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Research Article

Investigating Psychological Well-Being Levels of Teenagers Interested in Esport Career

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Abstract

The purpose of this study is to reveal psychological levels of teenagers who are interested in Esport career. Recently, thanks to technological developments, there has been a growing new industry: Electronic Sports. Nowadays, playing video games might be seem as a career option. Teenagers who are interested in eSport career play video games for a long time in their daily life as much as professional eSport players do. Excessive plays of video games have been known to cause psychological, physiological, and mental problems. Playing video games for a long time in daily life causes social, emotional, and mental problems such as depression, aggression, intolerance, lose of control. The research's study group consists of teenager students in high schools and colleges in Turkey. Web-based questionnaire and psychologocial well-being scale which belongs to Telef had been used to collect data. Using data from a survey of 320 teenagers 15 to 27 years old in Turkey, we tested psychological well-being levels of teenagers with daily playing video game times and teenagers' desire of having esport career. The results show that daily playing video game times effect psychological well-being levels of teenagers. Additionally, teenagers' desire of having an Esport career is significant predictor of low psychological well-being level.

Key Words

Electronic sports • Teenagers • Psychological well-being • Esport career

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The world has been shaped by technology based on human requirements in last years. Sport is one of the fields effected and changed by technological developments. Now, there is a new branch of sport industry: Electronic sport. Esport has become very popular over the last decade, however most of adults have not heard anything about this new concept. Esport is usually meant for competitive gaming or professional gaming (Welch, 2002). People used to see teenagers playing football, basketball and other sport branches on the streets. Lately, these sport games are switching to computer games. Now, computer games have helped shaping the esport industry. Esport is modern form of industrialized traditional sports (Jonasson & Thiborg, 2010). If a clear definition is made; Esport is a genre of sport which people can play video games on internet or local networks.

Esport has been discussed numerous times whether it is a real sport or not so far. There are common features between esports and traditional sports as they have different aspects. Contrarily, esport doesn't require physical activity as much as traditional sports have. On the other hand, both concepts include team chemistry, strategy, competition, talents, improvement (Crawford & Gosling, 2009). Also, esport players are training with coaches like traditional sports athletes (Jenny, Manning, Keiper, & Olrich, 2016). Esport players have similar brain activities with rally drivers when they compete with each other (Schütz, 2016). Additionally, Esport games will take place in the Asian Games in 2022 and those who rank will be provided with medals. Furthermore, it is estimated that there will be esport games in the Paris Olympics in 2024 (Bloom, 2018). Despite the discussions, most countries recognize esports as a sport branch.

The competition culture in video games is based on the 80s' games like Pac-Man, Asteroids (Borowy & Jin, 2013). However, people could not play against each other like they do nowadays because of not having common global network. After WorldWideWeb's coming on stage at 90s, a single global network is formed. People hereby could connect and compete with each other in online games. Three important events had been taken place as a turning point at history of esports. The very first known esport tournament Red Annihilation was organized with local area network in the USA on May 1997. The prize of the tournament was John Carmack's 1987 model Ferrari (Kampman, 2001). In 2008, 2000 euro prized tournament was organized in Sweden. The ladder system as known ranking players according to their skill levels has been created by this tournament (Jonasson & Thiborg, 2010). So that, players could play against same talented players as much as they are. Competition between the gamers has reached to another level with ladder system. However, prize pools of esport tournaments were still very low. In 2011, Valve company bought Dota which is a MOBA game (Multiplayer Online Battle Arena). Dota was used to be playing over Frozen Throne. In the summer of 2011, Valve organized \$1,6 million prized Dota 2 World Championship. The prize pool of Dota 2 World Championship was \$25,5 million in 2018. With time, the number of esport teams and players have increased. Nowadays, most of the esport teams have their rosters, coaches, and team workers. Also, professional esport players' salaries ranged from \$1500 to \$5000 and they are taking %80 of prizes when they win tournaments (Duran, 2016).

It is important to emphasize that teenagers admire esport players today. They see esport players as role models. For example Sumail Hassan won Dota 2 World Cup at the age of 16 with his team Evil Geniuses. He earned \$6 million prize with his 4 teammates in 2016. Especially, the moment when they won the tournament by "the play" has became one of the most iconic moments of esports history. It is called "\$6 Million Echo Slam". Sumail mentioned that taking prize is more important than having second championship at the Dota 2 World Cup in summer of 2018 (Put Tank in a Mall, 2018). On the other hand, teenagers may struggle with their self-

confidence when they compared to others. Loomis had been comparing to his successfull brother throughout childhood. Therefore, he chose to play computer games as an escape mechanism. When the time has come he won the Dota 2 World Cup with Sumail. Danil was an another esport player. When he was a child, his father passed away. He mentioned that he was playing computer games to escape from his pain. Also, he won the first Dota 2 World Cup with his team Natus Vincere. Danil whose nickname is Dendi has improved his playstyle over the years. His playstyle with his iconic hero in the game has been found fascinating by most of the Dota 2 fans. Today, he is recognized as the Face of Dota by Dota community ([Co, 2014](#)). It is understandable from the samples that teenagers may show interest in playing video games because of variable reasons happening in their life. Some teenagers use similar mechanisms to escape bad feelings, ignore academic achievements or make their parents angry. Teenagers may see themselves on esport players' life story. Also, they have been dreaming to earn prizes like esport players do while they are having fun with video games. So, it is not surprise that teenagers have a disare to purse having esport career.

Excessive use of video games is a common feature between esport players and game addicted teenagers. It is pointed out that esport players have weekly gaming times from 6 hours to 42 hours ([Garcia-Lanzo & Chamarro, 2018](#)). Professional gamers are able to play video games more than 22 hours per week ([Chappel, Eatough, Davies & Griffiths, 2006](#)). Furthermore, %15 of gamers called as dedicated gamers are playing video games more than 50 hours per week ([Griffiths, Davies, & Chappel, 2004](#)). %30 of teenagers who are interested in esports are playing video games more than 5 hours per day ([Eventbrite, 2015](#)). In the DSM-V Fact Sheets (2013), game addiction is classified like other behavioral addictions with withdrawal, tolerance, persistence, escape, deception, displacement, conflict symptoms. Physical activity makes persons happier by increasing serotonin levels ([Alikhani, Molaie, & Amiri, 2015](#)). Playing computer games for a long time may trigger depression and social problems ([Scott, Aune, & Roar, 2014](#)). Recently, esport teams like Evil Geniuses, Team Liquid, Virtus Pro have begun to work with psychologists and physiotherapists. These professional esport players have advised to exercise and attend weekly counseling sessions ([Erzberger, 2016; Sanchez, 2017](#)).

It is difficult to say that teenagers who are dreaming of having esport career may have same opportunities like esport players. Additionally, there are billions of teenagers trying to become an esport player like their role models, however very few of them can reach to that goal. Therefore, we can say that some teenagers may become addicted to video games because of their unpredictable future of having esport career or not ([Elliott, 2018; Kocadag, 2017](#)). It is highly possible to say that a teenager may show addicted behaviours with excessive use of video games if he or she can not reach to esport career goal. The issue is playing videogames excessively cause addictive behaviours while esport teams trying to reduce their esport players' addiction levels by counseling sessions and physical activities in last years.

Game addiction is a major problem for society to deal with. There will be some harmful consequences to society. Scientists have started viewing video gaming as a pathological issue ([Lemmens, 2006](#)). Uncontrolled and excessive play of video games causes social and emotional problems ([Lemmens, Valkenburg, & Peter, 2009](#)). Teenagers with addicted behaviours may be evolving to agressive, uncooperative, apathetic, and tense personalities ([Boxer, Groves, & Docherty, 2015; Dodge, 2010](#)). Researches showed that addicted teenagers' probability of using alcohol and drugs is more than their non-addicted peers. Hazardous and risky behaviours of teenagers show us how intensive they have been effected by video games ([Padilla-Walker, Nelson, Carroll, &](#)

Jensen, 2009). It is pointed out that most of the online games imposes stereotypes such as sexiness of woman and dominance of man (Stermer & Burkley, 2012). From educational point of view, academic performance is correlated negatively with playing video game time (Anand, 2007). According to Chan and Rabiowiz's research (2006) college students who are playing video games show less interest to academic achievements. When students get low credits, their self-confidence most likely decrease too. The harmful effects of game addiction on person's life come out with multi-dimensional aspects such as characteristic, habit, social, mental, and psychologic.

Various kind of video games have different effects on person's psychology. For example, violent video games shown to be an outlet for anger and frustration for adolescent boys (Greitemeyer, 2015). Fantasy games with unrealistic characters make teenagers act in similar fashion. More importantly, when teenagers play games for an excessive amount of time, they show pathological symptoms. Addicted teenagers have been known to show loneliness, anxiety, depression (Sarda, Begue, Bry, & Gentile, 2016). Also, life satisfaction and friendship quality decrease as addiction level increases (Valkenburg & Peter, 2007). Research suggest that video game exposure correlates significantly between an acceptance among the children of physical aggression and decreased empathy. Teenagers who have gaming habits had shown less reaction to actual fight on the street than normal people had (Anderson, Gentile, & Buckley, 2007).

We could say that exposure to violent video games makes person more desensitve. Harmful effects of excessive use of video games should be considered for social cycle. Excessive play of video games may cause increasing aggression, social isolation, lower academic degrees, and unhealthy lifestyle. It is useful to know psychological well-being levels of teenagers who are interested in esport career.

The purpose of this study is to reveal the degree to which teenagers' psychological well-being level is correlated with daily amount of time dedicated to video games. Increase of playing computer game times may cause lower level of psychological well-being level. Another purpose of this study is to test the relationship between teenagers' desire of having Esport career and psychological well-being levels from a regression perspective. Teenagers play computer games more and more times per day with desire of having esport career. Thus psychological well-being levels may get lower with increasing desire of having esport career.

Method

Study Group

The research's study group consists of teenagers who are students in high schools and colleges in Turkey. The data had been collected by web-based questionnaire which is composed in Google Forms, published at forum pages of specific busy Esport websites (eslgaming, joindota, voobly, strategyturk) and linked to researcher's Google Drive account. Of the students ranging from 15 to 27 years of age, 140 are belong to high schools and 180 are belong to colleges. 302 of the students are boy, while 18 of the students are girl.

Measurement Tools

Questionnaire. Specifically two important question are investigated in this study. The first one is related to teenagers daily play of video game time. Options of this question included three choices. By examining the literature related to gaming addiction, it is considered that playing less than 2 hours per day is not dangerous and

causing low gaming addiction behaviours. Playing more than 2 hours per day may cause behavioral issues and gaming addiction behaviours (American Academy of Pediatrics, 2001; Wu, Scott & Yang, 2013; Kim & Kim, 2015; Hawi & Rupert, 2015). Also, playing more than 6 hours per day is seen as causing extremely gaming addiction behaviours (NPD, 2010). Thus, choices were set to “0-2 hours per day”, “2-6 hours per day” and “more than 6 hours per day”. Second questions pertains to teenagers’ desire of having Esport career. This item was presented at a 7 point likert-type scale ranging from “definitely i dont want” (1) to “definitely i want” (7).

Psychological Well-Being Scale. Original form of Psychological Well-Being Scale was developed by Diener et al. (2010) consisting of 8 items. The scale has been founded to be undimensional. For this study Turkish Adaptation form of Psychological Well-Being Scale, which is developed by Telef (2013), was used. Psychological Well-Being Scale items assess participant responses at a 7 point likert-type scale ranging from “definitely i don’t agree” (1) to “definitely i agree” (7). Higher point indicates that the person has higher levels of psychological strength and capacity. After the validity study of the original scale, total variance was explained by %53. Factor loads of scale have been varying between .61 and .77, alpha internal consistency coefficients has been calculated as .87. For the Turkish Adaptation form of the scale, total variance explained by %42, factor loads of the adaptation form varying between .54 and .76. Alpha internal consistency coefficients has been calculated as .80 for the reliability study of Turkish Adaptation form. According to test-retest method, reliability has been calculated as .86.

Data Analysis

In this research, SPSS 16 was used for data analyzes. One way ANOVA was used for valuable differences of psychological well-being levels between the groups which are separated by daily play of video game times. Scheffe post hoc approach will be used in case ANOVA test come out significant to determine where the significance is. Simple linear regression analysis is used to determine the relationship between the psychological well-being level and teenagers’ desire of having esport career.

Findings

ANOVA Tests

One way ANOVA test was performed to see the psychological well-being level differences among the three groups in term of daily play of video game times: 0-2 hours ($n=86$), 2-6 hours ($n=102$) and more than 6 hours ($n=132$). ANOVA test’s result showed valuable significant difference ($p < .001$) between the groups. So that, Post hoc tests (Scheffe) were used for the groups’ multiple comparisons (See Table 1). According to Scheffe results, psychological well-being levels of 0-2 hours group was significantly higher than other two groups ($p < .001$ for both comparison). Psychological well-being levels of 2-6 hours group was also significantly higher than the more than 6 hours group ($p < .001$).

Table 1
Scheffe post hoc Results

Groups (i)	Groups (j)	Mean Difference	Std. Error	Sig.
0-2 hours	2-6 hours	5.348	.919	.000
	More than 6 hours	9.951	.869	.000
2-6 hours	0-2 hours	-5.348	.919	.000
	More than 6 hours	4.603	.830	.000
More than 6 hours	0-2 hours	-9.951	.869	.000
	2-6 hours	-4.603	.830	.000

*The mean difference is significant at the 0.05 level.

Simple Linear Regression Analysis

The simple linear regression analysis was carried out to identify the predictive power of the teenagers' desire of having esport career on their psychological well-being levels. The regression analysis findings regarding the psychological well-being of the teenagers can be found in this section of which is presented in Table 2. According to simple linear regression analysis results, there is a significant relationship between teenagers' psychological well-being levels and desire of having esport career ($R=0.317$ $R^2=0.100$), teenagers' desire of having esport career is significant predictive power of psychological well-being levels ($F_{(1-319)}=35.549$ $p < .05$). Teenagers' desire of having esport career explains 10% of teenagers psychological well-being levels. The significance test for the teenagers' desire of having esport career coefficient ($B= -1.547$), the predictor variable in the regression equation, shows that desire of having esport career is a significant predictor.

Table 2

The Simple Linear Regression Analysis, to identify the Predictive Power of the Teenagers' Desire of Having Esport Career over Teenagers' Psychological Well-Being Levels

Model	B	Std. Error	Beta	t	sig.
Intercept	47.180	1.550		30.432	.000
Desire of having esport career	-1.547	.259	-.317	-5.962	.000
$R=0.317$ $R^2=0.100$ $F_{(1-319)}=35.549$ $p=0.000$					

*The mean

Discussion

The purpose of this study was to compare the teenagers' psychological well-being levels by daily play of video game times and to show predictor power of desire of having esport career over psychological well-being levels. These findings can be interpreted as that the teenagers' psychological well-being levels are effected by daily play of video games and teenagers' desire of having esport career. Despite the fact that non gamers and gamers weren't used to compare psychological well-being levels, teenagers' daily play of video games showed significant differences among each three groups in this study. Groups with the low daily play of video game times had shown higher psychological well-being levels. Furthermore, these results support previous studies focusing on the relationship between game addiction and excessive use of video games. Additionally, teenagers' desire of having esport career over psychological well-being levels is significant, yet a weak predictor.

Today, youngsters are dreaming about having esport career and they are playing excessive time of video games to reach esport career goal. As results show that when playing video game times getting higher, psychological well-being levels are most likely about to decrease. If not achieving an esport career goal is considered conversely to dreams of most of the teenagers' having esport career, there will be many harmful effects on society such as wasting efficient times on playing video games, aggressive behaviours, depressive teenagers, physical, psychological and mental diseases. Having esport career is now a career option admitted worldwide. So, the solution must be focused on educational and social support system instead of dealing with game addiction. Some of the countries have courses and lectures for esport in their colleges ([Kocadag, 2017](#)). Most importantly, teenagers should be evaluated to ascertain whether or not they possess the aptitude and skills demanded for an Esport career.

School counselors must inform themselves about esport career, so that they might be more helpful to students. Addicted teenagers should be evaluated accurately whether they can have esport career or not. Thus, skilled teenagers might be oriented into esport profession. It has been known that numerous countries supporting esport players, teams, and organizations. Esport clubs might be founded in schools, so that teenagers can be observable and controlled. Very low percent of gamers can be esport player. School counselors must improve themselves to deal with addicted teenagers. Interactive or counseling group sessions might be organized for addicted teenagers. Most importantly teenagers have to aware of their addictive behaviours. Teenagers should be aware to do more physical activities and self-conscious to realize negative effects of video games.

Parents should be warned to control excessive use of video games. Parents must use secure internet packages. They should set limits to daily use of computers for their children. Also, they should aware of esport career option and they have to know their children. There are successful esport players who are supported by their family. This new trend might cause serious problems to society as well as it offers new opportunities.

Most of the studies which are related to esport have focused on video games, gaming addiction, gaming industry, psychological well-being. There has been many studies about esport from point of industry and economics, however not so many of them focusing on relationship between sociel sciences and esport career. In this study all data collected from teenagers who are interested in esport career, thus this study offers valuable information for future studies.

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