom teacher, parents, students, and psychological counselor. The semi-structured interview forms prepared for each participant group were formed around the experiences of that group. While the interview protocol prepared for the students focused on their internet use and addiction experiences, the interview protocols prepared for the psychological counselor, classroom teachers, and parents focused on their observations and experiences of the students' internet addiction process and their studies on its prevention. In order to confirm the applicability and expediency of the questions in the prepared interview protocols, we sought the opinions of two faculty members who work in the department of educational sciences, and study technology use by students, conduct studies in the field of psychological counseling and guidance, and have expertise on guidance practices in primary schools. Document analysis is the analysis of written materials containing information about the phenomenon or phenomena that are intended to be studied. In qualitative study methods, document analysis is seen as an additional source of information, in addition to other data collection techniques, to increase the validity of the study (Yıldırım & Şimşek, 2013). In this study, the content and materials used within the scope of the studies to prevent internet addiction, within the curriculum of the third- and fourth-grade courses and the school guidance framework plan were examined in order to support the interviews.

Data Collection Process

Data were obtained from the participants within the framework of the interview questions, which were redesigned in consultation with the expert opinion. Informed consent forms were obtained from the interviewees, and prior appointments were made for their interviews. The interviews with the teachers, students, and parents were recorded with a voice recorder in the school counseling service, in a quiet environment. The researchers transcribed the audio recordings. The curriculum, counseling framework plan and materials, and presentations used in document analysis were provided in collaboration with the participating teachers.

Data Analysis

Content analysis, one of the qualitative analysis methods, was used in the study. Analysis of the study data was carried out in four stages. The coding of the study data was carried out, the themes of the coded data were determined, the codes and themes were arranged, and finally, the data extracted from the codes and themes were identified and interpreted. The researcher verified that the findings obtained became a meaningful whole, and that there was compatibility between the grouped themes, before the themes were interpreted.

Validity and Reliability

In order to ensure the validity of the study, expert opinions were obtained during the preparation of the data collection tool, participant confirmation was applied during the data collection process, and direct quotations were used during the presentation of the data. The data collection and analysis process, and the participants, were also described in detail. On the point of reliability, the findings obtained were compared internally and with previous studies, and their consistency was checked. In addition to this, the data obtained from the study were coded separately to ensure reliability among independent coders. The consistency of the study findings was checked through the analyses and results obtained by both researchers.

The Role of Researchers

In qualitative studies, the researcher is the person who spends time in the field, meets directly with the people within the scope of the study, experiences the knowledge of these people when necessary, and uses the perspective and experience gained in the field in the analysis of the collected data (Yıldırım & Şimşek, 2013). In this study, the researcher tried to be impartial during the process, interviewed the participating teachers, parents, and students as interviewees, and asked questions to reveal the participants' thinking processes.

Ethical Issues

This study was carried out with the permission of the Social and Human Sciences Scientific Research and Publication Ethics Committee of the Eskişehir Osmangazi

University, with the decision dated May 8, 2019 and numbered 2019-9. Data collection permissions were obtained from the relevant Directorate of National Education. In addition, signed consent forms were obtained from the students, their teachers, and parents, indicating their voluntary participation in the study.

Results

In this study on internet addiction in primary school students, the findings were presented in line with the data obtained from teachers, school counselors, student and parent interviews, and the school guidance framework programs and teaching programs. As a result of the analyses, the themes emerged as “internet use, consequences of internet addiction, reasons for internet orientation, and prevention of internet addiction.”

Results Obtained from Students

Internet use

In the interviews, the students stated that they mostly use mobile phones, tablets, laptops, and televisions to access the internet. They stated that they spend between 3 and 5 hours on the internet daily, sometimes all day and until they go to bed at midnight, and they expressed that this time increases even more on weekends. Students shared that they generally do not control the time while they were online. In addition, they stated that unless there is a situation that prevents them from accessing the internet, they never leave the internet, and they find it difficult to school because of the games they play on the internet until late hours:

“The day I didn’t go to school, I looked at the phone until two at night. I fell asleep after that. After that, I couldn’t go to school because I couldn’t have enough sleep in the morning.” (Std3)

The majority of the students shared that their families thought that their internet use was excessive. Students expressed that they do not stay away from technology when there is no internet, and that they always have games on their computers that do not need the internet:

“A thing called offline gaming has developed, so it’s not a problem. I always have a few offline games with me.” (Std8)

Consequences of internet addiction

It was observed that students think that their academic success is not adversely affected by internet use, and they perceive themselves as successful. However, although their overall average in their courses is high, they stated that their use of the internet from time to time interfered with their lessons, they forgot to do their homework, and they could get more efficiency if they spent their time on the internet for school-related activities:

“For example, I cannot learn some lessons. For example, I have difficulties in mathematics, and I cannot learn because I look for other things on the internet.” (Std5).

It was seen that the most common emotion that students experience when they have limited access to the internet or technological tools is boredom, and then they feel bad and even angry. It was observed that a student who learned that her family was trying to prevent his/her access to the internet by hiding technological devices got angry and started to cry, and also started to physically harm herself and her surroundings from time to time:

“When I came home yesterday, I thought my father took the phone. For some reason, I hit my head against the walls, cried, slapped myself. Out of anger, we had a bird called Boncuk, I started hitting its cage.” (Std3).

Another student said that he felt bad when he did not use the internet and could not go out, but this feeling disappeared when he could go out of the house, and he felt better:

“If I can’t go out, I feel bad. But if I go out when I can’t use the internet, I feel good.” (Std8).

In general, the students’ social relations do not seem to deteriorate due to internet addiction, but there are also opinions to the contrary. A student admitted to thinking that she has problems due to the internet, especially in her family relations and quarrels with her parents. She can help her family at home under normal conditions, but admits that she does not help when she is online. She shared the following statements:

“Actually yes. For example, I cannot help someone in my family. For example, my brother is a trainee. For example, he brought something heavy, I can’t help to carry it, for example, but in normal times there is no such thing... Sometimes I fight with my brother.” (Std3).

The students stated that their parents warned them because they spent too much time on the internet, and mostly these warnings were about the need to study. Some students said that they quit the internet after they felt angry for a short while when their parents advised them about the negative consequences of the time spent on the internet. Some students also stated that their families had taken away their technological devices as a precaution, because of their prolonged internet use.

“If I spend too much time on the internet and I don’t want to quit, they send me directly to the village.” (Std5).

Reasons for internet orientation

It was observed that students generally use the internet to play games, access knowledge on topics they are curious about, watch videos, and use social media. There were also students who expressed that they used the internet to relieve their boredom when they could not go out of the house:

“Usually when I’m bored or can’t go out. Because nobody usually comes out. Usually, when I’m bored, I go online to relieve my boredom... I’m watching movies right now. I’m watching a video. I don’t have a hard time watching 1–2 minute videos, I watch them.” (Std8).

A student revealed that he is embarrassed and shy about communicating face-to-face in social environments because of the limited social environments that he can enter, and that he expresses himself more comfortably on the internet because is more comfortable with written expression. He shared the following:

“Nobody goes out; we can’t play, we can’t socialize even if they do. Nobody goes out in our apartment. I can’t go to other apartments and find friends; I don’t know why. I have a problem. Let me put it this way, for example, I can meet well with the sentence “my name is X.” But when I try to meet someone in a public environment, I feel very embarrassed for some reason. Since we do not look directly at each other on the internet and communicate, it makes me more comfortable. Because I’m usually the type of person who speaks his/her mind. I am afraid that I will blurt something out. But when I type, I memorize what I say in my mind, and I can type just by looking at the keyboard how I memorized it.” (Std8).

In addition, the data obtained show that children are introduced to the internet and technology at an early age. Std3 stated that she owned a phone and tablet at around the age of five or six.

Students generally learn about the internet and technology from their families. For example, one of the students said that he learned to use technology by modeling his father and grandfather’s internet use. Again, a student who learned many things in the name of technology with the help of his cousin shared that he received help in downloading and installing games:

“For example, I don’t actually know how to install games; I don’t know how to do it in a short way. So, my cousin taught me all about technology. He explained how he downloaded the games, how he installed them. I started to discover it myself.” (Std8).

Preventing internet addiction

Study data showed that students do not have social activities where they can spend time outside of the internet or technology. The students stated their lack because they did not have friends to play with and stated that they could not socialize with other people. It was observed that families impose time limits on their children's internet use, and they try to comply with these rules.

"I started spending time on the internet for only 30 minutes a day thanks to my mother these days. We tried it yesterday, I have been online for 30 minutes."

In addition to the students who stated that their parents imposed a limit on the time spent online, it was also observed that there were students who said that technological devices were hidden from them by their parents and therefore they felt anger. Std3 expressed this issue with the sentence,

"He/she was hiding the phone, yesterday he/she hid it under the covers, one under a bag last day, I was a little angry." (Std3).

It was also observed that there were students who have been able to obtain knowledge related to the subject, albeit limited, as well as students who say that they are not well informed about conscious internet use. The students mostly pointed to their teachers and family members as the people who taught them about the conscious use of the internet:

My teacher tells me, he/she says, look at the necessary things. He says I don't get too involved in games. He/she says, "Do not use the internet too much, your eye health will deteriorate." (Std8).

A student who said that he/she received information from his teacher about the time spent on the internet shared that his teacher said that using the internet for a maximum of one hour was correct. It was observed that there were students who stated that they received information from their family members in addition to the information they received from their teachers about safe internet use:

"Not to open non-instructional videos, not to go to other places, there is a camera, my brother taped that camera. My brother says don't go into video chat. My brother says such things." (Std6).

Results Obtained from Parents

Internet use

Parents who participated in the study stated that their children mostly use mobile phones, followed by computers and tablets, to access the internet; television is also used to access the internet, albeit just a little. In addition, single mothers, whose

children live with them and stay with their father on certain days of the week, stated that the children's internet access is not supervised during the days they stay with their father. P7 expressed this issue with the sentence, "For example, when he went to his father, he wouldn't get up for hours from the computer... I guess his father doesn't control it either." Parents have observed that children spend time with technology even in the absence of the internet with the help of games they download to technological tools. Regarding the subject, P2 explains this situation with a sentence, "Now, for example, there are things that are played only with the internet. For example, there are some games he can play even if the internet is turned off."

Consequences of internet addiction

The excessive use of the internet reflects in the children's' academics, and the parents shared that their children had difficulties in getting their homework done due to excessive use of the internet and that they often had arguments regarding homework. In addition, it was determined that children forget to do their homework and have no energy to study because they spend a lot of time on the internet playing games online with their friends, and therefore they score low grades in the exams. In the interviews, it was observed that there were parents who stated that they were disturbed by the fact that their children did not do their homework at home due to the time they spent on the internet and often did not even bring their belongings and backpack from school. It was also expressed that there were students who cursorily answer to their parents regarding their homework, saying that they did it at school. P4 expressed her reproach that her child does not give the necessary importance and care to his homework due to the time he spends on the internet.

The parents stated that when their children have limited access to the internet, they display feelings of boredom and anger and become aggressive and shout at their siblings or parents. It was learned that especially when children are concentrated in the game on the internet, they overreact when someone calls out, and families do not speak so as not to further anger their children, and they wait for the gaming device to run out of charge. Regarding the subject, P7 tried to explain the situation with the sentence, "He gets a little aggressive, so I'm going out, so he doesn't get angrier, because he starts shouting more." Another parent, who said that her grandson was very angry and shouted at the people around him while playing on the tablet, expressed this situation with the following words:

"I say, my son, wait a little bit, are you going to eat something? He says no and yells at me. He's angry. If he's concentrating on the game, son, I'm counting whether you want me to make toast or soup or fry potatoes. He is yelling at me that I am telling you to shut up; I am deprived of the game because of you. And then I don't call anymore. Then the tablet is running out of battery." (P6)

In general, while the parents thought that their children's internet use did not cause serious problems in their relationships with their families or friends, one parent stated that they were not in the same situation. She stated that her child had arguments with his family and friends due to the use of social media, that she shared the passwords of her social media account with her friends, that there were problems between them due to the sharing of her friends from her account, and that her child became more aggressive because her family canceled the internet.

Preventing Internet Addiction

The interview data revealed that the parents generally reacted negatively their children's excessive internet use. However, there are also parents who do not show consistency, cannot take a determined stance, and therefore cannot prevent their child's excessive use of the internet, even though they are angry with their children about this issue:

"I get angry. She says Mom, I'm bored; what should I do? She has no siblings; she is an only child. She doesn't get up when we get angry; she continues since we spare." (P 8)

It is observed that some parents try to prevent excessive internet use by their children by prohibiting it or punishing them:

"He exceeded the time that day, too. Then his father noticed it. My boy says, 'Mom, your phone has exceeded the internet limit'. After that, his father deposited money and punished him. No more phone, no internet, no laptop anymore." (P5)

It was also observed that the parents try to find alternative activities for their children, instead of the time spent with the internet or technological devices. The parents try to offer different options such as reading, playing games, or spending time with their friends in order to relieve the boredom that occurs in the absence of technology. Stating that her granddaughter does not like to be in space, P5 said that she tries to keep her busy with activities she likes, such as playing games, doing homework, reading books, and trying to draw her attention to other activities with the reward method:

"Then, she has babies; she dresses them up. We're both doing something, trying to do whatever she wants. She has homework; we do it, we do our reading to reward her. I say let's do something because she always says let's do something." (P5)

Although parents want to help children by finding alternative activities to avoid using the internet, they have argued that the environment and society they live in is

a major obstacle. For example, it was stated by P6 that children are not taken out of the house due to the lack of safe playgrounds and that they want to spend time on the internet because they do not have friends:

“Because we do not take the child out, cars pass by because he has no friends to play the game alone. Maybe there is in the apartment next to us, but they just moved in; we live across from the middle school. The park is also eventful if I take him to the street or the park. They destroyed the other side this year. Previously, I was taking him last year for playing. But this year I can’t take him anywhere. I agree with him; he gets bored.” (P6)

It was observed that the parents try to control their children’s excessive internet use by setting time limits or putting passwords on technological devices. There are also parents who try to impose control with a time limit, but think that their children do not obey them. Regarding this issue, P2 used the phrase, “Of course I set limits, but he doesn’t obey me.” P7, who also agreed with her grandchild that she set a daily time limit for his access to the internet, but that the child did not comply with this limit, explained the situation with the sentence “I could not arrange it, I permitted for a certain hour, but he does not listen.”

It was seen that there are parents who find the solution in hiding technological devices because they cannot prevent their children from using the internet. Although they set a time limit for their children’s use of the internet, the time limit is exceeded, their children find it difficult to leave the internet due to online games, and the parents threaten to seize their devices. It was seen that the children were being supervised by their parents while using the internet, and that the parents followed up on which sites they were browsing. There are also parents who become aggressive in trying to restrict their children’s internet use, but they calmly talk to them and explain their reasons and try to control it:

“She gets angry with her family. She argues that I will not do this or that. She calms down later. She is beautifully told by her mother. She says you will be like that. I want you to study; your father works, I work. She tells such things beautifully.” (P5)

The parents shared that they are generally not well informed about conscious internet use. P4, who stated that there was no source for help on the subject and was uncomfortable regarding internet use of the child, expressed this situation with the following sentences:

“I didn’t get any help. I just don’t want him to look. I want him to study. I don’t want him to experience what we went through. Unemployment or something.” (P4)

P1, on the other hand, stated that she had attended a seminar at the school earlier, with the sentence “Something happened last year, there was a seminar about the internet here, we came, but I don’t remember anything.”

Results Obtained From Classroom Teachers

Internet Use and Addiction

The teachers expressed that the time students spend on the internet daily is approximately five hours. On the subject, Tchr3 expressed her discomfort regarding the excessive use of the internet by her students with the statement,

“For example, a student of mine says, ‘Teacher, I played for five hours’. I say, ‘Can it be played for five hours? Don’t you feel sorry?’”

It was also shared that children were introduced to the internet and technology at an early age. Tchr2 stated that families introduce their children to technology at an early age, and as a result, children develop an addiction to the internet at a young age:

“Children born in the age of technology are introduced to the internet at an early age. I think the family has a lot to do with this. In order to silence our crying children on the phone and to do our work in our daily life, keeping children busy with the phone allows them to step into this addiction at a young age.” (Tchr2)

In addition, the introverted attitudes of students, their habits of refraining from participating in social activities, exhibiting angry and aggressive behaviors, and seeking opportunities to spend time with technology as soon as possible during the day were explained as symptoms of internet addiction:

“A student who is addicted to the internet moves away from participating in social activities and trying to make himself/herself accepted by society. They exhibit introverted behavior. They behave irritably and aggressively. They are eager to go home as soon as possible and sit in front of the computer.” (Tchr 1).

Reasons for Internet Orientation

Virtual games and the characters in these games attract the attention of students, and this is among the reasons why students go online. Tchr4 explained this situation with the statement:

“I think imaginary heroes or events in games attract their attention more; they try to find what they cannot find in real life in the virtual world, thanks to the internet.”

It was observed that especially the children of working parents spend more time on the internet when they are alone at home. Students also use the internet to follow the internet phenomena that have recently become popular. The fact that the internet

provides students with unlimited information on all kinds of subjects and that students want to have information on every subject they are curious about has also led them to use the internet:

“Students can instantly access the information they want on the unsupervised internet. They try to obtain some information that they cannot obtain from their elders, from the websites they visit, wondering about topics such as sexuality, knowing their own body, and obscenity.” (Tchr1)

There are also opinions of teachers who state that children are addicted to the internet due to the lack of communication within the family and the family’s inability to guide the development of children’s sense of curiosity. Moreover, children who face domestic violence also tend to use the internet more:

“In other words, the indifference of the family, lack of communication, and domestic violence, of course, are included in this. It is related to the family. In fact, the child is also curious about what is happening around, but if the family is indifferent, it progresses. Therefore, the interest of the family is definitely important.” (Tchr4)

In the interviews with the teachers, it was seen that computer games are also a serious factor in children’s internet addiction. In this regard, the sentence by Tchr4 “Students become addicted to the internet mostly because of computer games,” explains this situation. It was stated that children who play computer games develop more addiction to the internet because they cannot limit this time. Another finding obtained from the interviews is that although families are actually uncomfortable with their children’s excessive use of the internet, this situation also makes their lives easier, and therefore they do not speak out against their children’s preoccupation with the internet:

“Now they actually do not want to, they complain, but they do not impose sanctions. Because the child’s busy for hours sometimes works for them too. They can easily do their housework or go to the market. Or they can watch the series. At that time, they give the child a tablet or phone.” (Tchr3)

According to the teachers, a student’s circle of friends is a factor in internet addiction. Teachers emphasized that students who have friends who spend most of their time on social media and online games can become more dependent on the internet. It was shared that students play online games very often in order to be included in a group of friends. It was stated that there were students who were excluded and exposed to peer pressure by their friends if they were not included in the online games played by a certain group of friends, which resulted in internet addiction:

"I have students who play thoughtlessly at the expense of harming themselves in an effort to be in a group for the sake of socialization. In order to be included in a group. For example, children playing gameplay among themselves. They include those who play that game in the group and do not include those who do not — virtual, not real games. Interactive games are played on the internet. Of course, they don't play games that are appropriate for their age. Those who play them are called babies. They play with older age groups." (Tchr3)

It was emphasized by the participants that the positive role models of parents, especially for children at the primary school level, have a very important place in preventing internet addiction. It was remarked that the children of parents who constantly spend time with technological devices would naturally want to spend more time on the internet than necessary:

"Families are addicted, too. The child sees the parents holding the phone. Let's not just think of it as a phone; it can be a computer or tablet because they can reach it that way. The children also say that 'my parents are constantly on the internet' (Tchr2)

Again, Tchr2, emphasizing that it is important for family members to know healthy internet use and accordingly to be a positive role model, stated:

"If, for example, four out of five family members have a technological device in their hands and spend most of their time-dependent on it, we can say that there is no conscious use."

The importance of preventing children's internet addiction by taking care of their actions with technological devices when their children cannot see them, and giving them the sub-message that they spend less time with technology is emphasized:

"If the parents do not let go of the phone and become role models by constantly playing games and looking at it, the child will inevitably fall into it. But we have to restrain ourselves. First, we have to do our things to do and even the things we will do on the phone after they are asleep or not, and show them that we are less addicted to the phone." (Tchr4)

Studies to Prevent Internet Addiction

In the interviews with the teachers, it was seen that it is important that the parents support what the teachers say to the children at school regarding the use of the internet. It was stated that the behavior of parents toward their children at home in a supportive and approving way, in other words, the common attitude of the parents toward their internet use of their children at school, is of great importance in the permanent behavior change that will occur in this direction:

“No matter how much the teacher says, if the parents support the teacher, the child will listen to the teacher. But if the teacher talks to the parents and talks to the child, and then while eating at home, if the parents say ‘this teacher talks too much, he/she interferes with our business too much’, next to the child, it is not possible for that child to do anything because trust is shaken.” (Tchr3)

According to the teachers, it was seen that cooperation with the school counselor is important, especially in the issue of internet addiction in primary school children, and it was seen that positive feedback was received as a result of the meetings with the school counselor of the students who are in the risk group of internet addiction:

“I think that we have good cooperation with the school counselor, and we really attach great importance to this issue. I think we got positive results together with our school counselor. At least five or six students in my class said that they have now deleted the game with that age limit from their tablets and computers.” (Tchr3)

It is important to create time periods within the family at home, such as reading, instead of spending time with technology, in order to prevent internet addiction. The orientation of children to different social activities is important in reducing the time they will spend on the internet, and parents can help their children spend more healthy time on the internet by providing detailed information about safe sites that children can access.

Since children are at an early age, their awareness and consciousness levels related to internet use may not have developed enough, and therefore, parents should guide them at this point. Parents should be directive instead of being oppressive, be consistent in complying with the child by setting limits and also offer their children alternative options to the internet. It is underlined that children will not be able to understand the harms of excessive internet use unless if they are not given detailed information about its negative consequences, and if parents do not provide positive role models for them.

Although there is no independent topic in the books under the title of internet addiction, the participants shared that they included the topic of internet addiction in the examples they gave in the Turkish lesson or in the current events in the Life Science lesson, as follows:

“It is already mentioned in our books as internet addiction. In particular, we had a topic in the Turkish lesson. We talked about the benefits and harm by giving examples. Apart from that, this topic was also covered in current events in the Life Studies course, and we talked about it there too.” (Tchr4)

Stating that he/she taught fourth graders, Tchr2 said that while they were teaching the subject of technology in the Social Studies lesson, they touched on the subject of conscious internet use, and they also emphasized this issue in the guidance lessons. She said that she wanted children to do scientific research in order for them to internalize this subject more, and while doing this, she informed the students regarding the proper use of the internet, the reliability of the information they encountered on the internet, and the things to be considered while doing research on the internet. She also said that she talked about which sites can be safe on the internet and how they can be more careful about inappropriate or harmful advertisements and content that they may encounter. She remarked that it is not right to remove the internet from our lives. On the contrary, healthy use of the internet is beneficial and guiding in many areas of life. Therefore, the school attempts to teach children the right use of technology.

“We cannot remove technology from our lives now; it is not possible. In fact, we should place technology in our lives so that it will be beneficial and guide us in many areas. But using technology consciously and correctly is exactly that. I am trying to give.” (Tchr3)

Also, it was shared that internet use was included when it came to the topic of how to use technology in the Life Sciences lesson, but this issue was kept on the agenda the teacher tried to teach this to the students at every opportunity.

The teachers offer suggestions to parents about internet use by their children, that they should warn their children not to play games that are not suitable for their development or that they should limit them, that they should not impose bans on their children because the prohibitions cause more curiosity in children, and that they should be consistent in this regard. Teachers were also of the opinion that families should be informed about how their children should use the internet consciously, that families should guide their children in this direction and that they should be supervised and controlled to use the internet at a healthy level without overdoing it. It was stated that although parents did not grow up with technology, the same thing does not apply to children today. Given this fact, though it is not possible to distance children from technology and the internet, healthy use can be ensured:

“Adults and students should be informed about the conscious and level use of technological tools for the right purposes without harming ethical and moral values; I think this is very important. From a young age, families can be advised to ensure that their children access the internet safely and with limited time. We may not have grown up in the age of technology, but since children grow up in the age of technology, we can either keep them away from it or ensure that they are used in a healthy way.” (Tchr2)

Results Obtained from School Counselor

Internet Use and Addiction

In the context of internet use, the school counselor stated that children can use technology very well at an early age due to the high number of technological devices owned in the family today, and that internet addiction may occur at an early age with the decrease in the age level of technology use. In addition, the symptoms of internet addiction seen in primary school students vary widely. Children's fear of going to the toilet alone or going to bed late at night, and the fact that children are constantly talking about imaginary game heroes that have become common on the internet and frighten children, were shown as symptoms of internet addiction.

Reasons for Internet Orientation

The school counselor stated that internet use is so widespread among children that people of all ages and sections of life use the internet. They also expressed the opinion that parents do not have enough knowledge on this subject and therefore internet addiction cannot be prevented in children. Basically, the parents should be informed about healthy internet use before the children can be guided. The fact that children are not informed about which activities they can engage in instead of spending time on the internet, and the failure of families to offer alternative activities to their children, is another factor that triggers internet addiction in children:

“There are not many different environments where children can spend time or have fun. There are no sports activities or social activities where they can develop a hobby. Apart from that, it's a children's playground. For example, children do not know street games. Since the elements that children encounter as activities are generally on the internet, children do not have many alternatives. Families cannot offer many options to children in this regard. When children are not presented with different environments, they like to spend more time on the internet.” (Counselor)

In addition, it is seen that some parents do not control their children's internet use and do not care about how or in which way they access the internet, and this poses a serious problem. On this subject, the psychological counselor summarizes the situation with the statement,

“Parents are not very curious or cannot control where and how their children access the internet.”

Studies to Prevent Internet Addiction

According to the school counselor, it is important for children to have a healthy circle of friends that they can communicate with and help them in this direction, to prevent them from becoming asocial and dependent on the internet. The fact

that families do not set limits on their children's use of the internet and technology, and the parents' inability to display decisive behavior, are other factors found to be responsible for children's internet addiction:

"Some families offer the child options but do not set limits; they say, ok, you can play computer, but there is no limit. They say you can play for an hour, but they cannot set this limit; they cannot act consistently. There is an inconsistency between parents, and it is important for parents to set rules and act decisively."
(Counselor)

It was underlined that it is important to provide children with detailed knowledge regarding healthy internet use and to raise awareness about the harms of its use in excess, and that children should be directed to games that they can play on the street instead of games on technological devices. In addition, it was emphasized that children do not need the internet at school, but this is not the case in the home environment; therefore, it is important to ensure that children are taken to places where they can play outside to prevent internet addiction.

The school counselor stated that she gave information to the students at every opportunity about the positive and negative features of the internet, how personal data should be protected, and addictive and harmful games, and that she stated that she especially told children not to share any personal information about their families and themselves over the internet, and that these could be used by foreign people in a way that harms them. In addition, it was observed that informative studies and seminars had been held for kindergarten and primary school students, especially third and fourth graders, on what should be considered as healthy internet and social media use in accordance with their level:

"Every year, we provide information on a class basis at 1, 2, 3, 4 grades and even in the kindergarten, in accordance with their level. Internet addiction, conscious use of the internet, and how to act in social networks on the internet, especially 3rd and 4th grade students. Because some of them have Instagram and Facebook accounts, they use them, or they have YouTube channels, they share videos there. We provide information about them." (Counselor)

It was stated that parents come with complaints since they cannot prevent or limit the use of technology by their children and that studies are carried out for students and parents within the school framework plan.

"We provide information about internet addiction within the framework plan for students and parents. When we talk to them at these meetings, they complain that children prefer to play games more, cannot get the children off the computer, or cannot take the phone from their hands." (Counselor)

The school counselor stated that they carry out informative activities on the subject in the individual interviews they have with the parents and in the brochures they have prepared within the scope of the school framework plan. In addition, she stated that she included the technology addiction study prepared by the Turkish Addiction Fighting Platform and that informative studies were also carried out with teachers if necessary. She also stated that she used the brochures sent by the Green Crescent while describing the works she carried out within the framework plan, and that she took and implemented these studies in her own framework plan every year. She shared that she conducted individual interviews with students whom she thought were internet addicts or who had an unhealthy internet use orientation, and their parents.

Discussion, Conclusion, and Recommendations

This study examined the causes and consequences of internet addiction observed in primary school students, its effects on the social environment, and studies on preventive measures. An analysis of the data obtained from students, parents, teachers, and school counselors revealed the internet use of students, the factors affecting internet use, and what adults do to prevent internet addiction. The study observations revealed that students do not have social activities where they can spend time outside of the internet and that their friends and safe playgrounds where they can play outside are limited when there is no internet. The need for socialization is one factor that pushes individuals to use the internet (Grohol, 2020). Compared to the past, families find it safer for their children to spend time on the internet at home due to the insecurity of the environment outside (Çalışkan & Özbay, 2015). It is observed that children are not very competent in establishing and maintaining social relations compared to adults, and therefore they tend to use the internet more and communicate with their peers through social media instead of face-to-face activities (Griffiths & Kuss, 2015). The study results are consistent with the studies in the literature which state that children turn to the internet more due to their need for socialization and meeting with peer groups, thus increasing the risk of internet addiction.

Individuals addicted to the internet can face difficulty in controlling themselves when there is no internet and could show intense psychological withdrawal symptoms (Young, 2007). The introverted attitudes of the students participating in the study, and their habits of refraining from participating in social activities, displaying angry and aggressive behaviors, and seeking opportunities to spend time with technology as soon as they could, are among the symptoms of internet addiction. It is seen that students with internet addiction have arguments with people in their social environment (Cömert & Ögel, 2009), have difficulty in controlling their impulses, have behavioral disorders and display maladaptive behaviors (Dalbudak et al., 2013), experience social skill deficiencies (Singh & Nagar, 2019), and are isolated from social life (Çalışkan & Özbay, 2015). The fact that the students participating in the

study exhibited an introverted attitude due to excessive internet use, isolated themselves from the social area, and wanted to access the internet as soon as possible caused them to experience social anxiety by becoming lonely and revealing their already existing social anxiety. As a result of more time spent on the internet than planned, their actions in their social lives fall into the background, and when access to the internet is limited or blocked, emotions such as anger, nervousness, tension, and depression occur (Eroğlu & Bayraktar, 2017; Esen & Siyez, 2011). Therefore, the angry and aggressive behaviors expressed by the study participants (students) with internet deprivation, are consistent with findings of studies in the literature.

In the course of the study, it was observed that the students had arguments with their parents due to the increased time spent on the internet, the difficulty of the family in the control of this time, and the restriction of the internet. Due to the time which people spend on the internet and the negativities they encounter in the virtual world, situations may occur that negatively affect their daily lives, including problems with parents (Binali, 2015; Davis, 2001). Internet addiction deteriorates an individual's interpersonal relationships and communication skills. The increase in the duration of children's use of the internet and technology and the inability of the family to control this issue cause frequent discussions with the child on the issue (Gangwar & Suvidha, 2016; Günüş, 2009). When we consider the results of the study and the studies in the literature, it can be said that the time spent on the internet can cause arguments between the child and the parent(s) in the family; therefore, parents' monitoring of the duration of internet use by children will be effective in preventing children from being harmed. In this regard, parents should monitor their children's use of the internet and control it within certain frameworks in order to prevent their children from being adversely affected by it (Bölükbaş, 2003).

In this study, it was seen that the students' circle of friends was a factor in internet addiction, and students who have a group of friends who spend most of their time on social media and online games can be more addicted to the internet because they often play online games in order to be included in a group among their friends. If they do not do this, they are exposed to peer pressure. Although it is true that online games allow children and young people to socialize by joining a group (Karahisar, 2014), it has been stated that online games played in the virtual environment can effectively lead to addiction, and individuals who try to meet their need to communicate with the people whom they play games with on the internet, simultaneously as they play online games, become addicted to the internet with the persistence of these (Ayhan & Köselioğlu, 2019; Ögel, 2012). According to Dinç (2010), the lack of a satisfactory group of friends may be a result of internet addiction. A comparison of the literature and the study results reveal that children and adults spend time on the internet and realize their social relations on the internet, which is rapidly becoming widespread

today and is found in almost every home. Since online games have replaced face-to-face games, children come together with their friends in virtual games instead of street games, and if they are not involved in these games, they feel obliged to be more in virtual games, that is, on the internet, due to the peer bullying they face. It can be said that this situation causes children to become addicted to the internet.

The study findings reveal that although students feel that internet use does not cause major negative effects on their academic success, they sometimes have difficulties in doing their homework and lessons and neglect their responsibilities. Studies show that students' academic achievement with internet addiction is negatively affected because they neglect their lessons (Cengizhan, 2005; Esen & Siyez, 2011; Horzum, 2011; Sharma & Sharma, 2017). It is seen that this information in the literature is similar to the results obtained from the study, and that internet use can cause students with high academic success to neglect their responsibilities such as doing homework and studying.

Horzum and Ayas (2013) expressed that the children's risk of being addicted to the internet increases with the increase in the time spent online, among those who are not supervised and controlled by their parents. In this study, it was seen that families monitor which sites their children visit on the internet, enforce a time limit on their use of the internet, try to hide technological devices from their children, and set passwords for technological devices. Some families try to inform their children about the negative consequences of excessive internet use by talking calmly. It is believed that it is very important for parents to use the internet and technology together with them and to inform them about the correct internet use, in order for children to be healthy internet users, as well as to control and monitor the internet use by their children (Çevik & Çelikkaleli, 2010; Özkan & Hira, 2017). The literature and the findings obtained within the scope of this study are parallel, and if families control their children's internet use and inform them regarding the correct and conscious use of the internet, they can reduce the possibility of their children becoming addicted to it. Thus, the parents, being individuals who set rules, provide control, and have democratic attitudes, can support their children to be healthy internet users.

This study showed that when students have limited access to the internet or technological devices, they experience boredom, feel bad or angry, and begin to harm themselves or their environment. When people are addicted to the internet, they exhibit emotions such as excessive worry, anxiety, deterioration in life functions, and lying about internet use (Esen & Siyez, 2011; Young et al., 2000). When this information is compared, it can be said that when internet access is blocked, children become angry and uneasy due to the deterioration of their existing comfort zones, and the parents participating in the study could not show a conscious reaction after the negative behaviors they received from their children.

Another point where the results of the study show parallelism with the studies in the literature (Biçer, 2014; Caplan et al., 2009; Eroğlu & Bayraktar, 2017; Leung, 2006) relates to students who experience social anxiety, have difficulty in establishing social relations with their environment and isolate themselves from the group they live in tend to turn to the internet more to meet their social needs. It can be stated that students who use the internet intensively due to their social anxiety may experience problems in friendship and family relations in the later stage. Again, the reasons for internet addiction were that the families of the students participating in the study did not have sufficient knowledge about conscious internet use, failed to offer their children alternative activities to substitute internet use, and could not limit the time spent on it.

Horzum and Ayas (2013) expressed that children's risk of being addicted to the internet increases with the increase in the time spent on the internet by those who are not supervised by their parents. Families monitor which sites their children visit on the internet, limit their use of the internet to a set duration, try to hide technological devices from their children, set passwords for technological devices, and, in some families, try to discuss with their children the negative consequences of excessive internet usage. It is very important for parents to use the internet together with their children and to inform them about the correct internet use, in order for children to be healthy internet users, as well as to control and monitor the internet use of their children (Çevik & Çelikkaleli, 2010; Özkan & Hira, 2017). The literature and the findings obtained within the scope of this study show parallelism, and that if families control internet use by their children and inform them regarding the correct and conscious use of the internet, they can reduce the possibility of their children becoming addicted to the internet. Parents are individuals who set rules to provide control, and having a democratic parental attitude supports their children in being healthy internet users.

According to the findings obtained as a result of the study, it was seen that families warn them, inform them regarding healthy internet use, confiscate technological devices from their children, and punish them for excessive use of the internet by students. It was observed that some parents were angry with their children for excessive use of the internet, but could not prevent their child's use of the internet as they did not display a consistent and determined attitude afterward. In addition, it was seen that it is important for parents to be aware of the internet use of their children, to control it, and to have a determined attitude in preventing internet addiction in students. It was observed that families do not have sufficient awareness of how their children should use the internet, despite the precautions taken regarding internet use (Tokel et al., 2013), although they impose a definite block and limitation on their children's use of the internet, they sometimes cannot be consistent with their children in order to spare time for themselves and allow them to spend time with the internet (Özkan & Hira, 2017). Parents' being as supervisory and controlled as possible about their children's

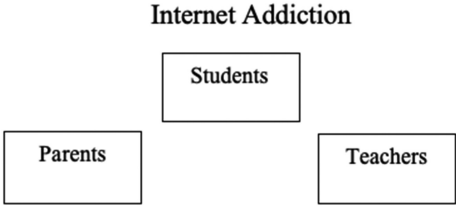


Figure 1.
Single Case with Embedded Units Design (Yin, 2003).

internet and computer use and displaying a moderate attitude can contribute to healthy internet use in children (Tokel et al., 2013). With this study, it can be said that parents actually try to control their children's internet use by methods such as restricting, blocking, and informing, but they cannot show a stable attitude in this regard.

Studies should be carried out to develop ways to prevent children from being harmed by inappropriate content and situations encountered on the internet (Yaman et al., 2017), and first of all, parents should be informed regarding conscious internet use (Özkan & Hira, 2017). This study observed that students and parents had limited, insufficient information related to conscious internet use. It was seen that students get information related to the subject from their families and teachers, and the parents from the seminars given at school. While the subjects that children receive information regarding are healthy and safe internet use in general, it was seen that parents receive more information on the internet usage time of children, methods of preventing internet addiction, and making use of free time.

According to Karahisar (2014), the risk of encountering harassment, pedophilia and violence is higher for children who do not have knowledge about the safe and correct use of the internet. Children may encounter sexual or violent images in the virtual environment while playing games or browsing websites, and they may unconsciously share private information about themselves and their families with strangers, thus increasing the risk of harm. Therefore, it is essential to develop methods and to implement them, while working to prevent children from being harmed by inappropriate content and situations encountered on the internet (Yaman et al., 2017). In light of all the above-mentioned issues, it is important for students and their parents to be informed about conscious internet use, protect children from harmful content on the internet, and ensure that they benefit from the internet in a healthy way. Again, it can be said that the more well-informed the parents are on this subject, the more securely can their children use the virtual world. At this point, the role of schools in raising awareness of parents as well as children should be underlined.

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References

- Arisoy, Ö. (2009). İnternet bağımlılığı ve tedavisi [Internet addiction and its treatment]. *Current Approaches in Psychiatry*, 1(1), 55–67.
- Ayas, T., & Horzum, M. B. (2013). İlköğretim ikinci kademe öğrencilerinin internet bağımlılığı ve aile internet tutumunun çeşitli değişkenler açısından incelenmesi [Internet addiction and internet parental style of primary school students]. *Turkish Psychological Counseling and Guidance Journal*, 39(4), 46–57. [CrossRef]
- Ayhan, B., & Köselören, M. (2019). İnternet, online oyun ve bağımlılık [Internet, online game, and addiction]. *Online Journal of Technology Addiction and Cyberbullying*, 6(1), 1–30.
- Bayram, S. B., & Gündoğmuş, G. (2016). İlköğretim öğrencilerinin internet bağımlılığı eğilimlerinin ve yalnızlık düzeylerinin çeşitli değişkenlere göre incelenmesi [The research of tendencies of primary school students' internet addiction and their loneliness levels according to a variety of factors]. *Akademik Bakış Dergisi*, 54, 307–318. [CrossRef]
- Berson, I., & Berson, M. (2003). Digital literacy for effective citizenship: Cybersafety, digital awareness, and media literacy. *Social Education*, 67(3), 164–167.
- Biçer, U. (2014). *Sosyal beceri eğitiminin ortaokul öğrencilerindeki internet bağımlılığı düzeylerine etkisi* (Publication No. 370863) [Master's thesis]. Cukurova University, YOK Tez Merkezi.
- Binalı, R. (2015). *Lise öğrencilerinin kişilik özellikleri ile internet bağımlılığı ve akademik başarı durumu arasındaki ilişkinin incelenmesi* (Publication No. 427563) [Master's thesis]. Uskudar University, YOK Tez Merkezi.
- Bölükbaş, K. (2003). *İnternet cafeler ve internet bağımlılığı üzerine sosyolojik bir araştırma: Diyarbakır örneği* [Master's thesis]. Dicle University. Dspace@Dicle. Retrieved from <https://hdl.handle.net/11468/2398>
- Brand, M., Laier, C., & Young, K. S. (2014). Internet addiction: Coping styles, expectancies, and treatment implications. *Frontiers in Psychology*, 5, 1256. [CrossRef]
- Çalışkan, Ö., & Özbay, F. (2015). 12–14 yaş aralığındaki ilköğretim öğrencilerinde teknoloji kullanımı eksenli yabancılaşma ve anne baba tutumları: Düzce ili örneği [Estrangement based on the exercise of technology and parents' attitude among the primary education students between the ages of 12–14: A case study of Düzce]. *Journal of International Social Research*, 8(39), 441–458. [CrossRef]
- Caplan, S., Williams, D., & Yee, N. (2009). Problematic internet use and psychosocial well-being among MMO players. *Computers in Human Behavior*, 25(6), 1312–1319. [CrossRef]
- Cengizhan, C. (2013). Öğrencilerin bilgisayar ve internet kullanımında yeni bir boyut: internet bağımlılığı [A new dimension of students' use of computer and internet: Internet addiction]. *Marmara University Atatürk Education Faculty Journal of Educational Sciences*, 22(22), 83–98.

- Çevik, B. G., & Çelikkaleli, Ö. (2010). Ergenlerin arkadaş bağlılığı ve internet bağımlılığının cinsiyet, ebeveyn tutumu ve anne baba eğitim düzeylerine göre incelenmesi [Adolescents' friends attachment and internet addiction according to gender, perception parents attitudes and parents educational levels]. *Journal of Çukurova University Institute of Social Sciences*, 19(3), 225–240. [CrossRef]
- Chi, X., Hong, X., & Chen, X. (2020). Profiles and sociodemographic correlates of internet addiction in early adolescents in southern China. *Addictive Behaviors*, 106, 106385. [CrossRef]
- Chia, D. X. Y., Ng, C. W. L., Kandasami, G., Seow, M. Y. L., Choo, C. C., Chew, P. K. H., Lee, C., & Zhang, M. W. B. (2020). Prevalence of internet addiction and gaming disorders in South-east Asia: A meta-analysis. *International Journal of Environmental Research and Public Health*, 17(7), 2582. [CrossRef]
- Cömert, I. T., & Ögel, K. (2009). İstanbul örnekleminde internet ve bilgisayar bağımlılığının yaygınlığı ve farklı etkenlerle ilişkisi [Prevalence factors for internet and computer addiction in Istanbul sample]. *Türkiye Klinikleri Journal of Forensic Medicine and Forensic Sciences*, 6(1), 9–16. [CrossRef]
- Dalbudak, E., Evren, C., Topçu, M., Aldemir, S., Coskun, K. S., Bozkurt, M., Evren, B., & Canbal, M. (2013). Relationship of Internet addiction with impulsivity and severity of psychopathology among Turkish university students. *Psychiatry Research*, 210(3), 1086–1091. [CrossRef]
- Davis, R. A. (2001). A cognitive-behavioral model of pathological internet use. *Computers in Human Behavior*, 17(2), 187–195. [CrossRef]
- Derin, S., & Bilge, F. (2016). Ergenlerde internet bağımlılığı ve öznel iyi Oluş düzeyi [Internet addiction and the level of subjective well-being in adolescents]. *Turkish Psychological Counseling and Guidance Journal*, 6(46), 35–51. [CrossRef]
- Digital Report. (2021). *We are social*. Digital 2021. Retrieved from <https://wearesocial.com/digital-2021>.
- Dinç, M. (2010). *Internet bağımlılığı [Internet addiction]*. Ferfir Yayınları.
- Eroğlu, A., & Bayraktar, S. (2017). Investigation of variables associated with internet addiction. *International Journal of Social Sciences and Education Research*, 3(1), 184–199. [CrossRef].
- Esen, E., & Siyez, D. M. (2011). Ergenlerde internet bağımlılığını yordayan psiko-sosyal değişkenlerin incelenmesi [An investigation of psycho-social variables in predicting internet addiction among adolescents]. *Turkish Psychological Counseling and Guidance Journal*, 4(36), 127–138.
- Gangwar, G., & Suwidha, D. (2016). A systematic review of literature on effect of internet addiction in adolescents. *International Journal of Scientific Research in Science and Technology*, 2(5), 172–179.
- Gökçearsan, Ş., & Günbatır, M. S. (2012). Ortaöğrenim öğrencilerinde internet bağımlılığı [Internet addiction in high school students]. *Educational Technology Theory and Practice*, 2(2), 10–24. [CrossRef]
- Griffiths, M. D., & Kuss, D. J. (2015). Online addictions: Gambling, video gaming, and social networking. *The Handbook of the Psychology of Communication Technology*, 32, 384–403. [CrossRef]
- Grohol, J. M. (2020). *What is Internet addiction disorder (IAD)?* PsychCentral Retrieved from <https://psychcentral.com/net-addiction/>
- Günüç, S. (2009). *Internet bağımlılık ölçeğinin geliştirilmesi ve bazı demografik değişkenler ile internet bağımlılığı arasındaki ilişkilerin incelenmesi* (Publication No. 427563) [Master's thesis]. Van Yüzüncü Yıl University, YOK Tez Merkezi.

- Horzum, M. B. (2011). İlköğretim öğrencilerinin bilgisayar oyunu bağımlılık düzeylerinin eşitli değişkenlere göre incelenmesi [Examining computer game addiction level of primary school students in terms of different variables]. *Education and Science*, 159(36), 59–65.
- Horzum, M., & Ayas, T. (2013). İlköğretim öğrencilerinin internet bağımlılığı ve aile internet tutumu [Internet addiction and internet parental style of primary school students]. *Turkish Psychological Counseling and Guidance Journal*, 4(39), 46–57. [CrossRef]
- Hossain, A., Afrin, D., Islam, M. U., & Rabbi, F. (2017). The school-level factors associated with internet addiction among adolescents: A cross-sectional study in Bangladesh. *Journal of Addiction and Dependence*, 3(2), 170–174. [CrossRef]
- Karahisar, T. (2014). İnternette çocukları bekleyen riskler ve medya okuryazarlığı [Risks for children on the internet and media literacy]. *Turkish Online Journal of Design, Art and Communication*, 4(4), 82–95. [CrossRef]
- Leung, L. (2007). Stressful life events, motives for Internet use, and social support among digital kids. *Cyberpsychology and Behavior*, 10(2), 204–214. [CrossRef] (Pubmed:[CrossRef])
- Madell, D., & Muncer, S. (2004). Gender differences in the use of the internet by English secondary school children. *Social Psychology of Education*, 7(2), 229–251. [CrossRef]
- Mohammed, M. B. (2016). Internet addiction among secondary school students in Sudan. *IOSR Journal of Computer Engineering*, 20(1), 16–22. [CrossRef]
- Nayanika Singh, & K. C. Barmola (2015). Internet addiction, mental health and academic performance of school students/adolescents. *International Journal of Indian Psychology*, 2(3), 98–108. [CrossRef]
- Neuman, W. L. (2012). Toplumsal araştırma yöntemleri: Nicel ve nitel yaklaşımlar (S. Özge, Çev.). Yayın Odası Yayınları. (Original Work Published 2005).
- Ögel, K. (2012). İnternet bağımlılığı: İnternetin psikolojisini anlamak ve bağımlılıkla başa çıkmak [Internet addiction: Understanding the psychology of internet and coping with addiction]. Türkiye İş Bankası Kültür Yayınları.
- Özkan, A., & Hira, İ. (2017). Dijital medya ve sosyalleşme: 6–12 yaş çocukların sosyalleşmesine dair ebeveyn görüşleri (İstanbul örneği) [Digital media and socialization: parents view on 6–12 age children socialization (Istanbul case)]. *Journal of Kesit Academy*, 3(9), 245–270. [CrossRef]
- Sharma, P., & Sharma, S. K. (2017). Internet addiction, loneliness and academic performance among the secondary school students. *International Journal of Humanities and Social Sciences*, 6(5), 19–24.
- Singh, N., & Nagar, D. (2019). Relationship between internet addiction with emotional maturity: A study on high school students. *International Journal of Indian Psychology*, 7(1), 21. [CrossRef]
- Tokel, S., Başer, D., & İşler, V. (2013). Türkiye’deki ebeveynlerin çocuklarının internet ve sosyal paylaşım siteleri kullanımına yönelik bilgi seviyeleri ve algıları [Parents’ knowledge levels and perceptions about their children’s use of internet and social networking sites]. *Mersin University Journal of the Faculty of Education*, 9(1), 225–236. [CrossRef]
- Tsai, S. M., Wang, Y. Y., & Weng, C. M. (2020). A study on digital games internet addiction, peer relationships and learning attitude of senior grade of children in elementary school of Chiayi County. *Journal of Education and Learning*, 9(3), 13–26. [CrossRef]
- We Are Social (2021, January). *Digital Press*. Retrieved from <https://wearesocial.com/digital-2021>.
- Yaman, F., Dönmez, O., Yurdakul, I. K., & Odabaşı, H. F. (2017). Primary school students’ encounters against online risks from the perspectives of schools counselor teachers. *Turkish Online Journal of Qualitative Inquiry*, 8(4), 415–427. [CrossRef]

- Yıldırım, A., & Şimşek, H. (2013). *Sosyal bilimlerde nitel araştırma yöntemleri* [*Qualitative methods in social sciences*] (9th ed.). Seçkin Yayıncılık.
- Yin, R. K. (2017). *Case study research and applications: Design and methods* (6th ed.). Sage Publications.
- Young, K. S. (1998). Internet addiction: The emergence of a new clinical disorder. *CyberPsychology and Behavior*, 1(3), 237–244. [\[CrossRef\]](#)
- Young, K. S. (2007). Cognitive behavior therapy with Internet addicts: Treatment outcomes and implications. *Cyberpsychology and Behavior*, 10(5), 671–679. [\[CrossRef\]](#)
- Young, K., Pistner, M., O'mara, J., & Buchanan, J. (2000). Cyberdisorder: The mental health concern for the new millennium. *Cyber Psychology and Behavior*, 3(5), 475–479. [\[CrossRef\]](#)