VIDEO GAME ADDICTION IN TURKEY: DOES IT CORRELATE BETWEEN BASIC PSYCHOLOGICAL NEEDS AND PERCEIVED SOCIAL SUPPORT?[3]

Abstract: Even though video games are generally appealing to adolescents, sometimes this can be an issue. In this study, the correlation between video game addiction of adolescents and gender, game genres, types of schools attended to and grade levels, basic psychological needs, and the social support perceived are researched. In this study, conducted in the Bağcılar district of Istanbul province in Turkey, 262 female and 271 male students, making a total of 533 participants from various types of high school. The data was collected using the Basic Psychological Needs Scale, the Perceived Social Support Scale, and the Gaming Addiction Scale for Adolescents. For independent samples t-test, a one-way analysis of variance and Pearson correlation coefficient was used for the analysis of the data. According to the results of the study, the levels of game addiction were significantly higher in males than in females, in vocational high schools than in Anatolian or Imam Hatip high schools, and featured online games rather than offline games. It was observed that game addiction affects basic psychological needs and perceived social support significantly negatively.

Keywords: Video game addiction, perceived social support, basic psychological needs, adolescents, online game.

Yıldırım, Emre, MA
Psychological Counselor
Department Ministry of Education
Şükrü Savaşeri Middle School
İstanbul
Contact:
E-mail: emreyldrm16@gmail.com
ORCID: 000-0001-9074-3534

Zeren, Şerife Gonca, PhD
Assoc. Prof. Dr.
Faculty of Education
Çanakkale Onsekiz Mart University
Çanakkale
Contact:
E-mail: gonca.zeren@comu.edu.tr
ORCID: 0000-0002-4904-4085

INTRODUCTION

[3] This study was produced from the master thesis prepared by the first author under the supervision of the second author. Part of the study was presented as an oral presentation at USBIK International Social Sciences Congress.

The use of games is not only an important tool to meet the basic need of fun in childhood, but also in adulthood (Ögel, 2012). In the past, games which were played with friends in playgrounds and streets are nowadays evolved into online events which take place in Internet cafes, or at home, via smartphones, game consoles and computers in every aspect of life (Yeşilyurt & Erdoğan, 2018). The word game is used for free and individualistic exploratory activities, while the game describes rule-driven events (Groh, 2012). It can be said that digital games have become a daily routine that consumes a serious amount of time (Çeken & Çiçekli, 2018). It can be observed that the generation which grew up with these kinds of games will continue to play and follow the developments into their puberty or even into their adulthood.

The online games which require Internet connection that can be played simultaneously or which are turn based are more preferable due to their social qualities, such as friendship, initiating communication, building relationships, creating groups and joining groups (Griffith, Davies, & Chappell, 2004). Based on these preferences the game industry develops games open to new experiences, boundaries rather extensile, and which are able to test skills and opportunities of online interactions and communications (Przybylski et al., 2012). It has been stated that, during game sessions, a short term well-being is experienced (Rigby & Ryan, 2016). In addicted individuals, this specific condition can obstruct other components of life. In one study, players with a lower satisfaction of basic needs show more inclined demeanor towards game obsessed behavior. Digital games, appearing as the only source of individuals' filialness, are a problem and this shows that we need a better understanding of games.

According to research made by the NewZoo company, 30.8 million people in Turkey play digital games; a share of 30% belongs to the 10-20 years age group, while the biggest share of 46% belongs to 21-35 years age group (NewZoo, 2018). In other research, it is shown that there are over 24 million mobile game players, and that 90.1% of the 15-19 years age group plays mobile games (Adcolony, 2018). With regard to the most time spent playing games, after Russia and Poland, Turkey ranks third (Kartal, 2019).

Video game addiction is defined as excessive and problematic use of video games and computers to such an extreme extent that it causes social and emotional problems (Lemmens, Valkenburg, & Peter, 2009, p.78). It is understood that video game addiction in Turkey varies between 2.1% (Yalçın-Irmak & Erdoğan, 2015), 3.7% (Arıcak et al., 2019), 11.6% (Baysak et al., 2016), and 15% (Yiğit & Günüç, 2020). In Weinstein's study (2010), ong term changes in the reward circuitry can be caused by playing computer games and it can show effects resembling those of substance dependence.

In the early research papers regarding digital games, it can be seen that the first studies concerned the relationship of personality types with the playing of video games (Gibb et al., 1983) and motivation in playing games (Braun & Giroux, 1989; Braun et al., 1986; Griffiths, 1991; Morlock et al., 1985). In another study, much like other addictions, the physical and mental symptoms of excessive and obsessive video game playing are described (Soper & Miller, 1983), while other researchers also report cases that came for treatment (Keepers, 1990; Klein, 1984; Kuczmierczyk, 1987). In the 1990s, when home computers and game consoles just started becoming widespread, even though the effects of video games were not entirely known, this was still becoming a social phenomenon (Colwell et al., 1995; Griffiths, 1997; Griffiths & Hunt, 1995). When examined from a socio-demographic standpoint, with males playing more games than females (Buchman & Funk, 1996; Griffiths, 1997) and with violent games becoming more popular, it is understood that ideas involving families being informed about this subject (Funk, 1993) have since emerged.

With the Internet integrating with daily life in the 2000's, multi-massive online role-playing games (MMORPG) started to become popular. These games are three dimentional games which simultaniously allow a large number of online participants to create, develop, battle and take part in interactions with their online characters in a digital universe. (Pontes & Griffiths, 2014; Steinkuehler & Williams, 2006). In one study, it was found that 15% of high school students were addicted to video games, had low academic success, had more arguments with their friends and teachers, got involved in more physical fights and displayed more aggressive behavior than in the previous year (Hauge & Gentile, 2003). In similar studies, the academic success of students who were addicted to video games was lower (Gentile, 2009; Wang et al., 2014). In another study, social competence, self-esteem and loneliness were found to be important predictors of pathological video gameplaying (Lemmens, Valkenburg, & Peter, 2011). This was found to be the case because of the emergence of video game addiction depression, anxiety, social phobia, and low

school performance (Gentile et al., 2011). Video game addiction and depressive moods, loneliness, and social anxiety are correlated, especially in male adolescents, whose use of nicotine, marijuana and alcohol are twice as great as those who do not play video games (Van Rooij et al., 2014). It has also been found that stress, living in a family with divorced parents, and bullying at school are related to video game addiction (Taechoyotin, Tongro, & Piyaraj, 2018). According to studies conducted in Turkey, there is a correlation between video game addiction and shyness (Ayas, 2012), social anxiety (Karaca et al., 2016), aggresive behavior (Balıkçı, 2018), as well as negative demeanor while expressing anger (Çakıcı, 2018).

In an another study, quite to the contrary, playing video games is listed as a meaningful and purposeful activity (Shi, Renwick, Turner, & Kirsh, 2019). Video games could be a viable option for adolescents to satisfy their psychological needs. Basic psychological needs are necessary requriements for psychological development, integrity, and well-being (Deci & Ryan, 2000). According to the self determination theory, there are three basic psychological needs; autonomy, competence, and relatedness. These needs are innate, basic, and universal (Ryan & Deci, 2000; Sheldon, Elliot, & Kasser, 2001). If an individual cannot fulfill their basic needs, or cannot achieve real satisfaction of needs, then that individual could become engrossed in an activity that offers the best at that current moment (Deci & Ryan, 2011). Online games with activities such as comunication with others, building relationships, establishing small groups, and those that depend on group work, such as clans, groups, squads and teams, could satisfy psycholocigal needs. It is also noteworthy that these games offer players a good challenge enabling them to satiate their need for competence (Allen & Anderson, 2018). Mankind has a natural tendency to seek new challaneges to experience a sense of competence, even when there is no external reward (such as cash or other remuneration) to be won.

Every element of the educational process has a dynamic structure, which also includes students needs (Gündoğdu, Dursun, & Saracaloğlu, 2020). Satisfaction of basic psycolocigal needs is closely related to daily activities (Oliver et al., 2015; Tamborini et al., 2010). In this context it is possible to find studies that claim that digital games are tools for the satisfaction of basic psycholocigal needs (Oliver et al., 2015). In addition, it has been found that when the satisfaction of basic psychological needs in real life is plentiful, game addiction scores decrease (Allen & Anderson, 2018; Scerri et al., 2018) and that basic psychological needs have a intermediary role (Li et al., 2016) in the relationship between stressful life events and Internet addiction in adolescents. According to recent studies in Turkey, it has been found that there is a negative corelation between extreme use of the Internet and the satisfaction of basic psycologcal needs (Candemir Karaburç & Tunç, 2020), and that Internet addiction and basic psycologcal needs directly and negativlely affect each other (Can & Zeren, 2019).

In another study, different game design elements are configured and analysed based on their satisfaction of the basic psychological needs. The results of that particular study show that performace based rewards, such as rankings, tiers, badges, leaderboards and so on, positively correlate with a need for competence, while teammates, avatars, and meaningful stories correlate with social relatedness (Sailer, Hense, Mayr, & Mandl, 2017). There has been no reasearch found on the video game addiction levels of adolescents in the context of percieved social support and basic psychlogical needs.

The game addiction of adolescents could be related to percieved social support. Social support can be defined as developing a sense of commitment with the thought that the person is loved, cared for, accepted and valued by others and receives their help when it is necessary (Cobb, 1976; Lepore, Evans, & Schneider, 1991; Sarason, Levine, Basham, & Sarason, 1983). The most important sources of social support for adolescents are friends, family members and teachers (Yıldırım, 1997). In particular, with the desire and need for autonomy emerging, compared to other developmental periods, in this period, the importance of received social support from families decreases while the importance of social support from friends increases (Zimet et al., 1990). It can be seen that as the percieved social support received from family and friends increases, self esteem also increases (Kahriman & Polat, 2003), while decreasing risky behaviour and cyberbullying (Elkady, 2019; İskender, 2018; Sever, 2015). While Colwell and Payne (2000), judging from the fact that adolescents often meet up with their friends away from the school environment, claim that video games do not cause isolation, in various research studies conducted in Turkey regarding social support proves that there is a negative correlation between percieved social support and Internet addiction (Baysak et al., 2018; Karaer & Akdemir, 2019; Öztosun, 2018; Tanrıverdi, 2014; Taşdemir, 2016; Varol-Afo & Mortan Sevi, 2019).

Students from three different types of high schools participated in this study. In Turkey, Anatolian High School students are admitted through an examination procedure, and the success of these schools are generally higher than average compared to other types. Vocational high schools train those for blue-collar occupations, while Imam Hatip high schools are religious schools. In this research the answers to the following questions were sought: (1) 'Do adolescents' video game addiction levels differ amongst gender, game genres, types of schools attended, and parents' proficiency in Internet usage?'; and (2) 'Is there a correlation between video game addiction levels and perceived social support, as well as basic social needs?'.

METHOD

PARTICIPANTS

The study population of the research consists of 16,958 high school students studying in the ninth, tenth and eleventh grades in the Bağcılar district, Istanbul, in Turkey. The data was collected using the cluster-sampling method at a population of 650 students between the ages 14-17 whose education at different high schools continues. Missing data was removed from the data set and, thus, the research was contucted with a total of 533 students of whom 262 (49.2%) were females and 271 (50.8%) were males.

INSTRUMENTS

GAME ADDICTION SCALE FOR ADOLESCENCE

The Game Addiction Scale for Adolescence was developed by Lemmens, Valkenburg and Peter (2009) and the Turkish adaptation was undertaken by Ilgaz (2015). The scale consists of twenty-one items and seven factors. The total score of the scale has an internal consistency coefficent of .92 (Ilgaz, 2015). In this research, the internal consistency coefficent regarding the scale was recalculated and the Cornbach Alpha coefficent was found to be .93.

PERCEIVED SOCIAL SUPPORT SCALE- R (PSSC-R)

The Perceived Social Support Scale was developed by Yıldırım (1997) and revised in 2004. The PSSC-R has subscales consisting of family members, friends, and teacher support. The lowest score that can be obtained from the scale is 50, and the highest score is 150. Items of the PSSC-R are rated using the three-point Likert-type rating. The internal consistency coefficient for the whole scale was found to be .93 (Yıldırım, 2004). In this study, the internal consistency coefficient of the scale was recalculated, and the Cronbach Alpha coefficient was found to be .84 for the family subscale, .87 for the friend subscale, .94 for the teacher subscale, and .94 for the entire scale.

BASIC PSYCHOLOGICAL NEEDS SCALE - HIGH SCHOOL FORM (BPNS-H)

The Basic Psychological Needs Scale was developed by Ryan and Deci (2000) and the Turkish adaptation of the scale was made by Kesici and others (2003). Studies for the high school form of the scale were made by Şahin (2007). The scale was reduced to seventeen items by removing four of the thoughts that showed low correlation. The scale, which was a five-point Likert-type, consists of three sub-dimentions. For the BPNS-H, the Cronbach Alpha reliability relatedness need subscale was found to be .77, the need for competence subscale was found to be .64 and the need for autonomy subscale was found to be .69. The scales' total reliability coefficient was calculated to be .82 (Şahin & Korkut-Owen,2009). High scores on the scale indicate that basic psychological needs are satisfied. In this study, the internal consistency coefficient of the scale was recalculated, and the Cronbach Alpha coefficient was found to be .74 for the relatedness need subsale, .47 for the need for competence subscale, .57 for the need for autonomy subscale, and .79 for the entire scale.

PROCESS

For this research, initially the necessary legal permission was obtained from the Turkish Ministry of Education. The purpose of the research was disclosed to the students and data colecting tools were only applied during classes, to students who had volunteered, with all of the questions answered, and written consent being taken. The data was collected in the Istanbul province, Bağcılar district, in 2018.

DATA ANALYSIS

The data was analyzed through the independent samples t-test, a one-way analysis of variance (ANOVA), and the Pearson correlation coefficient. The data obtained during the research was analysed using IBM SPSS 23.0 and the margin of error was taken to be .05. It was noted that the data showed normal distribution and the variances were homogeneous.

RESULTS

In this research, in order to determine whether there was a difference according to the adolescents' gender, prefered video game genre and levels of video game addiction for the independent samples t-test were used, and the result of the analysis is shown in Table 1.

Table 1. Differences of video game addiction according to gender and video game genres

Gender	n	M	SD	df	t	p	Cohen d
Female	262	39.48	16.72	531	-10.62	.000*	-0.92
Male	271	54.93	16.87				
Video game genre							
Online	303	53.55	16.72	461	7.91	.000*	0.765
Offline	160	40.69	16.87				

*$p < .01$

As can be seen in Table 1, the average video game addiction points of males are significantly higher than those of females ($t = -10.62$, $p < .01$), and the effect size is large ($d = .919$). Video game addiction levels are significantly higher in individuals who play online games compared to those who play offline games ($t = 7.91$, $p < .01$), with the effect size being large ($d = .765$).

The video game addiction level of adolescents is compared using ANOVA, and the results are given in Table 2.

Table 2. Differences of video game addiction according to school type

School type	n	M	SD		Sum of squares	df	Mean square	F	p	η^2
Anatolian	174	42.51	18.14	Between groups	9300.45	2	4650.23	14.30	.000*	0.05
Vocational	230	51.94	18.21	Within groups	172411.35	530	325.30			
Imam-Hatip	129	45.63	17.56	Total	181711.81	532				

*$p < .01$

In Table 2, there is a significant difference between the video game addiction levels of different types of high school students ($F = 14.30$, $p < .01$), with the effect size being medium ($\eta^2 = .051$). The Tukey HSD test was conducted to understand which groups this difference was in, and it was found that the game addiction levels of the vocational high school students were higher than those of the Anatolian and Imam Hatip schools. In addition, there is no significant difference between the adolescents' game addiction by grade level ($F = 2.66$, $p > .05$), mother's Internet usage competence ($F = 2.21$, $p > .05$), or father's Internet usage competence ($F = .83$, $p > .05$).

The relationship between satisfaction of basic psychological needs, percieved social support and video game addiction levels was analysed using the Pearson correlation coefficient and is shown in Table 3.

Table 3. The relationship between satisfaction of basic psychological needs, percieved social support and video game addiction level

Variables	GA	BPN	PSS (family)	PSS (friends)	PSS (teachers)
Game addiction (GA)	1				
Basic psychological needs (BPN)	- .196*	1			
Perceived social support (PSS) (family)	- .210*	.487*	1		
Perceived social support (friends)	- .211*	.466*	.505*	1	
Perceived social support (teachers)	- .151*	.267*	.446*	.418*	1

*$p < .01$

As can be seen in Table 3, there is a negative, low and significant correlation between video game addiction, basic psychological needs ($r = - .196$. $p < .01$) and perceived social support ($r_{family} = - .210$, $p < .01$; $r_{friends} =$

- .211, p< .01; $r_{teachers}$ = - .151, p< .01). In addition, it can be seen that there are positive relationships between basic psychological needs and perceived support.

CONCLUSION AND DISCUSSION

In this study, the relationships between video game addiction, satisfaction of basic psychological needs and percieved social support were examined. According to the findings of this study, there is a negative, low correlation between video game addiction and satisfaction of basic pscyhological needs and percieved social support. It is understood that the basic psychological needs of adolescents with high video game addiction level are not satisfied and they have insufficient social support. It is also found that video game addiction levels of male adolescents were higher than girls, online vidoe games are more preffered than offline games and vocational high school students are more addicted to video games than those of the Anatolian and Imam Hatip schools.

As a result of this research, it was found that male adolescents' level of game addiction is significantly higher than that of females. There are many research results similar to this finding which are available in the literature (Aksoy, 2018; Colwell & Payne, 2000; Colwell, Grady, & Rhaiti, 1995; Çakır, Ayas, & Horzum, 2011; Dönmez, 2018; Eni, 2017; Fisher, 1994; Gentile et al., 2011; Griffiths & Hunt, 1998; Hauge & Gentile, 2003; Kaya & Şahin Altun, 2015; Odabaşı, 2016; Taechoyotin, Tongro, & Piyaraj, 2018; Toker & Baturay, 2016; Van Rooij et al., 2014; Wang et al., 2014; Yu & Cho, 2016). However, there has also been research in the literature that states that gender differentiation is non-existent (Demirtaş-Madran & Ferligül-Çakılcı, 2014; Gibb et al., 1983; Taş, Eker, & Anlı, 2014), with studies showing that social media addiction is more common in females (Griffiths, Kuss, & Demetrovics, 2014), while conversely, males are more addicted to video games (Kuss & Griffiths, 2012).

The fact that the parts of the brain regarding the reward and punishment system of males is far more active than females can be a valid reason explaining why males are far more vulnurable to video game addiction than females (Griffiths & Hunt, 1998; Hoeft et al., 2008; Ko et al., 2009). In addition females are more likely to get addicted to their mobile phones due to social usage (Adamczyk, Adamczyk & Tłuściak-Deliowska, 2018). The games, and especially online games, that are build upon competition with others, and which contain both socially rewarding, appreciative content, such as ranking up in leagues, leveling up, ranking up, gaining titles and offering virtual material rewards, such as gold, credits, weapons, clothes and suchlike, can easily affect the cognitive processes of the individual. It can be seen that the recently popular looting mechanics of games affect players to a degree that is similar to gambling addiction (Abarbanel, 2018; King & Delfabbro, 2019; Zendle & Cairns, 2019). In addition, males are less neurologically affected than females while playing video games (Wang et al., 2018).

Results show that adolescents' levels of game addiction differ according to type of school attended, and this differentiation is due to the fact that vocational high school students' game addiction levels are higher than those of Anatolian and Imam Hatip high school students. This finding aligns with the findings of Aksoy (2018), although there are few studies comparing school types in the literature. Taş, Eker, and Anlı (2014) could not find any significant difference in the game addiction levels of adolescents in terms of school type. In one study, it is stated that the school type with the highest time efficiency for leisure activities among high schools is the vocational high school (Yetiş, 2008). Among the activities that students in these schools engage in when making use of their spare time, there are mostly activities such as listening to music, watching TV, doing homework, and spending time on the Internet (Okay, 2012). Considering the education and training program of vocational high school students, due to them having less academic expectations, and their future targets being more specific and limited, may have caused them to turn towards digital games as activities where they can spend their free time.

In this study, the average game addiction score of the individuals who preferred mostly online games was found to be significantly higher than that of those who preferred offline games. Griffiths, Kuss and King (2012) and Toker and Baturay (2016) also point out that online games are more addictive. Lemmens and Hendriks (2016) state that the time spent playing games in both game types is closely related to game addiction, but this situation is certainly more noticeable in online games. Social interaction in online games can be easier and more satisfying than face-to-face interaction for some, suggesting that people also prefer online games in order to seek social interaction (Ng & Wiemer-Hastings, 2005). Individuals who cannot

build social relationships and individuals who are alone, searching for friendship, turn towards online games and, thereby, increase the likelihood of video game addicton (Akkaş, 2020). However, Kuss, Griffiths, and Pontes (2017) state that games can be addictive regardless of whether they are online or offline, because, in qualifying the behavior as addiction, it is necessary to have certain clinical deterioration with overuse. In the studies, it is observed that addictive behavior is involved in both online and offline game types (Griffiths, Kuss, & King, 2012).

As a result of this research, it is found that there is a low-level negative correlation between video game addiction and perceived social support, as well as basic psychological needs. Adolescents whose basic psychological needs are not met sufficiently have high game addiction rates. There are a number of research results similar to this finding available in the literature (Allen & Anderson, 2018; Candemir Karaburç, 2020; Li et al., 2016; Scerri et al., 2018; Tamborini et al., 2010).

Griffiths, Davies and Chappell (2004) state that sociability is the most attractive aspect of online games. In cases where basic needs are not met or prevented, individuals may apply different methods to meet these needs (Deci & Vansteenkiste, 2004). It can be thought that adolescents develop addiction by turning to online games where they can find the opportunity to socialize. Online video games provide a way for players to build lasting relationships and to preserve existing ones (Siitonen, 2007). Digital games can have a great effect on meeting basic psychological needs if not used problematically or in an addictive way (Ryan, Rigby, & Przybylski, 2006). The fact that online games affect social life negatively and may lead to loneliness can lead to the prevention of real relationships that could sufficiently meet the need for relatedness (Gentile et al., 2011; Jeong & Kim, 2011).

The region where this research was conducted is one of the most populous districts of Istanbul, Turkey, where families with low socio-economic levels live. Families in this district can sometimes be concerned about their childrens' safety outside their houses. With this concern, parents can prevent their children from participating in out-of-home activities from an early age. In this area, houses are very close to each other and there are few safe environments such as parks where children and young people can spend time. Adolescents who cannot spend time and socialize with their peers on the streets or on a park, try to meet their needs at home. At the same time, video game addiction correlates with shyness, loneliness, low self esteem, anxious-indecisive attachment and low empathic tendency (Akkaş, 2020; Ayas, 2012; Lemmens, Valkenburg, & Peter, 2011; Tas, 2019), individuals not being comfortable in real relationships, and not being able to build healthy relationships. The motivation to play video games by players is found to be a progression in the game, game mechanics, competition, and socialization (Dindar & Akbulut, 2014; Ko et al., 2009; Sussman et al., 2014). In addition, the fact that games provide a kind of simulated environment for behavior that is not possible to experience in real life helps individuals to discover new skills in themselves and to realize their interests (Ryan, Rigby & Przybylski, 2006; Wan & Chiou, 2006). Games being open to new experiences allow individuals to test their skills and, thereby, to meet their basic psychological needs. According to the findings of this study, as the perceived social support of adolescents decreases, online game addiction increases. This finding is supported by similar studies in the literature (Ayas & Horzum, 2013; Baysak et al., 2018; Bonnaire & Phan, 2017; Durak-Batıgün & Kılıç, 2011; Günüç & Doğan, 2013; Karaer & Akdemir, 2019; Özmen, 2019; Öztosun, 2018; Varol-Afo, & Mortan Sevi, 2019; Yeh et al., 2008; Yiğit & Günüç, 2020). With low family support and neglect of children in particular, (Sussman et al., 2014; Beyazıt & Bütün Ayhan, 2019), conflicts and problems in family relationships (Boannaire & Phan, 2017; Çalışkan & Özbay, 2015; Yiğit & Günüç, 2020) and the absence of one of the parents (Taechoyotin, Tongro, & Piyaraj, 2018) significantly correlate with video game addiction.

In adolescence, although interest in the family decreases and relationships with peers become more important for the individual, emotional support of the family is still extremely important. In this study, perceived social support from family and perceived social support from friends are found to be negatively related to video game addiction at a similar level. The support the adolescent receives from his family and friends, especially the social support he feels while dealing with the problems that an individual faces, can help him overcome problems and stressful events in a healthy way (Deniz, 2006). A lack of social support and appropriate problem solving skills in adolescents, and the fact that games become a tool used to escape from problems, makes it easier for them to develop addiction to video games after a while. (Griffiths, 2010). According to a study that was conducted in South Korea with 600 student participants, composed of a

mixture of middle and high school students, game addiction is negatively correlated with social activities with parents (Jeong, & Kim, 2011).

In another study, it was found that 72% of young people between the ages of 13-17 play online games with their friends every day and 52% make friends with the people they play with, but the relationships they establish in daily life are weak (Lenhart, 2015). Adolescents who have trouble building relationships, and who are exposed to bulliying, due to having insufficient friendships and having social anxiety, leads to online games being seen as an alternative social space correlating with video game addiction (Griffiths, 2010; Karaca et al., 2016; Taechoyotin, Tongro, & Piyaraj, 2018). During the adolescence period it is important to be accepted as a part of a group and to feel included as a part of that group. Adolescents can cope more easily with the problems they encounter by getting strength from their peers. Cohen and Wills (1985) state that social support has a faciliating effect on coping with stressful life events. In this period, peers are an important source of social support for adolescents (Yıldırım, 1997). Adolescents who do not have sufficient social support from their peers may turn to online games, both to seek support and to avoid their problems (Papacharissi & Rubin, 2000).

In the study, no relationship is found between perceived social support from teachers and video game addiction. Due to their seasonal characteristics, the importance of teachers for high school students can be expected to be lower than for primary and secondary school students. This may be interpreted as teachers not being an important source of social support in the lives of adolescents.

In this study, since the internal consistency coefficients calculated for the sub-dimensions of the Basic Psychological Needs Scale are low, the use of the total score in the analyzes is preferred. In this sense, it can be suggested to work on scales in new studies. According to the results of this study, as well as similar studies in the literature, males, and especially adolescent males, have higher levels of online video game addiction. Considering male adolescents as a risk group in this sense may be considered in preventative studies.

According to the results of the study, game addiction levels of vocational high school students are found to be higher. At the same time, the fact that this group is more at risk, the teachers, students and parents at these schools need to be informed accurately about game addiction and awareness needs to be raised about possible dangers. In addition to informing, peer groups can be formed and group work can be used to support the correct use of games. Similarly, physical and social activities for students in the risk group can be diversified and students can be directed to these.

The online game addiction levels of adolescents who cannot find sufficient social support from their families and friends are higher than the research results. In this sense, families can be educated regarding ways to communicate with adolescents and provide appropriate social support. Correct parenting skills, monitoring the adolescent and supervision provided to the adolescent (Toker & Baturay, 2016) prove their worth as the families' social support. In addition to this, families' knowledge of digital parenting should be increased in order to enable children to maintain a healthier relationship with technology. In this way, the family should be able to provide suffcent digital support to the child and adolescent. Conducting activities together in the family with the close attention of parents, especially the mother's attention to the child (Yiğit & Günüç, 2020), are stated as protective factors.

The computer as well as computer assisted instruction plays an important role in development of children and could be used as an assistive tool in academic purposes (Mohammed, 2013). Thus, the students' addiction towards digital games can be used in their education. We should learn more about children's passion for video games.

REFERENCES

Abarbanel, Brett. "Gambling vs. gaming: A commentary on the role of regulatory, industry, and community stakeholders in the loot box debate." *Gaming Law Review* 22 (4) (2018): 231-234.

Adamczyk, Małgorzata, Andrzej Adamczyk, and Aleksandra Tłuściak-Deliowska. "Using Mobile Phones by Young People: The Trends and Risk of Addiction." *Psycho-Educational Research Reviews* (2018): 29-41.

Adcolony. *Mobile gaming in Turkey Under the microscope*. (2018) Retrieved from: https://www.adcolony.com/blog/2017/07/18/mobile-gaming-turkey-microscope/

Akkaş, İbrahim. "Study on digital game addiction as a global problem area: The case of Erzincan." *Modern Leisure Studies, 2* (1) (2020): 11-23

Aksoy, Zahide. "*Adölesanlarda oyun bağımlılığı, yaşam biçimi davranışları ve etkileyen faktörler.*" Master's Thesis. Marmara University, 2018.

Allen, Johnie J., and Craig A. Anderson. "Satisfaction and frustration of basic psychological needs in the real world and in video games predict internet gaming disorder scores and well-being." *Computers in Human Behavior* 84 (2018): 220-229.

Arıcak, Osman Tolga, et al. "Adapting the short form of the Internet Gaming Disorder Scale into Turkish: Validity and reliability." Addicta: The Turkish Journal on Addictions 5.4 (2018): 615-636.

Ayas, Tuncay. "The relationship between Internet and computer game addiction level and shyness among high school students." *Educational Sciences: Theory and Practice* 12.(2) (2012): 632-636.

Ayas, Tuncay, and Mehmet Barış Horzum. "Internet addiction and internet parental style of primary school students." *Türk Psikolojik Danışma ve Rehberlik Dergisi* 4.(39) (2013): 46-57.

Balıkçı, Rafi. *Çocuklarda ve ergenlerde çevrimiçi oyun bağımlılığı ve agresif davranışlar arasındaki ilişkinin incelenmesi.* Master's Thesis. Fatih Sultan Mehmet Vakıf Üniversitesi, Sosyal Bilimler Enstitüsü, 2018.

Baysak, Erkan, et al. "Online game addiction in a sample from Turkey: Development and validation of the Turkish version of game addiction scale." *Klinik Psikofarmakoloji Bülteni-Bulletin of Clinical Psychopharmacology* 26.(1) (2016): 21-31.

Baysak, Erkan, et al. "How game addiction rates and related psychosocial risk factors change within 2-years: A follow-up study." *Psychiatry investigation* 15.(10) (2018): 984.

Beyazıt, Utku, and Aynur Bütün Ayhan. "The relationship between digital game addiction and being neglected by parents in adolescence." *Ankara Sağlık Bilimleri Dergisi* 8.(2) (2019): 86-95.

Bonnaire, Céline, and Olivier Phan. "Relationships between parental attitudes, family functioning and Internet gaming disorder in adolescents attending school." *Psychiatry Research* 255 (2017): 104-110.

Braun, Claude MJ, and Josette Giroux. "Arcade video games: Proxemic, cognitive and content analyses." *Journal of Leisure Research* 21.2 (1989): 92-105.

Braun, Claude MJ, et al. "Adolescents and microcomputers: Sex differences, proxemics, task and stimulus variables." *The Journal of psychology* 120.6 (1986): 529-542.

Buchman, Debra D., and Jeanne B. Funk. "Video and computer games in the'90s: Children's time commitment and game preference." *Children today* 24.1 (1996): 12.

Can, Sermin, and Şerife Gonca Zeren. "The Role of Internet Addiction and Basic Psychological Needs in Explaining the Academic Procrastination Behavior of Adolescents." *Cukurova University Faculty of Education Journal* 48.2 (2019).

Candemir Karaburç, Gülşah, and Erhan Tunç. "Problematic Internet use, marital adjustment, couple burnout and basic psychological need satisfaction levels of married individuals." *Journal of Social and Humanities Sciences Research* 7.55 (2020): 1695-1721.

Cobb, Sidney. "Social support as a moderator of life stress." *Psychosomatic medicine* 38(5) (1976): 300-314.

Cohen, Sheldon, and Thomas A. Wills. "Stress, social support, and the buffering hypothesis." *Psychological bulletin* 98.2 (1985): 310.

Colwell, John, Clare Grady, and Sarah Rhaiti. "Computer games, self-esteem and gratification of needs in adolescents." *Journal of Community & Applied Social Psychology* 5.3 (1995): 195-206.

Colwell, John, and Jo Payne. "Negative correlates of computer game play in adolescents." *British Journal of psychology* 91.3 (2000): 295-310.

Çalışkan, Ömer, and Fatih Özbay. "12-14 yaş aralığındaki ilköğretim öğrencilerinde teknoloji kullanımı eksenli yabancılaşma ve anne baba tutumları: Düzce ili örneği." *Uluslararası Sosyal Araştırmalar Dergisi* 8.39 (2015): 441-458.

Çakıcı, Gizem. *Ergenlerde dijital oyun bağımlılığı ve öfkeyi ifade etme biçimleri arasındaki ilişkinin incelenmesi.* Master's Thesis Haliç Üniversitesi, Sosyal Bilimler Enstitüsü, 2018.

Çakir, Özlem, Tuncay Ayas, and Mehmet Barış Horzum. "An investigation of university students' internet and game addiction with respect to several variables." *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi* 44.2 (2011): 95-118.

Çeken, Birsen, and Kübra Çiçekli. "FRP Kutu Oyunlarından Grafiğe, Sıra Tabanlı (Digital Turn Based) Dijital Oyunlardaki Tasarım Trendleri" *Uluslararası Afro-Avrasya Araştırmaları Dergisi, 3*(5) (2018): 35-43.

Deci, Edward L., and Richard M. Ryan. "The" what" and" why" of goal pursuits: Human needs and the self-determination of behavior." *Psychological inquiry* 11.4 (2000): 227-268.

Deci, Edward L., and Richard M. Ryan. "Levels of analysis, regnant causes of behavior and well-being: The role of psychological needs." *Psychological Inquiry* 22.1 (2011): 17-22.

Deci, Edward L., and Maarten Vansteenkiste. "Self-determination theory and basic need satisfaction: Understanding human development in positive psychology." *Ricerche Di Psicologia,* 27(1) (2003): 23-40.

Madran, Demirtaş, and Ferligül Çakılcı. "Çok oyunculu çevrimiçi video oyunu oynayan bireylerde video oyunu bağımlılığı ve saldırganlık." *Anadolu Psikiyatri Dergisi* 15.2 (2014): 99-107.

Deniz, Mehmet. "The relationships among coping with stress, life satisfaction, decision-making styles and decision self-esteem: An investigation with Turkish university students." *Social Behavior and Personality: an international journal* 34.9 (2006): 1161-1170.

Dindar, Muhterem, and Yavuz Akbulut. "Why do pre-service teachers quit Facebook? An investigation on 'quitters forever'and 'quitters for a while'." *Computers in Human Behavior* 39 (2014): 170-176.

Dönmez, Şeymanur. *"Çevrimiçi oyun bağımlılığının bilinçli farkındalık ve yaşam doyumu ile ilişkisi."* Unpublished Master's Thesis. Fatih Sultan Mehmet Vakıf Üniversitesi, İstanbul, 2018.

Batıgün, Ayşegül Durak, and Nevin Kılıç. "İnternet Bağımlılığı ile Kişilik Özellikleri, Sosyal Destek, Psikolojik Belirtiler ve Bazı Sosyo-Demografik Değişkenler Arasındaki İlişkiler." *Turk Psikoloji Dergisi* 26.67 (2011): 1-10.

Elkady, Ayman Abdelgalil M. "The Mediating Role of Emotional Intelligence in the Relationship between Perceived Social Support and Cyberbullying Victimization among Adolescents in Egypt." *International Journal of Psycho-Educational Sciences* 8 (2019): 6-13.

Eni, Beyzanur. "*Lise öğrencilerinin dijital oyun bağımlılığı ve algıladıkları ebeveyn tutumlarının değerlendirilmesi.*" Master's Thesis. Haliç Üniversitesi, Sosyal Bilimler Enstitüsü, 2017.

Fisher, Sue. "Identifying video game addiction in children and adolescents." *Addictive behaviors* 19.5 (1994): 545-553.

Funk, Jeanne B. "Reevaluating the impact of video games." *Clinical pediatrics* 32.2 (1993): 86-90.

Gentile, Douglas. "Pathological video-game use among youth ages 8 to 18: A national study." *Psychological science* 20.5 (2009): 594-602.

Gentile, Douglas A., et al. "Pathological video game use among youths: a two-year longitudinal study." *Pediatrics* 127.2 (2011): e319-e329.

Gibb, Gerald D., et al. "Personality differences between high and low electronic video game users." *The Journal of psychology* 114.2 (1983): 159-165.

Griffiths, Mark D. "Amusement machine playing in childhood and adolescence: A comparative analysis of video games and fruit machines." *Journal of adolescence* 14.1 (1991): 53-73.

Griffiths, Mark D. "Computer game playing in early adolescence." *Youth & Society* 29.2 (1997): 223-237.

Griffiths, Mark D. "The role of context in online gaming excess and addiction: Some case study evidence. " *International Journal of Mental Health Addiction*, 8(1) (2010): 119–125.

Griffiths, Mark D., Mark NO Davies, and Darren Chappell. "Demographic factors and playing variables in online computer gaming." *CyberPsychology & behavior* 7.4 (2004): 479-487.

Griffiths, Mark D., and Nigel Hunt. "Computer game playing in adolescence: Prevalence and demographic indicators." *Journal of Community & Applied Social Psychology* 5.3 (1995): 189-193.

Griffiths, Mark D., and Nigel Hunt. "Dependence on computer games by adolescents." *Psychological reports* 82.2 (1998): 475-480.

Griffiths, Mark D., Daria J. Kuss, and Zsolt Demetrovics. "Social networking addiction: An overview of preliminary findings." *Behavioral addictions* (2014): 119-141.

Griffiths, Mark D., Daria J Kuss, and Daniel L King. "Video game addiction: Past, present and future." *Current Psychiatry Reviews* 8.4 (2012): 308-318.

Groh, Fabian. "Gamification: State of the art definition and utilization." *Institute of Media Informatics Ulm University* 39 (2012): 31.

Gunuc, Selim, and Ayten Dogan. "The relationships between Turkish adolescents' Internet addiction, their perceived social support and family activities." *Computers in Human Behavior* 29.6 (2013): 2197-2207.

Gündoğdu, Kerim, Fevzi Dursun, and Asuman Seda Saracaloğlu. "Investigation of Educational Philosophies and General Self-Efficacy Perceptions of Graduate Students in Educational Sciences Programs." *Psycho-Educational Research Reviews* 9.1 (2020): 21-32.

Hauge, Marny R., and Douglas A. Gentile. "Video game addiction among adolescents: Associations with academic performance and aggression." *Society for Research in Child Development Conference*. (2003).

Hoeft, Fumiko, et al. "Gender differences in the mesocorticolimbic system during computer game-play." *Journal of psychiatric research* 42.4 (2008): 253-258.

Ilgaz, Hale. "Ergenler için oyun bağımlılığı ölçeğinin Türkçeye uyarlama çalışması." *Elementary Education Online* 14.3 (2015): 873-884

İskender, Ali. "*Boş zamanda sıkılma algısı ile üniversite öğrencilerinin riskli davranışları arasındaki ilişkinin belirlenmesinde çok boyutlu algılanan sosyal destek araçlarının rolü.*" Doctoral Thesis. Gazi Üniversitesi, Sosyal Bilimler Enstitüsü, 2018.

Jeong, Eui Jun, and Doo Hwan Kim. "Social activities, self-efficacy, game attitudes, and game addiction." *Cyberpsychology, Behavior, and Social Networking* 14.4 (2011): 213-221.

Karaca, Semra, et al. "Ortaokul öğrencilerinde bilgisayar oyun bağımlılığı ve sosyal anksiyetenin incelenmesi." *Clinical and Experimental Health Sciences* 6.1 (2016): 14-19.

Kahriman, İlknur, and Sevinç Polat. "Adölesanlarda Aile ve Arkadaşlardan Algılanan Sosyal Destek İle Benlik Saygısı Arasındaki İlişki. " *Atatürk Üniversitesi Hemşirelik Yüksekokulu Dergisi*, 6(2) (2003): 13-24.

Karaer, Yusuf, and Devrim Akdemir. "Parenting styles, perceived social support and emotion regulation in adolescents with internet addiction." *Comprehensive psychiatry* 92 (2019): 22-27.

Kartal, Beyazıt. *Oyun Başında En Fazla Vakit Geçiren 3. Ülkeyiz*. (2019). Retrieved from: https://www.webtekno.com/carpici-istatistik-oyun-basinda-en-fazla-vakit-geciren-3-ulkeyiz-h60910.html

Kaya, Hava, & Özlem Şahin-Altun. "Hemşirelerin temel psikolojik ihtiyaçları ve etkileyen faktörler." *Sağlık Bilimleri ve Meslekleri Dergisi, 5*(3) (2015): 295-305.

Keepers, George A. "Pathological preoccupation with video games." *Journal of the american academy of child & adolescent psychiatry* 29.1 (1990): 49-50.

Kesici, Şahin, et al. (2003, July 9-11). Temel Psikolojik İhtiyaçlar Ölçeğinin Geçerlik ve Güvenirliği [Paper presentation]. VII. Ulusal PDR Congress İnönü University, Malatya, Turkey.

Klein, Martin H. "The bite of Pac-man." *The Journal of Psychohistory* 11.3 (1984): 395.

King, Daniel L., and Paul H. Delfabbro. "Video game monetization (eg,'loot boxes'): a blueprint for practical social responsibility measures." *International Journal of Mental Health and Addiction* 17.1 (2019): 166-179.

Ko, Chih-Hung, et al. "Brain activities associated with gaming urge of online gaming addiction." *Journal of psychiatric research* 43.7 (2009): 739-747.

Kuss, Daria Joanna, and Mark D. Griffiths. "Internet gaming addiction: A systematic review of empirical research." *International journal of mental health and addiction* 10.2 (2012): 278-296.

Kuss, Daria J., Mark D. Griffiths, and Halley M. Pontes. "Chaos and confusion in DSM-5 diagnosis of Internet Gaming Disorder: Issues, concerns, and recommendations for clarity in the field." *Journal of behavioral addictions* 6.2 (2017): 103-109.

Kuss, Daria J., Jorik Louws, and Reinout W. Wiers. "Online gaming addiction? Motives predict addictive play behavior in massively multiplayer online role-playing games." *Cyberpsychology, Behavior, and Social Networking* 15.9 (2012): 480-485.

Kuczmierczyk, Andrzej R., Page B. Walley, and Karen S. Calhoun. "Relaxation training, in vivo exposure and response-prevention in the treatment of compulsive video-game playing." *Cognitive Behaviour Therapy* 16.4 (1987): 185-190.

Lemmens, Jeroen S., and Stefan JF Hendriks. "Addictive online games: Examining the relationship between game genres and Internet Gaming Disorder." *Cyberpsychology, Behavior, and Social Networking* 19.4 (2016): 270-276.

Lemmens, Jeroen S., Patti M. Valkenburg, and Jochen Peter. "Development and validation of a game addiction scale for adolescents." *Media psychology* 12.1 (2009): 77-95.

Lemmens, Jeroen S., Patti M. Valkenburg, and Jochen Peter. "Psychosocial causes and consequences of pathological gaming." *Computers in human behavior* 27.1 (2011): 144-152.

Lenhart, Amanda, et al. *Teens, technology & friendship*. Vol. 10. Washington, DC: Pew Research Center, 2015.

Lepore, Stephen J., Gary W. Evans, and Margaret L. Schneider. "Dynamic role of social support in the link between chronic stress and psychological distress." *Journal of personality and social psychology* 61.6 (1991): 899.

Li, Dongping, et al. "Stressful life events and adolescent Internet addiction: The mediating role of psychological needs satisfaction and the moderating role of coping style." *Computers in Human Behavior* 63 (2016): 408-415.

Morlock, Henry, Todd Yando, and Karen Nigolean. "Motivation of video game players." *Psychological reports* 57.1 (1985): 247-250.

Mohammed, Adel Abdulla. "Using computerized games as a computer-assisted instruction format to enhance helping behaviour in kindergarteners at-risk for learning disabilities." *Psycho-Educational Research Reviews* (2013): 3-14.

NewZoo. "The Turkish gamer (2017). Retrieved from: https://newzoo.com/insights/infographics/the-turkish-gamer-2017/

Ng, Brian D., and Peter Wiemer-Hastings. "Addiction to the internet and online gaming." *Cyberpsychology & behavior* 8.2 (2005): 110-113.

Odabaşı, Şule. "*Üniversite Öğrencilerinin Online Oyun Bağımlılığı Düzeylerinin Öznel Mutluluk Düzeyleriyle İlişkisi.*" Master's Thesis. Sakarya Üniversitesi, 2016

Okay, Seçil. "*Meslek lisesi öğrencilerinin okul dışı zamanlarını değerlendirme şekilleri ve değerlendirme şekillerini etkileyen faktörler.*" Master's Thesis. Sakarya Üniversitesi, 2012.

Oliver, Mary Beth, et al. "Video games as meaningful entertainment experiences." *Psychology of Popular Media Culture* 5.4 (2016): 390-405.

Ögel, Kültegin. *İnternet bağımlılığı: İnternetin psikolojisini anlamak ve bağımlılıkla başa çıkmak*. İstanbul: Türkiye İş Bankası Kültür Yayınları, 2012.

Özmen, Mehmet. "*Ortaokul öğrencilerinde dijital oyun bağımlılığı düzeyinin yordanması.*" Master's Thesis. Pamukkale Üniversitesi Eğitim Bilimleri Enstitüsü, 2019.

Öztosun, Ali. "*Ergenlerde algılanan sosyal destek ve sosyal dışlanma deneyimlerinin internet bağımlılığını yordayıcılığı.*" Master's Thesis. İstanbul Sabahattin Zaim Üniversitesi, Sosyal Bilimler Enstitüsü, Eğitim Bilimleri Anabilim Dalı, 2018.

Papacharissi, Zizi, and Alan M. Rubin. "Predictors of Internet use." *Journal of broadcasting & electronic media* 44.2 (2000): 175-196.

Pontes, Halley M., and Mark D. Griffiths. "Assessment of internet gaming disorder in clinical research: Past and present perspectives." *Clinical Research and Regulatory Affairs* 31.2-4 (2014): 35-48.

Przybylski, Andrew K., et al. "The ideal self at play: The appeal of video games that let you be all you can be." *Psychological science* 23.1 (2012): 69-76.

Przybylski, Andrew K., et al. "Having to versus wanting to play: Background and consequences of harmonious versus obsessive engagement in video games." *CyberPsychology & Behavior* 12.5 (2009): 485-492.

Reinecke, Leonard, and Mary Beth Oliver, "Media use and well-being: Status quo and open questions" *The Routledge handbook of media use and well-being: International perspectives on theory and research on positive media effects*. Ed. Leonard, Reinecke, and Mary Beth Oliver. New York: Routledge. 2016. 3-13

Sailer, Michael, et al. "How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction." *Computers in Human Behavior* 69 (2017): 371-380.

Sarason, Irwin G., et al. "Assessing social support: the social support questionnaire." *Journal of personality and social psychology* 44.1 (1983): 127.

Scerri, Matthew, et al. "Need fulfilment and internet gaming disorder: A preliminary integrative model." *Addictive behaviors reports* 9 (2019): 100144.

Sever, Gökcan. "*Lise öğrencilerinin madde kullanma eğilimlerinin algılanan sosyal destek ve riskli davranışlarla ilişkisinin incelenmesi.*" Unpublished Master's Thesis. Gaziantep Üniversitesi Eğitim Bilimleri Enstitüsü, 2015.

Sheldon, Kennon M., et al. "What is satisfying about satisfying events? Testing 10 candidate psychological needs." *Journal of personality and social psychology* 80.2 (2001): 325.

Shi, Jing, et al. "Understanding the lives of problem gamers: The meaning, purpose, and influences of video gaming." *Computers in Human Behavior* 97 (2019): 291-303.

Soper, W. Barlow, and Mark J. Miller. "Junk-time junkies: An emerging addiction among students." *The School Counselor* 31.1 (1983): 40-43.

Steinkuehler, Constance A., and Dmitri Williams. "Where everybody knows your (screen) name: Online games as "third places"." *Journal of computer-mediated communication* 11.4 (2006): 885-909.

Siitonen, Marko. "*Social interaction in online multiplayer communities*." No. 74. University of Jyväskylä, 2007.

Şahin, Ekrem. S. 2007. *Psikolojik İhtiyaçları Farklı Lise Öğrencilerinin Saldırganlık Düzeyleri.* Master's Thesis, Hacettepe Üniversitesi, Eğitim Bilimleri Enstitüsü, 2007.

Şahin, Ekrem, and Fidan Owen. "Psikolojik ihtiyaçları farklı lise öğrencilerinin saldırganlık düzeyleri." *Türk Psikolojik Danışma ve Rehberlik Dergisi* 4.32 (2009): 64-74..

Taechoyotin, Pawan, et al. "Prevalence and associated factors of internet gaming disorder among secondary school students in rural community, Thailand: A cross-sectional study." *BMC research notes* 13.1 (2020): 1-7.

Tamborini, Ron, et al. "Defining media enjoyment as the satisfaction of intrinsic needs." *Journal of communication* 60.4 (2010): 758-777.

Tanrıverdi, Selami. "Ortaöğretim öğrencilerinde internet bağımlılığı ile algılanan sosyal destek arasındaki ilişkinin incelenmesi.*" Online Journal of Technology Addiction & Cyberbullying*, 1 (2014): 1-27.

Taş, İbrahim. "The pattern of relationship between attachment styles, gaming addiction and empathetic tendency among adolescents." *Eurasian Journal of Educational Research* 19.83 (2019): 125-144.

Taş, İbrahim, Halime Eker, and Gazanfer Anlı. "Orta öğretim öğrencilerinin internet ve oyun bağımlılık düzeylerinin incelenmesi." *Online Journal of Technology Addiction & Cyberbullying. 1*(2) (2014): 37-57.

Taşdemir, Nüzhet Özlem. "*Gençlerde algılanan sosyal destek ve yalnızlık duygusunun internet kullanımına etkisinin incelenmesi*." Master's Thesis, Haliç Üniversitesi Sosyal Bilimler Enstitüsü, 2016.

Toker, Sacip, and Meltem Huri Baturay. "Antecedents and consequences of game addiction." *Computers in Human Behavior* 55 (2016): 668-679.

Varol-Afo, Larissa, and Oya Mortan Sevi. *Yalnızlık, utangaçlık, algılanan sosyal destek ve yaşam doyumunun problemetik internet kullanımı ile ilişkisi*. Uluslararası Ruh Sağlığında Toplumsal Farkındalık Kongresi, (2019). Retrieved from: https://www.researchgate.net/profile/Fatih_Bal2/publication/332080035_COCUKLUKTAN_YASLILIGA_DEGISEN_ZA MAN_ALGISI/links/5c9e3596299bf11169500413/COCUKLUKTAN-YASLILIGA-DEGISEN-ZAMAN-ALGISI.pdf#page=76

Van Rooij, Antonius J., et al. "The (co-) occurrence of problematic video gaming, substance use, and psychosocial problems in adolescents." *Journal of behavioral addictions* 3.3 (2014): 157-165.

Wan, Chin-Sheng, and Wen-Bin Chiou. "Why are adolescents addicted to online gaming? An interview study in Taiwan." *Cyberpsychology & behavior* 9.6 (2006): 762-766.

Wang, Chong-Wen, et al. "Prevalence and correlates of video and Internet gaming addiction among Hong Kong adolescents: A pilot study." *The Scientific World Journal* (2014): 1-9

Wang, Ziliang, et al. "Females are more vulnerable to Internet gaming disorder than males: Evidence from cortical thickness abnormalities." *Psychiatry Research: Neuroimaging* 283 (2019): 145-153.

Weinstein, Aviv Malkiel. "Computer and video game addiction—a comparison between game users and non-game users." *The American journal of drug and alcohol abuse* 36.5 (2010): 268-276.

Yalçın Irmak, Aylin, and Semra Erdoğan. "Dijital Oyun Bağımlılığı Ölçeği Türkçe formunun geçerliliği ve güvenilirliği." *Anatolian Journal of Psychiatry/Anadolu Psikiyatri Dergisi* 16 (2015): 10-18.

Yeh, Yu-Chun, et al. "Gender differences in relationships of actual and virtual social support to Internet addiction mediated through depressive symptoms among college students in Taiwan." *Cyberpsychology & behavior* 11.4 (2008): 485-487.

Yeşilyurt, Ferahim, and İrfan Erdoğan. "Ergenlerin Oynadıkları Çevrim İçi Oyunların Cinsiyet, Sınıf Düzeyi ve Ders Başarısına Göre İncelenmesi." *HAYEF Journal of Education* 15.2 (2018): 100-121.

Yetiş, Ümit. "Orta Öğretim Öğrencilerinin Boş Zaman Değerlendirme Eğilimlerinin Farklı Değişkenlere Göre Belirlenmesi." *Beden Eğitimi ve Spor Bilimleri Dergisi* 2.3 (2008): 193-205.

Yıldırım, İbrahim. "Algılanan sosyal destek ölçeğinin geliştirilmesi güvenirliği ve geçerliği." *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi,* 13 (13) (1997): 81-87.

Yıldırım, İbrahim. "Algılanan sosyal destek ölçeğinin revizyonu." *Eğitim Araştırmaları–Eurasian Journal of Educational Research,* 17 (2004): 221-236.

Yiğit, Emrullah, and Selim Günüç. "Çocukların dijital oyun bağımlılığına göre aile profillerinin belirlenmesi." *Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi* 17.1 (2020): 144-174.

Yu, Hongsik, and Jaehee Cho. "Prevalence of internet gaming disorder among Korean adolescents and associations with non-psychotic psychological symptoms, and physical aggression." *American journal of health behavior* 40.6 (2016): 705-716.

Zendle, David, and Paul Cairns. "Correction: Video game loot boxes are linked to problem gambling: Results of a large-scale survey." *Plos one* 14.3 (2019): e0214167.

Zimet, Gregory D., et al. "Psychometric characteristics of the multidimensional scale of perceived social support." *Journal of personality assessment* 55.3-4 (1990): 610-61