IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF PSYCHOLOGY

MASTER THESIS

INVESTIGATION OF RELATIONSHIP BETWEEN GAME ADDICTION, ATTACHMENT STYLES, GAME MOTIVATION AND EMOTION REGULATION

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THESIS SUPERVISOR

ASSIST. PROF. FATİH AYDOĞAN

İSTANBUL, 2021

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by
YAKUP GÜNTAY

A thesis submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Arts in Psychology

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APPROVAL PAGE

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts in Clinical Psychology.

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This is to confirm that this thesis complies with all the standards set by the School of Graduate Studies of Ibn Haldun University.

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ÖZ

OYUN BAĞIMLILIĞI, BAĞLANMA STİLLERİ, OYUN MOTİVASYONU VE DUYGU DÜZENLEME ARASINDAKİ İLİŞKİNİN İNCELENMESİ

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Bu çalışmanın amacı oyun bağımlılığı, bağlanma stilleri, duygu düzenleme stratejileri ve oyun motivasyonları arasındaki ilişkiyi incelemektir. Erzurum'da çeşitli liselerde okuyan 12-19 yaş aralığındaki 351 öğrenci araştırmanın örneklem grubunu oluşturmaktadır. Katılımcıların %49.6'sı (174) kız öğrencilerden ve % 50.4'ü (177) erkek öğrencilerden oluşmaktadır. Araştırmaya gönüllü olarak katılan katılımcılara Sosyodemografik Bilgi Formu, Ergenler için Oyun Bağımlılığı Ölçeği Kısa Formu, İlişki Ölçekleri Anketi, Oyun Motivasyonu Ölçeği, Duygu Düzenleme Anketi verilmiştir. Veriler analiz edilirken erkek ve kız öğrencilerin oyun bağımlılığı açısından karşılaştırmak için Bağımsız Gruplar t-testi kullanılmıştır. Farklı oyun tiplerini oyun bağımlılığı açısından kıyaslamak için Tek Yönlü Varyans Analizi (ANOVA) yapılmıştır. Bağlanma stilellerinin oyun bağımlılığını yordayıcı özelliklerini incelemek için Çoklu Doğrusal Regresyon kullanılmıştır. Duygu düzenleme stratejisinin oyun bağımlılığını yordayıcı özelliğini incelemek için Basit Doğrusal Regresyon uygulanmıştır. Oyun motivasyonları ile oyun bağımlılığı arasındaki ilişkiyi incelemek için Pearson Korelasyon Katsayısı kullanılmıştır. Analiz sonuçlarına göre kaçıngan bağlanma stili ve saplantılı bağlanma stilinin oyun bağımlılığını yordadığı anlaşılmıştır. Bununla birlikte bastırma duygu düzenleme stratejisi oyun bağımlılığını yordamaktadır. Ayrıca, bilişsel duygu düzenleme stratejisi ile oyun bağımlılığı arasında negatif ilişki bulunmuştur. Oyun motivasyonları

ile oyun bağımlılığı arasında pozitif ilişki bulunmuştur. Ayrıca, erkek olmak, uzun süre oyun oynamak ve çok oyunculu oyunlar oynamanın oyun bağımlılığı için risk faktörleri oldukları bulunmuştur. Bu çalışmanın sonuçları çoğunlukla literatürle uyumlu bulunmuştur. Çalışma, oyun bağımlılığını anlama konusunda bağlanma stilleri, duygu düzenleme ve oyun motivasyonları ile bilişsel, davranışsal bakış açıdan açıklayarak literatüre katkı sağlamaktadır.

Anahtar Kelimeler: Oyun bağımlılığı, Bağlanma Stilleri, Duygu Düzenleme, Oyun Motivasyonu

ABSTRACT

INVESTIGATION OF RELATIONSHIP BETWEEN GAME ADDICTION, ATTACHMENT STYLES, GAME MOTIVATION AND EMOTION REGULATION

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Aim of the study is to examine relationship between game addiction, attachment styles, emotion regulation strategies and game motivations. The participants were 351 students who are between ages of 12-19, studying in high schools in Erzurum province. 49.6 % (174) of participants were female and 50.4% (177) of participants were male in the study. Socio-demographic Information Form, Game Addiction Scale Short Form, Relationships Questionnaire Scale, Game Motivation Scale, Emotion Regulation Scale were given to participants. For analysis of results, Independent Samples t-test was used to compare male and female participants in terms of game addiction. One Way Analysis of Variance (ANOVA) was used to compare different types of games in terms of game addiction. Multiple Linear Regression was used to understand if attachment styles predict game addiction. Linear regression was done to understand if emotion regulation strategy predicts game addiction. Pearson Correlation was used to examine correlation between game motivations and game addiction. According to analyses, preoccupied attachment style and dismissive attachment style predict game addiction. Suppressive emotion regulation strategy predicts game addiction. There was negative association between cognitive emotion regulation strategy and game addiction. Also, there was positive correlation between game motivations and game addition. Being male, playing

game for long time, playing multiplayer game were risk factors for game addiction. Results of the study were mostly similar to the literature. The study presents new contribution to literature by conducting a comprehensive behavioral, cognitive and emotional model to understand game addiction.

Keywords: Game Addiction, Amotion Regulation, Attachment Styles, Game Motivation

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LIST OF ABBREVIATIONS

ICD : International Classification of Diseases

IGD : Internet Gaming Disorder

DSM : Diagnostic and Statistical Manual of Mental Disorders

CBT : Cognitive Behavioral Therapy

fMRI : functional magnetic resonance imaging

SES : Socio Economic Status

ADHD: Attention Deficit Hyperactivity Disorder

SD : Standard Deviation

$\bar{X}$: Mean

N : Number

df : Degrees of freedom

p : Level of significance

SE :Standard Error

B : Beta value

CHAPTER I

INTRODUCTION

1.1 Statement of the Problem

Game has been a part of our life for centuries. It has been changing its forms according to the innovations in technology (Sang-Min Whang, Lee, & Chang, 2003). Nowadays, old and real time games with real toys have been replaced with digital games in virtual world. There are 1 billion people who play game regularly in the world (Clement, 2021). There are some problems occurring with introduction of digital games. Some people play games rarely, some of them play regularly. Some become addicted to playing games. The prevalence of game addiction in worlds is about 3 %(Stevens, Dorstyn, Delfabbro, & King, 2021). Adolescents are at risk for negative effects of games such as addiction (Kuss & Griffiths, 2012). To deal with game addiction, factors that are associated with game addiction should be investigated. That may help to make more comprehensive intervention program for game addictions.

People from children to adults play wide variety of games in online and offline platforms. Those games are grouped mostly under these names: Browser Games, First-Person, Massively Multiplayer Online Role-Playing Games, Simulation Games and some hybrid forms of those types of games (Daria Joanna Kuss & Griffiths, 2012). Some people play in their spare time for fun whereas some of them play excessively. As people play games excessively, they show symptoms similar to pathological gambling such as craving, withdrawal symptoms, salience and mood modification (Chappell, Eatough, Davies, & Griffiths, 2006). Chappel et al (2006) found these common symptoms of gamers by doing content analysis after getting data from participants who play online games especially EverQuest.

In the 11th version of ICD internet gaming addiction is included as an entire section. That section describes the symptoms of game addiction and discriminates game addiction from hazardous gaming (World Health Organization, 2019c). This entire section is designed for diagnosis of game addiction worldwide. There are 153 studies about game addiction are done between 2010-2019 in Turkey. Most of these are quantitative studies. The topics that are included in those studies are; family relations, depression, use of social networks, and academic success. Internet game addiction can be seen at every age and sex around the world. That problem has important negative effects especially on young people (Boyacı, 2019).

Playing game is a coping strategy to deal with negative emotions for some adolescents and it gets difficult for them to have control over their behavior(Savcı & Aysan, 2017). Attachment styles affect people's coping strategies in negative situations(Cooper, Shaver, & Collins, 1998). Since attachment style is related to coping strategies it is also related to game addiction.

Attachment style is firstly added into literature by Bowlby (1973). Then, Bartholomew & Horowitz (1991) developed four factor model of adult attachment styles as secure, dismissing, preoccupied and fearful. This model was developed by determining people's beliefs about self and others. In that model of self and others there are four alternatives in which person can have a positive or negative self-image and positive or negative image of others. For instance, if a person has a positive image about self and others, then that person may believe he or she is lovable and others are reliable people. That kind of strong beliefs can shape that person's behaviors in relationships.

Game addicts have more aggression, depression and less well-being when compared to non addicts showing that game addicts are poorer in emotional health (Stockdale & Coyne, 2018). Internet addicts are worse in areas of controlling emotions, having self-control and self-discipline when compared to other people (Joo, Namkoong, Ku, & Joo, 2008). Burleigh et. al. (2018) emphasized the importance of emotion regulation in game addiction and supported that people with depressive symptoms are at risk for game

addiction. For this reason, emotion regulation strategies need to be considered in game addiction.

Gross (1998) states that there are two groups of emotion regulation; cognitive reappraisal and emotion suppression. Cognitive reappraisal is a cognitive process which is like using cognitive skills after emotional triggers (Lazarus & Alfert, 1964). Expressive suppression is suppressing one's own emotions when faced with an emotionally important situation (Gross & John, 1998). Two kinds of emotional regulation strategies are used to understand game addiction in the study.

In game addiction research, game motivation is important to understand differences between players. Thus understanding game motivation enables researchers to investigate game players in different categories (Yee, 2007). Further, Williams and Yee (2008) from a study with 7000 multiplayer gamers found that people play for achievement, socializing, immersion from which achievement is strongest motivation. In addition, they found that time for playing game correlates positively with motivation of achievement and socializing whereas negatively with immersion motivation. Hence, it is important to factor in motivation of gamers in game addiction research.

Game addiction is examined by analyzing its correlation with game motivation, attachment style and emotion regulation. Game motivation is helpful to understand the reasons why people play game. Emotion regulation is important to examine gaming behavior from the aspect of emotions, whereas attachment style is important to learn about behavioral patterns of gamers in real life relationships.

1.2 Aim of the Study

Aim of the study is to examine relationship between game addiction, attachment styles, emotion regulation strategies and game motivation. Also, factors of gender, level of income, level of education of parents, type of game, game vehicle in game addiction are investigated in correlational and comparative way.

1.3 The Definitions

Definitions of the variables are as follows;

1. Game addiction is excessively and compulsively playing game for excessive amount of time. Playing game despite negative consequences to life. Giving priority to playing games more than social and academic life (World Health Organization, 2019b).
2. Attachment style is the type of attachment style in accordance with four factor model of Bartholomew and Horovitz (1991) four attachment styles are; secure, dismissing, preoccupied and fearful.
3. Game motivation is the motivation behind gaming behavior. The motivation is assessed by game motivation scale developed by Lafrenière et al., (2012) on basis of self-determination theory. The game motivations are intrinsic, integrated regulation, identified regulation, introjected regulation, external regulation and motivation. It is a nominal value.
4. Emotion regulation is way of regulating emotions in two ways suppression of emotions and cognitive reappraisal of emotions. It is assessed by emotional regulation scale developed by Gross & John (2003).

1.4 Significance of the Study

There is a lot of research about game addiction. Attachment style is a general construct; its relation to emotion regulation and game motivation are important contributions to game addiction literature. Game addiction includes a persistent behavior of gaming. Attachment style includes cognitive and behavioral themes that are important to understand persistent gaming behavior. Game motivation is important to understand the reasons for people to continue gaming behavior. Thus this study will give new information to understand game addiction. The information from study can be used when preparing intervention programs for gaming addiction.

The interventions programs can be addressed to motivations of gaming. Alternative activities can be designed so that adolescents have these motivations in alternative

activities other than games. Emotion regulation abilities of adolescents can be improved to prevent persistent gaming. Information from attachment styles can be used to understand behavioral patterns of adolescents in real life relationships. Preventive strategies can be used to adapt them to social life. Information learned from the study can be used in high schools, in hospitals and in non-governmental organizations. They can deal with emotional regulation system in addition to cognitive and emotional features of attachment styles to adapt game addicted people to society.

1.5 Research Objectives and Questions

These research questions will be answered in that study:

1. Is there any relationship between four attachment styles (secure, preoccupied, fearful, and dismissive) and game addiction?
2. Do any of the four attachment styles (secure, preoccupied, fearful, and dismissive) predict game addiction?
3. Is there any correlation between game addiction and game motivations (intrinsic, integrated regulation, identified regulation, introjected regulation, external regulation and amotivation)?
4. Is there any association between game addiction and emotion regulation strategies (cognitive, suppressive)?
5. What is importance of gender, level of income, level of education of parents in game addiction?

CHAPTER II

LITERATURE REVIEW

2.1 Game Addiction

2.1.1 Definition of Addiction

Parekh (2017), who is director of American Psychiatric Association, defines addiction as a brain disease that becomes appear after compulsive substance use despite its negative consequences. She explains that addicts have strong focus on the drug and they use it though they are aware of its harmful effects. Key concept in addiction is being negatively affected and continuing using substance. Parekh (2017) also adds symptoms of addiction as follows: impaired control, social problems related to substance, risky use, and tolerance and withdrawal research symptoms. That description of addiction is useful for research of pathological gambling disorder which is considered as addiction without any drug. Likewise Parekh (2017) mentions about internet gaming disorder as playing games persistently and frequently for longer times dominating their lives which may result in clinical distress.

Sussman and Sussman (2011) have made research about the term addiction in 52 different studies and they derived common features of definition of addiction. They found that in the studies addiction is used to express the construct that has these components; doing the behavior for gratification, occupied with behavior, feeling satiety for short period of time, impair to control, having negative results.

Alavi, S.S. et. al. (2012) made research about similarities between behavioral and substance addiction in the addiction literature. They made content analysis and found that some researchers support that the feeling that catch people to the behavior like

internet use is similar to the feeling initiating substance use. Also symptoms like lack of control, tolerance is similar in both type of addiction.

Grant and Chamberlain (2017) explained that behavioral addictions like gambling disorder, compulsive sexual behaviors have similar neurobiological effects with substance addiction. However, research on behavioral addictions is not fewer than research about substance addiction is lacking. That is why they support that there is limitation in including problematic internet use in distinct entity in DSM-5 and ICD 11th.

2.1.3 The Conceptualization of Game Addiction from Past to Present

The studies cover the phenomena of game a with different terminologies such as excessive play, problematic internet use, compulsive playing and game addiction. However, all of the studies mention same disorder (D. Griffiths, J. Kuss, & L. King, 2012). Griffiths et al. (2012) cover the past research about game addiction, they found that video games are presented in 1970s and the term game addiction is first used in 1980s with similar features as lack of control over playing. However no standardized diagnostic tools were used in that time period. Charlton (2002) supported that in 1990s game addiction research are increased but they are criticized because they couldn't discriminate game addiction from excessive play. Griffiths et al. (2012) saw that as online video games were introduced after 2000, literature on game addiction made dramatic growth.

Hussain and Griffiths (2009) made interviews with 71 online gamers of Multiplayer Online Role Playing Games (MORPG) from 11 countries and found that people who play hazardously have similar features to substance-related addiction. The findings of the study are as follow: people play to regulate negative feelings, games have negative effects on their life, feeling like they are addicted to it, and gamers play to escape from real world. Griffiths (2010) used a valid concept as "game addiction" to attract attention of researchers to that problem in a common term. Game addiction has become an umbrella term for addictive behavior of playing games for research.

2.1.2 Definition of Game Addiction

Game addiction isn't included in DSM 5 (American Psychiatric Association, 2013) as an entire section whereas gambling disorder, which is a behavioral addiction, is included. There are similarities between gambling disorder and internet gaming addiction as Griffiths (1991) showed. Griffiths (1991) showed similarities between gambling addiction and game addiction in his research. These similarities are feeling reward and continuing the activity persistently. He then supported that game addiction is like a form of gambling disorder without any financial issues. That similarity is also seen in preparation of instrument for game addiction (Griffiths & Hunt, 1998).

In the 11th version of ICD phenomena of game addiction is described as gaming disorder. Gaming disorder has become an independent mental illness in 11th revision of ICD. ICD-11 defines game disorder as a pattern of recurrent gaming behavior with three factors: impaired control over gaming, increased priority given to gaming over daily activities and continuation of gaming despite its negative consequences (World Health Organization, 2019b). Hazardous gaming and gaming disorder are differentiated in ICD-11. Hazardous gaming is defined as pattern of gaming which increases risk of harmful effects to the individual and the environment (World Health Organization, 2019a).

Game addiction is differentiated from excessive gaming. Even though people play a lot of hours for a day , they may not be addicted to games unless it has a negative consequence on their lives (Griffiths, 2010). That shows game addiction is end of the process of excessive playing game. When negative consequence of playing computer game becomes evident, it shows person is getting close to addiction.

2.1.4 Neurobiological Aspect of Game Addiction

The construct of game addiction is relevant term since the studies done by using fMRI show that game addicts have similar neural activities to people having substance related addiction when they are presented cue about computer games. Also, their brain parts

that are enrolled in other types of addictions are more active than other parts (Daria Joanna Kuss & Griffiths, 2012). Moreover, psychopharmacological treatment has an evident effect on reduction of symptoms of game addiction which shows that game addiction has a biochemical base (Daria Joanna Kuss & Griffiths, 2012).

There is much emphasis on dopaminergic pathways in behavioral addiction and substance use disorders in game addiction literature (Yau, Crowley, Mayes, & Potenza, 2012). That kind of similarities is a bridge to understand biological mechanism of gaming addiction. Yau et al., (2012) then show that there is release of dopamine when people play games. Nevertheless, there is difference between game addicts and non addicts in terms of levels of dopamine. That is useful to differentiate excessive play and addictive play. Moreover, A study done by Weinstein and Lejoyeux (2010) shows that internet addicts have less dopamine D2 receptors in bilateral caudate and in left putamen than control group. That shows dopamine is important factor in internet addiction and also game addiction.

A study done by Ko et al. (2009) shows that people who play more than 30 hours for a week have much more activation in right orbitofrontal cortex, right nucleus accumbens, bilateral anterior cingulate. They found that these results are parallel with the self-reports of participants. Thus, people who play for longer hours were affected more than other people. They also mention that craving of a substance addicts and urge for playing games of game addicts are similar in activation of brain areas.

C. J. Sussman, Harper, Stahl, and Weigle (2018)has stated that as new understanding on reward mechanisms are revealed neurobiology of game addiction is being more clearly understood. They added that, similar to substance addiction, the input coming from games has an effect on pathway of pleasure which is mesocorticolimbic dopamine system. They also mention that these are gathered by functional and structural imaging and electroencephalogram (EEG) in international literature reviews

These findings show that game addiction has also neurobiological basement. Attachment style and emotion regulation also have also neurobiological basis (Buchheim et al., 2006; Martin & Ochsner, 2016). This may show that these variables are neurobiological important in shaping behavior of people especially gaming behavior.

2.1.5 Cognitive Behavioral Approach to Game Addiction

Game addiction can also be approached in cognitive and behavioral model. In that model, internet gaming disorder is better explained. People feel reward when they play game. Thus they seek to feel reward again. Reward-seeking is considered to maintain playing behavior. Thus they persistently play game. In addition, gamers have failure to manage executive function properly while they play game. They also fail to have cognitive control over drive to play game repeatedly. These lead to decision making that contributes to playing game excessively (Dong & Potenza, 2014). They centralized the model on craving to playing game. They made a treatment plan in multidimensional way such as doing cognitive behavioral therapy for cognitions about playing game. Also, they plan to do mindfulness based therapy to relieve stress of game players and try to increase their control over playing game.

Dong, Lin, Zhou and Lu (2014) made a study with internet addicts and non addicts to find out differences in cognitive flexibility. They made color-word Stroop test to the participants and try to understand their ability to switch task. After fMRI scanning they found that internet addicts are worse in cognitive flexibility than other group. They also added that internet addicts are less successful than control group in switching task. Thus internet addicts have weak cognitive flexibility which may be the reason for internet addiction. This shows internet addiction has important cognitive basement that needs to be considered in also in game addiction research.

Cognitive aspect of game addiction is important issue to consider treatment methods for the problem. King and Delfabbro (2014) made a review of 29 studies about cognitions related to gaming addiction. They found that there are four main cognitions that are

important for game addiction. The cognitions are as follows; gamers' beliefs about game rewards, faulty rules for playing games, playing games to have self-confidence and play games to be socially accepted. They support that these cognitions are important for perpetuating gaming behavior. Furthermore, Griffiths, Kuss and Pontes (2016) supported that CBT is most widely used in treatment of internet gaming disorder. In addition, they mention that since there is association between gaming addiction, cognitive control and distortions, CBT is helpful for reducing symptoms.

CBT for game addiction is a good contribution. However, its long term effects need to be considered when applying CBT to game addicts. Stevens, King, Dorstyn and Delfabbro (2019) mentioned that there is not enough data about effects of therapies on game addiction. They made a meta-analysis of 12 studies showing effect of cognitive behavioral therapies on game addiction, they made analysis on four dimensions; time for playing, depressive scores, anxiety scores and internet gaming disorder symptoms. They found that cognitive behavioral therapy is effective on internet gaming disorder for short period of time. On the other hand, they couldn't find enough data for effectiveness of CBT on reducing time for playing game.

2.1.6 Diagnosis of Game Addiction

In 11th version of ICD, internet gaming disorder is diagnosed according to online and offline games. In each type, person plays game recurrently. First criteria include inability to have control over playing games. Thus person cannot decide beginning, length, type, regularity of game. Secondly, game becomes more important than any other activity. Thirdly, person continues playing game in spite of negative effects of it. This affects person’s social and academic life. This gaming disorder is diagnosed after 12 months of period with these criteria being met. However, time can be shortened if person has severe symptoms (World Health Organization, 2019c).

There 25 assessment tools for assessing game addiction. The instruments are not enough for use of clinical settings because there is a problem about inconsistency with core

criteria of addiction, there is a problem about use of cutoff scores. For this reason, it has been argued that it is better to use of clinical interview for game addiction to work in clinical settings (Griffiths, Kuss, & Pontes, 2020).

Diagnosis of game addiction is important when working on treatment of addiction in clinics. It is obvious that gaming is an enjoyable activity at first, but when it starts to have negative effect on individual's life it starts to become pathological. Therefore, in the literature of game addiction, research on gaming behavior from normal level to pathological level needs to be done to work on preventive methods to reduce game addiction. Diagnosing people for game addiction depends on the way of using monothetic and polythetic formats (Lemmens, Valkenburg, & Peter, 2009). Lemmens et al. (2009) developed scale to assess game addiction. The scale can be used to decide whether a person is addict or not in two different ways; polythetic and monothetic formats. Monothetic format every item should be required to identify person as game addict. In polythetic format half of the criteria are enough for identifying person as game addict. In that study polythetic format was used and when an item is scored as 3(sometimes) it is counted and if person meet for four items from seven he or she is identified as game addict.

Further, game addiction could be approached better with the concept of syndrome. Different kinds of addictions (drug, internet, gambling etc.) can be thought under the same syndrome in which they have biological, psychosocial and experiential similarities (Shaffer et al., 2004). That model of syndrome encourages researchers to examine proximal and distal effects of addiction on people. This helps to detect peripheral criteria of game addiction and diagnose game addicts who have core criteria of addiction. People in that field could be alert to influences of addiction to work on prevention of game addiction.

Different criteria are used in diagnosis of game addiction. Peripheral criteria of game addiction (cognitive salience, tolerance and euphoria) are shown before the core criteria (conflict, withdrawal symptoms, relapse, reinstatement and behavioral salience)

(Charlton & Danforth, 2007). Therefore, game addiction has some levels, there needs to be research about people in those levels to process much about treatment of game addiction.

The criteria designed to diagnose internet addiction is based on criteria in DMS 5 for gambling disorder and substance dependence (Pontes & Griffiths, 2014). They also have noted that the instruments designed to assess gaming addiction have some limitations about conceptualization of game addiction and inclusion of core criteria of addiction. The past literature lacks the common diagnostic methods to diagnose gaming addiction. Common diagnosis is needed to psychiatric area and helpful for better treatment methods. Game addiction is part of internet addictions and have similar features with them(Monacis et al., 2017).Thus research about internet addiction can be important to understand diagnosis of game addiction. The assessment and diagnosis of game addiction has been developed over years especially after 2000s. There needs more empirical research to understand effects of game addiction (D. Griffiths et al., 2012).

2.1.7 Worldwide Prevalence of Game Addiction

The countries begin to have some preventive strategies to reduce game addiction (Yal & Erdo, 2016). Since game addiction is a global issue which has increasing emergence day by day, more research, policies, informative talks need to be done on that topic. It is important to know prevalence game addiction and excessive play to be aware of the importance of the problem.

Prevalence study done with ninth grade students in Germany shows that 3 % of boys and 0.3 % of girls have game addiction (Rehbein, Kleimann, Mediasci, & Mößle, 2010). That shows being male is a risk factor for game addiction. In the international research, prevalence of game addiction ranges between 0,6 % and 15%. According that study was done with male and female participants from ninth graders. They made a clear discrimination .between extensive playing and game addiction by comparing symptoms

between participants. They found that game addicts have too much social stress, fewer sleep time, fewer leisure time activities and thoughts about committing suicide.

According to a study done with 3616 participants from colleges in Taiwan, prevalence of internet addicts was found to be 15.3 percent in Taiwan population (Lin, Ko, & Wu, 2011). They mention that this value was high and policies should be made to reduce internet addiction. The prevalence of game addiction in Norwegian sample of 1928 adolescents ages from 13 to 17 was found by using survey(Brunborg, Mentzoni, & Frøyland, 2014). They found that mean score for game addiction is 1.47 out of 5 in Norwegian sample. Lemmens, Valkenburg and Peter (2009) found the prevalence of game addiction in Netherland sample as between 2 % and 9%. It varies due to the differences between polythetic or monothetic format to decide game addiction.

A study done by Thomas and Martin (2010) showed that prevalence of game addiction increases. They made the study with 1326 students from which 657 are female in Australian university and students between 7th and 12th grades. They found that game users of computer games and internet addiction had an increase in prevalence among students when compared to past research.

Przybylski, Weinstein and Murayama (2017) made a research by analyzing four different prevalence studies which are from United States, United Kingdom, Germany and Canada. The studies used surveys to get data about game addiction from 18,932 participants ages older than 18. The research found that more than 60 % of population didn't have any symptoms of game addiction. The game addiction prevalence was between 0.3 % and 1 % among population.

Chia et al. (2020) made a meta-analysis from 24 studies to learn a prevalence rate in Southeast Asia. They found that the findings show that prevalence rate of game addiction and internet addiction are about 10.1% and 20 % respectively. The studies were done in those countries; Malaysia, Thailand, Singapore, Indonesia, Vietnam and Philippines. They also added that the studies included small size of population that

should be considered before generalization. They also mention that Southeast Asia has highest prevalence rate of internet and game addiction.

Humphreys (2019) noted that prevalence rate of game addiction varies between 0.7 % and 27.5 % in Japan. The surveys show that prevalence rate of game addiction in North America and Europe varies between 1% and 10 %, 1% in Switzerland. They added that further research is accepted for better diagnostic tools.

2.1.8 Risk Factors for Game and Internet Addiction

In the game addiction literature, the reasons in development of the disorder need to be investigated. Since it is hard to mention any causal relationship on that topic, risk factors are mentioned for development of the disorder. There are a lot of risk factors for game addiction. Individual factors (sex, age) cognitive function, psychopathologies and social interaction are main factors in game addiction. Also, being male, being older among adolescents, having poor executive functioning, having psychopathology (ADHD and MDD), not having enough social interaction in family and colleagues are risk factors in development of game addiction. Thus, cognitive function is important to control gaming behavior, having few cognitive flexibility causes game addiction. Moreover, real life social interaction is prevents adolescents to play longer hours of game (Hyun et al., 2015).

Lin et al. (2011) made a study with 3,616 participants from Taiwan found follows as risk factors for internet addiction; being male, having depressive symptoms, having more expectancy from internet, using internet for long hours, having low academic performance. Among those factors depression was most important. They supported that depressed people may cope with depression by using internet. That may enhance time of internet use which lead them to addiction .In addition, insecure attachment style is also a risk factor for game addiction (Lin et al., 2011).

Emotion regulation is another risk factor which needs to be mentioned (Yen et al., 2018). They mention that abilities to regulate emotions are important risk factor in substance addiction. Emotion regulation is a moderator in development of addictions including game addictions and also it affects development of psychopathology such as anxiety and depression. These psychological disorders might have an effect in game addiction because people might play games as a coping strategy for their disorders.

Karaca, Karakoc, Can Gurkan, Onan, and Unsal Barlas (2020) made a study with 1174 students from middle schools in Turkey. The study showed that 5.7% of the group had game addiction, 44% of the group played games problematically. People with game addiction have met the game addiction criteria. However, people playing problematically, play for longer hours of game, but they have control over terminating gaming. The results of study showed that the risk factors for game addiction are ;time of using computer, having social anxiety and being older.

Baysak, Yertutanol, Dalğar and Candansayar (2018) made a study with 110 people with a mean age of 30. They designed the study as a follow up study so that they aimed to see long term effect of game addiction. The study found that game addiction scores of the participants decreased within two years. They concluded that game addiction is not a long term disorder and put emphasis on that risk factors change in lifetime. That's why effects of risk factors on game addiction also changes within time.

2.2 Attachment Style

2.2.1 Definition of Attachment Style

Attachment is defined by Bowlby (1973) as a person's extensive emotional bond to caregiver. He thought that child has innate instinct to have attachment with caregiver to maintain their life. The relationship between child and care giver becomes a prototype that affects all relationships of children in future. Thus child has emotionally stronger relationship with one person than others which is called monotropy. Attachment helps

child to be closer to caregiver so that they are safe from dangers around them. That's why the most important part of attachment is to keep intimacy with caregiver. Child sees this intimacy as safe place. When the child feels that intimacy is threatened, child begins to show strong emotional and behavioral reactions. When time of separation from caregiver is very long, the child may start to detach from caregiver.

Effect of attachment becomes obvious when child loses attachment figure. This loss affects emotions, cognitions and behaviors of child. He noted that when the child gets signal about loss of the intimacy with attachment figure, child does an attachment behavior like seeking intimacy automatically. According to Bowlby's maternal deprivation theory (McLeod, 2017), loss of caregiver has a strong effect on child's psychological and cognitive wellbeing in the future.

Main (1990) noted that child have some behaviors as a result of strong intimacy with caregiver to adapt to environment. These behaviors are crying to seek intimacy when caregiver is not present and explore the environment with curiosity when the caregiver is present. She added that when caregiver isn't present for longer period of time, child has some behaviors to adapt that environment. These behaviors are; trying to be independent, and having detachment from caregiver. She called these two different groups of behaviors as 'primary and secondary conditional strategies'. Use of these strategies may have a role in formation of image of self and others which then can affect people's relationships (Main, 1990). Kaplan and Cassidy (1985) thought that there is internal working cognitive model in attachment. They defined that working model as conscious and unconscious information about self, world, people and relationships. They supported that working model leads people to have information about self. That's why attachment isn't restricted in childhood and attachment can be effective throughout lifetime by being resistant to change.

2.2.2 Development of the Term Attachment Style

Ainsworth and Bell (1970) made further exploration and made a study called strange situation. In that study child and the mother are put in the same room with toys. Then stranger comes in to the room. Then mother leaves the room and child stays with a stranger. Afterwards, mother returns to the room and child's reactions to that are observed. According to behaviors of children, they observed that 60% of children react to mother's leave by crying and calms down after mother returns and relaxes the child. The researchers thought that attachment figure is as important as for the child as a sources of security thus affecting child's emotions and behaviors (Ainsworth & Bell, 1970).

Ainsworth et al. (1978) after observing different groups of behavioral reactions they defined three attachment styles as secure, avoidant and anxious/ambivalent. Children having secure attachment style can be calmed down after their mother returns. Children with anxious/ambivalent attachment style can't be easily calmed down after their mother returns. Children with avoidant attachment style doesn't have too much reaction when their mother leaves and they don't seem to be interested when their mother returns.

After investigation of attachment in children, scientists have expanded the term of attachment to understand the relationships between adults. Hazan and Shaver (1987) made a study to find out whether there is a connection between adulthood relationship and attachment style. They used a scale to assess attachment style in that study. They found that there are three attachment styles in adult people. Also, those people are different in their relationships. The study showed that people with secure attachment styles have positive beliefs and experiences with their parents. Hazan and Shaver (1994) used the term attachment to explain the emotions, cognitions and behaviors in close relationships. Hazan and Shaver (1994) supported that, attachment plays role in relationships when choosing romantic partners. They thought people find another person as base for comfort and security and people seek proximity for that person. Also they

added that in relationships, attachment reactions to the partner are observed when there is a threat to lose the partner which is alike in attachment behaviors in babies.

Bartholomew and Horovitz (1991) developed four factor models to explain four attachment styles as secure, preoccupied, dismissing and fearful. This is based on model of self and others. Model of self and others are independent but complementary models. In the model of self, when a person has a positive self-image, that person has self-esteem and sees himself/herself lovable. That's why this person doesn't need for approval of others. However, when the self-image is negative, the person needs for approval of others. Thus, this need affects person's behaviors towards others. The model of others affects person's expectation about others' behaviors. Accordingly it affects person's efforts to have intimacy with others. Thus negativity in model of others results in avoidance.

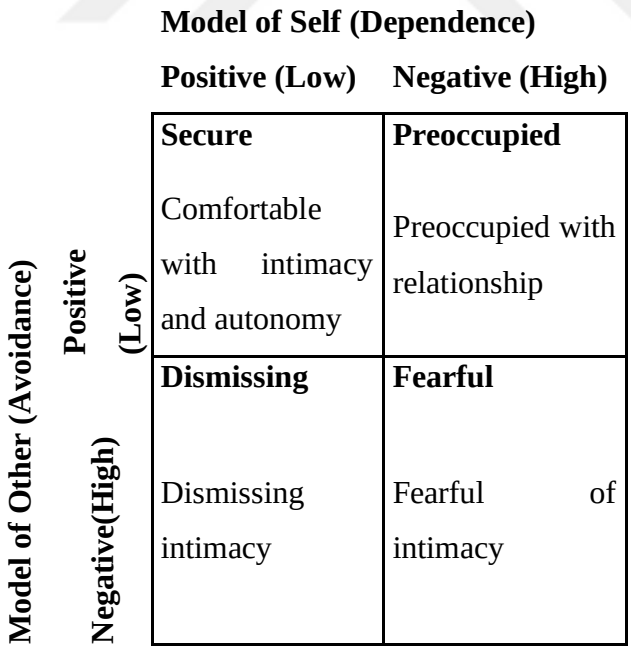

Figure 2.1 Model of Self Adult Attachment (Bartholomew & Horowitz, 1991)

According to (Bartholomew and Horowitz (1991), people with secure attachment style has positive image of self and others. They see themselves as lovable and others as

trustworthy. Thus, they are open to intimacy in relationships and they are comfortable by being autonomy. Next, people with preoccupied attachment style view themselves as unworthy and others as positive. Those people are preoccupied with relationship and they consistently try to get approval from others. Further, people with fearful attachment style view themselves as unworthy and others as untrustworthy. Lastly, people with dismissive avoidant see themselves as lovable, worthy and others as negative. Thus these people protect themselves by avoiding any intimate relationship.

2.2.3 Cognitive Behavioral Aspect of Attachment

Blakely and Dziadosz (2015) explained that there are three concepts when dealing with attachment: attachment styles, applied behavioral system and working models. They support that the main behavior in attachment is proximity seeking behavior. When the child feels that the caregiver is not available in the environment, the child gets anxious and reacts like crying till caregiver comes and relaxes child. Secondly, Blakely and Dziadosz (2015) added that the style of attachment is the group of behaviors, emotions and expectations as a result of attachment experiences with caregiver. They show that fundamental part of attachment is formed in childhood. This affects people's behavior patterns in their relationships in future. Further, Attachment has a cognitive system which is based on learnings from childhood. Blakely and Dziadosz (2015) showed that therapists should work on these working models to make some changes in behaviors of people having insecure attachment style.

Platts, Tyson and Mason (2002) made a research about the beliefs of people have according to their attachment styles. They put emphasis on the link between cognitive schemas and attachment styles. Further, they supported one of the similarities between schema and attachment style is that they are both developed in childhood. The other similarity is that they are used to interpret life events and are important in expectations people have. They added that the differences in attachment can be explained by the differences in cognitions of people about self and others.

Collins, Ford, Guichard and Allard (2006) made a study with 181 participants. They found that the anxiety related to attachment is associated with the negative attributions of people. Thus, people with fearful and preoccupied attachment style are different from people with secure attachment style in attributions about negative events in relationship. In addition, they mentioned that people with insecure attachment styles have more negative attributions about their partner's faults. They added that people with preoccupied and fearful attachment styles have more negative feeling and people with dismissing attachment styles have less distress in relationship. They highlighted that these emotional differences are due to the attributions they made in relationships.

Gündüz (2013) made a study with 436 students and found that cognitive flexibility of the students can be predicted by their irrational beliefs, anxiety and obsessive attachment. The regression analyses showed that the most important predictors of the cognitive flexibility are irrational beliefs and attachment styles. He emphasized that the attachment style is related to person's problem solving and adaptation to himself and the other people. That's why there is a relation between attachment styles and cognitive flexibility. He added that the mental processes for personal relationships are shaped in childhood.

Shorey and Snyder (2006) supported that attachment styles contributed to cognitive schemas and that is important for perception of people and their adjustment to the world. They added that, since there is a relation between schema and psychopathologies, there is also a relation between attachment styles and conceptualization of psychological problems. That’s why they mentioned that in treatment of psychological problems, attachment styles should be considered throughout the therapy sessions.

2.2.4 Neurobiological Aspect of Attachment Style

Coan (2010) mentioned that the neuroscientists made studies about neural activities that enroll in feeling of security coming from attachment experiences and emotion regulation by partners in relationships. He added that bonding with pairs is related to dopaminergic

pathways in prefrontal cortex, ventral tegmentum and palladium. He supported that there is link between adult attachment and oxytocin. The amount of that oxytocin shows the importance of attachment. Also, neuroscience research have data to support that the loss has effect on cognitive abilities and function of brain according to experiment done on rats (Janetsian-Fritz et al., 2018).

Coan, Schaefer and Davidson (2006) made fMRI study with female participants to see the effect of attachment figures in emotion regulation. The effect of threat of electrical shock was observed in three conditions; women holding stranger's hand, women holding partner's hand and women alone. When women got threat of shock alone, their brain activation related to stress was at most in comparison to other situations. Thus, they had more activation in areas of posterior cingulate, supramarginal gyrus, postcentral gyrus and ventral anterior cingulate cortex. They supported that availability of attachment figure is important for brain to get ready for problem solving. They highlighted that brain accommodates itself for problem solving according to availability of attachment figure.

Buchheim et al. (2006) made a study by making brain scanning of people while they are telling about stories of their attachment. They found that when participants tell about loss or any other detachment stories they had in past, they have higher activation in brain areas of amygdala and hippocampus. Thus they showed link between brain activation and attachment.

Gillath, Bunge, Shaver, Wendelken and Mikulincer (2005) made a study by using fMRI scanning with 20 female participants. They wanted participants to think about scenarios about negative relationships for a period of time. Then, they found that when participants with high attachment anxiety think about negative relationships, dorsal anterior cingulate has too much activation. Further, those participants had low activation in orbitofrontal cortex. Thus, there is a link between attachment anxiety and activation of neurons.

2.2.5 Factors Affecting Attachment Styles

Schecter (2013) stated that skills and availability of caregivers are more important than parental income, education and occupation in development of secure attachment. Likewise stated by Schecter (2013), attachment style is developed by many factors that can't be minimized into one factor to be determined. Further, she added that socio economic status may have bidirectional effect with attachment. She considered that parental skills may minimize effect of low SES on development of secure attachment style.

Moreover, a research showed that the most important predictor of attachment is maternal sensitivity (Bakermans-Kranenburg, van IJzendoorn, & Kroonenberg, 2004). They made a study with mothers from different ethnicities and income. They found that that when poverty has any effect on maternal sensitivity, the attachment can be affected by that indirectly. That research supports that unless family is extremely poor, socio economic status is not a dominating factor in formation of attachment.

Gervai (2009) made a meta-analysis about attachment style literature and found that parenting style plays a big role in formation of attachment style. Thus parent's responses to the distress of child affect the child's way of self-regulation. She also added that attachment style can also be due to mental health problems especially disorganized attachment. Further, she emphasized that biological characteristics of children in regulation of negative emotion is important in attachment style.

Cole (2005) made a study with group of infants in foster homes and with their foster caregivers. He found that 67 % of infants are securely attached to their foster caregivers. Also, he added that those caregivers who have secure attachment are better to provide better environment for infants' needs. He emphasized that providing proper materials for infant's development is positive factor for infant to develop secure attachment. He also mentions that childhood trauma and abuse is a negative factor for formation of secure attachment. Further, caregiver's unresolved trauma is another negative factor since those

caregivers may be too sensitive for protection of infant and this may obstruct formation of secure attachment. That's why he concludes that childhood trauma of caregiver, abuse of infant, providing material to infant, being securely attached caregiver are important factors in attachment style.

2.2.6 Relationship between Attachment Style and Game Addiction

A research shows that there is large positive correlation between game addiction and anxious and avoidance attachment orientations. There is small negative correlation between game addiction and secure attachment style (Monacis, De Palo, Griffiths, & Sinatra, 2017). They made a study with 712 students with mean age of 21,63. They made a regression and found that attachment style explains about 13% of the variance including online addiction of internet, gaming and social media. Also, they added that all internet addictions (internet, game, and social media) are positively interrelated. Another research done by Lidia Suárez+ and Cephas F. W. Thio (2012) findings also support that negative correlation between secure attachment style and game addiction.

Savcı and Aysan (2017) support that there is relationship between game addiction and attachment styles. They made a study with Turkish adolescents and found that attachment style is correlated with game addiction as a result of stepwise regression analysis. Likewise, according to a study done by Morsünbül (2014) with 350 university students, people having high scores from internet addiction scale, have insecure and avoidant attachment styles as a result of hierarchical regression analysis.

Insecure attachment style is positively correlated with internet addiction (Lin et al., 2011). They found that people play games to search for emotional support and to distract from real unwanted relationships which lead to game addiction. Further, there is positive correlation between problematic internet use with dismissing and preoccupied attachment styles based on a study done by Turkish students in universities. (Odaci & Çikrikçi, 2014). They also found that avoidant people have more scores in immersion motivation than other attachment styles.

2.2.7 Attachment and Game Addiction Research inside Turkey

According to Turkish National Thesis Center (Ulusal Tez Merkezi, 2021) up to 15th Januay 2021, there are 136 thesis written by including game addiction between 2014 and 2020. Before 2014 no thesis includes game addiction in the title. Most of these theses are master thesis, the others are Phd and psychiatry specialization theses. Of those theses including game addiction, five theses includes attachment styles with game addiction. It would be important to understand the methodologies of these theses to understand contributions and limitations of them.

Musluoğlu (2016) made a correlational study about game addiciton and attachment styles with 164 participants ages from 15-19 in Kırklareli. The study was quantitative and used those scales; digital game addiciton scale, internet adiciton scale, experiences in close relationships scale. The study showed that people playing at least 5 hours a day have more anxiety, avoidance and insecure attachment scores than people who play less than 5 hours a day.

Cansu (2019) made a correlational study about attachment and game addiction with 2999 people with mean age of 34,3. The study used quatitative research method and used anova and linear regression to analyze data. The study found that there is a correlation between game addiciton and anxious- avoidant attachment style, age and gender. Younger male people with no child have more game addiciton score.

Köksal (2015) made a quantitative study with 179 students in İstanbul The study used digital game addiction scale to assess game addiction and parent and peer attachment inventories to assess attachment. The study found that students with higher bonding to mother have less internet addiction scores and didn’t find association between game addiction and attachment.This may due to numer of participants used in the study.

Yılmaz (2020) made astudy with 175 children ages 8-12 who diagnosed with ADHD according to DSM-V and didn't have medical treatment in 3 months of period. The study

was quantitaive and used computer game addiciton scale to asses game addiciton and experiences in close relationships scale revised middle childhood to asses attechment style. Children with secure attachment style have least game addiction scores.

2.3 Emotion Regulation

2.3.1 Definition of Emotion Regulation

Lewis, Havlond-Jones and Feldman Barrett (2008) support that emotions are raised when people attend to events and think that something is appropriate to their aims. It doesn't matter if the aims can be conscious or not, temporary or long term. The goals give meaning to the situation and that is reason for rise of emotions. Thus meaning of situation changes the emotional responses. Emotions are complicated things that involve physiology and behavioral and experiential responses. They added that there is also a link between emotion, hormonal changes and actions. Emotions aren't strict and can change by time. They can get stronger and dominate people's attention while they are doing an action. They may also decrease in intensity over time. He emphasized that when a situation, attention and meaning of situation result in emotional response that includes physiological characteristics. Then emotional response may change the situation.

Amendola, Spensieri, Guidetti and Cerutti (2019) support that there is relationship between emotion regulation and videogame dependency. Thus, it is important to know definition of emotion regulation to understand that relationship. Emotional regulation is defined by Gross (1998) as a set of actions which includes initiation, suppression and regulation of the emotions. Gross (1998) made a study with 120 participants to see how different emotional responses differentiate in terms of physiological, behavioral and experiential responses. He found that, emotion expressions of reappraisal and suppression groups are lower than control group. He also found that group of people who try to suppress their emotion in experiment, have more sympathetic responses than the other groups. When people reevaluate an emotional event they show less

physiological symptoms. Finally he confirmed that there are two groups of emotion regulation; cognitive reappraisal and emotion suppression. Cognitive reappraisal is a cognitive process which is like reframing an emotionally important situation that results in changing emotions (Lazarus & Alfert, 1964). Expressive suppression is suppressing one's own emotions when faced with an emotionally important situation (Gross & John, 1998).

Gross (1998) proposes input and output model to explain emotion regulation. In that model input means antecedent focused emotion regulation that is activated by emotional cue and some of behavioral, physiological and experiential emotional responses are triggered. Gross (1998) supports that after these responses are modulated, emotion can be regulated. He calls this type of regulation as reappraisal. The output side of the model which is response-focused emotion regulation, emotion is regulated after it is produced like doing suppression.

2.3.2 Neuroscience of Emotion Regulation

Kuss and Griffiths (2012) mention that game addiction has neurobiological bases. Thus, it can be better if the variables used in game addiction research have neurobiological bases. Knowing neuroscience of emotion regulation can be helpful to explain the reason why this variable is included game addiction study.

Silvers, Buhle, Ochsner, and Dean (2013) support that different brain regions play important role in emotion regulation. They think that emotion regulation is done by the frontoparietal control regions which are active for memory, attention regulation and the other thought actions. Further, they add that dorsolateral prefrontal and inferior parietal cortex is important in working memory and shifting attention in goal directed tasks. They also support that that areas are important in emotion regulation to shift attention to reevaluation, maintaining attention in that reevaluation and forming new evaluations about the situation. They add that, Posterior dorsomedial prefrontal cortex and dorsal anterior cingulate are important to initiate and maintain a controlled task. Moreover,

they support that these areas take role when the new reappraisals change the emotions. These areas are important in the process of reappraisal formation and formation of goals about the situation. They lastly add that ventrolateral prefrontal cortex is used to choose appropriate information from memory to make new interpretation of the situation.

Ochsner and Gross (2008) think that emotion regulation is done by activation of different parts of the brain. Thus it is a complex ability rather than unified ability .They adds that amygdala plays an important role in emotion regulation processes like encoding an emotional stimuli. Also, they mention that insula is important for the experience of affect. They add that two methods for emotion regulation are reinterpreting the emotion evoking situation and distancing. They support that both methods are useful for regulating emotion. Then they support that different parts of brain get activated in these processes. In reinterpretation dorsal prefrontal cortex is activated whereas, right prefrontal cortex gets activated in process of distancing.

Martin and Ochsner (2016) have made a summary of research to see the results about regulation of emotions for children. Then they find that it is more difficult for children to regulate negative emotions. They also find that there are stronger emotional responses in children towards rewards. They add that children get trouble in regulating positive emotions too. They highlight that regulating emotion is mostly about interaction between emotion and cognition. Thus they support that brain regions related to cognitive processes, especially prefrontal cortex, are important in emotion regulation. That is why it is more difficult for children and adolescents to regulate their emotions because of developmental issues.

2.3.3 Emotion Regulation and Internet Addictions

Monacis, De Palo, Griffiths and Sinatra (2017) support that internet addictions include social media, game and other internet activities. In accordance with that, they found that there positive correlation between these internet addictions. That is why it is important to mention research about internet addictions. There is an association between emotion regulation and internet addiction according to study done by Amendola, Spensieri,

Guidetti and Cerutti (2019) with 280 adolescents aged between 11 and 18 in Italy. They make an analysis from data to find out if there is a correlation between emotion regulation and problematic internet use. They find that there is an association between videogame dependency and emotion dysregulation. They also add that having problem about emotion regulation is a risk factor for using technology problematically in adolescence.

Relationship between emotion regulation and problematic internet use is shown by another study done by Pettorruso et al. (2020) with 428 participants mean age of 22. They also add that people who have more difficulty in emotion regulation use internet more problematically. They mention that those people having emotional dysregulation use internet to escape from negative feelings.

Mediator role of emotion regulation in social media addiction is shown by study done by Liu and Ma (2019) with 463 students from colleges. They mention that there is a link between emotional dysregulation and substance use and behavioral addiction including internet use. They state that people may use internet for coping with negative emotions which may result in addiction. Thus they also add that it is important to work on development of emotion regulation to prevent social media addiction.

2.3.4 Relationship between Emotion Regulation and Attachment Style

The association between emotion regulation and attachment styles can be seen in a study done in Canada (Pascuzzo, Cyr, & Moss, 2013). That study is done by 56 people and the data about attachment orientation and emotion regulation are taken at the age 14 then at age of 22. The results of the study show that people who have insecure attachment orientation have more reactions with negative emotions later in life. Thus these people focus on negative emotions more than other people. They also find out that emotion regulation is a mediator factor which has a role in continuity of anxious attachment orientation from adolescence to adulthood.

There are differences between different attachment styles in terms of emotion regulation according to a study done is USA with 1989 people from different ethnicities ages between 13 and 19 (Cooper et al., 1998). They show that adolescents having anxious attachment styles are worst in regulation of negative emotion and they have high levels of risky behaviors. Also, insecurely attached adolescents can't develop coping strategies to cope with negative emotions. People having different attachment styles have different ways to express and feel the emotions. That's why anxious attached people are risky for violence because of feelings of hostility. They mention that there is no difference between attachment styles of different races, age and gender.

People with secure attachment styles have good ability to regulate emotions (Marganska, Gallagher, & Miranda, 2013). The study is done with 284 participants with a mean age of 20 from undergraduates in USA. They also mention that emotion regulation is a mediator for association between insecure attachment style, depression and generalized anxiety disorder. They also note that not accepting negative feelings and unable to control impulse are mediating factor between attachment styles and generalized anxiety disorder. They highlight that securely attached people are better to control their impulsivity, keep their attention on a goal better than other people. They add that, people with preoccupied and fearful avoidant attachment styles get trouble in regulating too much negative emotions when they feel threat to themselves and feel that they will be alone. Also these people view themselves as negative and they don't believe their potential to manage negative emotions. Likewise stated by Gross and John (2003) people with avoidant attachment style suppress their emotions more than others. That causes their negative emotions to rise and emotion regulation gets more difficult for avoidant attached people.

2.3.5 Emotion Regulation in Adolescence

Method for emotion regulation changes over time in adolescence and children (Gullone, Hughes, King, & Tonge, 2010). They make a study with 1128 people aged 9 to 15. They find that older participants use suppression less than younger ones. They also add that

male participants use Suppression more than females. Thus females get mature emotionally earlier than males. They mention that as age and experience increases people start to use healthier method of emotion regulation.

Ability of regulating emotions in adolescence gets developed to maintain more successful emotional regulation strategies. (Ahmed, Bittencourt-Hewitt, & Sebastian, 2015). They support that adolescents are not good at emotion regulation so they are vulnerable to negative emotions. Thus, adolescents are sensitive to influence of their peers. Also, stability of emotions is increasing as adolescents get older. They add that brain regions for emotion regulation which are limbic system and prefrontal cortex are structurally developed in adolescence. Further, the volume of amygdala increases and the regions for connecting amygdala to prefrontal cortex develop during adolescence. In addition, the rewards are very important for adolescence. Thus regulating positive emotion is also difficult for them. Within limitations of brain imaging and methodological faults, generation of emotions and emotion regulation are developing during adolescence.

2.3.5 Similarity of Game Addiction and Substance Use in Dimension of Emotion Regulation

There is a positive correlation between substance use disorder and dysregulation of mood (Wilens et al., 2013). They support this association by adding that, psychological and pharmacological therapies on emotion regulation are effective for substance use disorder. They add that emotional dysregulation is maintaining factor for substance use. These emotions can be positive and negative. Likewise stated by Khantzian (1997) people use substance to regulate their negative emotions and continue using drug for same purpose. He support that drugs have a powerful effect on people. Substance addicts have difficulty in regulating negative emotions that is why they use substance to get rid of negative feelings or to experience an emotion. Further, he also note that children and young adults who have social adaptation and aggression regulation problems have risk for drug use later in life. They mention that people who are intolerant to negative

feelings are vulnerable to addictions. Thus dysregulation of emotions in social interaction is another risk factor for drug use.

On the other side of the coin, according to study done by Ream et al. (2013) adolescents play to regulate negative emotions like use of substance and they may continue playing through adulthood as they have learned that as a coping style. They play to escape problems they face in real life, social relationships. Likewise, people use internet as self-medication for emotion regulation because it is not illegal and it seems to be safe (Yen et al., 2007). They also state that adolescents use internet to relief their depressive symptoms. That is also exemplified by study done by Burleigh et al. (2018) which shows relationship between depressive symptoms and playing games to decrease emotional burden of these symptoms. Likewise, Ream et al. (2013) support that adolescents play games to regulate negative emotions and they continue this coping style in adulthood.

2.3.6 Relationship between Emotion Regulation and Game Addiction

There is empirical data about emotion regulation of people with game addictive behaviors. Gaming behavior is maintained by the feeling of excitement players have while playing game (Chumbley & Griffiths, 2006). On the other hand there is data for regulating negative emotions by playing game. Yen et al., (2018) found that people with IGD suppress emotions more than other people whereas they have less cognitive reappraisal than other people. They think IGD results in some depressive and anxious symptoms that symptoms may result in vicious cycle of negative emotions. People may play games to cope with their negative emotions. These negative emotions lead them to play game. In addition, Thalemann et al. (2007) found that emotional processing of pathological game player are more than normal player according to event related potential scores.

2.4 Game Motivation

2.4.1 Definition of Motivation

Motivation is multidimensional concept, thus there are a lot of factors within definition of motivation. Achievement and avoidance are important terms to understand motivation. Motivation can be categorized in three groups; extrinsic, intrinsic and amotiovation. There are some behavioral factors to determine motivation according to self-determination theory, explained below. At one side of motivation, people are more dominant in determining their own actions, and at the other end, they are less active. Firstly, in intrinsic motivation, person purely chooses the act and does it for pleasure and sake of it, not for any external goal. In extrinsic motivation, person does behavior for the sake of a goal, an external outcome. Some of the extrinsic motivations are; feeling behavior as part of person's identity (integrated regulation), meaning of the behavior (identified regulation), positive and negative feelings (introjected regulation), rewards and punishments (external regulation).

Lastly, amotivation is acting behavior without any motivations. This type of motivation needs to be determined in research. In integrated regulation, person does the behavior, because he or she thinks the behavior as part of the identity. These people think the activity expresses them in a clear way. In identified regulation, person thinks that the activity is important and finds a meaning in that activity. These are important drives for person to continue doing the activity. In introjected regulation, person does the activity whether he or she wants to feel positive feelings or avoid from negative feelings. In external regulation, person does the behavior whether he or she wants to have reward or avoids from punishment (Howard, Gagné, & Morin, 2020).

2.4.1 Motivations for Playing Games

An empirical study done by King, Delfabbro and Griffiths (2011) shows one of important motivations to play is reward systems in games such as getting points, getting

into upper level and having faster loading times. They also note that a narrative element which is actually escapism is most important motivating factor. People, who play problematically, differ from other gamers by giving more importance on mastering skills, earning points, getting full points which cause them to play more hours to be successful in these areas.

Another empirical study done by Ng and Wiemer-Hastings (2005), most important motivating factor for people playing games for long hours is having a social environment which is not available in their real lives. Further, socializing and having challenge found to be most important when gamers decide their favorite games (Myers, 2016). Moreover, an interview study done by Liebert, Wan, Chiou and Ph, (2006) as a result of content analysis on interviews with game players showed that, people play to entertain, cope with difficult emotions, escape from reality. Another study done by King et al.(2019) shows that the least important motivational factor that leads to gaming disorder is socializing.

2.4.2 The Definition of Game Motivation

Motivation is based on self-determination theory which is multidimensional theory of motivation that can be used to asses type and level of motivation (Lafrenière et al., 2012). According to Self Determination Theory, motivation is assessed as intrinsic, integrated regulation, identified regulation, introjected regulation, external regulation and amotivation. Extrinsic motivation has different parts, so different players in those sub groups play for different goals. For instance, players who have introjected regulation play to get rid of irritability because of non-playing. Also for identified regulation, players play because of the meaning of games for them such as having new friends. Lastly in integrated regulation, players play because they integrate game with their view of self. These motivations are assessed to understand type of motivations that affect people's gaming behaviors. (Lafrenière et al., 2012).

Yee (2007) thinks that game motivation is important to differentiate different gamers. He makes research with 3000 online gamers by using online surveys to assess game motivation and some demographic information. After making factor analysis he figures out subgroups of game motivation. He puts those subgroups into three big components; social, achievement and immersion. He finds out that grouping gamers into different categories in terms of motivation is better to analyze gamers' behaviors rather than simplifying them into one group. Also, he adds that game motivation is important to understand the motivation that affects continuation of addictive behavior of gaming.

2.4.3 Neuroscience of Motivation

Motivated behaviors of adolescents can be modelled by triadic explanation in neurobiological manner. In that model, amygdala, some parts of prefrontal cortex and nucleus accumbens are important. Adolescents have strong reward system when there is uncertainty. That is explained by nucleus accumbens. Also, adolescents have weakness for avoiding from harmful situations. That is explained by amygdala. Further, adolescents have weakness in self-regulatory behaviors, thus they may have impulsive behavior. That is explained by prefrontal cortex in the triadic model(Ernst, Pine, & Hardin, 2006).

Di Domenico and Ryan (2017) note that intrinsic motivation is a complex phenomenon which includes cognition, behaviors and emotions. That's why broader area of neurotransmitter transmissions. They also support that dopamine is important in intrinsic motivation. Dopamine has a role in emotions and behaviors, thus this initiates wanting process of the behavior. Hence, dopamine is effective in rewarding and punishing events. Thus, dopamine has some changes in emotions after events and cognitions about the events and behavioral reactions to event. Emotions and behavior have important role in game addiction as mentioned in game addiction section. Emotions and behavior have neurobiological basemen. Thus, it can be useful to mention about neuroscience of motivation.

2.4.4 Motivation and Addiction

Probability of addiction is higher in adolescence than other developmental stages. It is indicated that adolescents have tendency to have risky behaviors because there is no balance within prefrontal cortigal regions. That has an effect on their motivation and emotions. Also, addictive behaviors mostly start at adolescence with neural basement. Then, this behavior continues into adulthood. Thus, adults keep doing that addictive behavior with cue which initiates automatic reactions with little control. Adults continue using drug mostly because of negative affect due to not using it. They keep using it as a habit with negative reinforcement. This decreases control over using drug or alcohol. It is also noted that alcohol and drug addicts have impaired control when they start using alcohol and drug in adolescence(Gladwin, Figner, Crone, & Wiers, 2011). Adolescents are at risk for beginning addiction, and continue this addiction. Game addiction may have similar pathway from adolescence throughout adulthood.

DiClemente (2003) notes that Transtheoretical model includes 5 stages for change. At stage of precontemplation, person doesn't accept the problem and have no aim to change. At stage of contemplation, person accepts the problem but does nothing for change. At stage of preparation, person aims to change and is ready for an action to change. At stage of action, person acts for change which lasts about 5 months. At stage of maintenance, person behaves to prevent any relapse. These stages are important to understand role of motivation in addiction treatment.

Kennedy and Gregoire (2009) note that there are two types of motivation one of them is based on self-determination theory; the other is based on transtheorethical motivation. They also support that motivation is important in addiction treatment. Moreover, they find out that person with high internal motivation is most probably in stage of action. Thus, they show that there is relation between self -determination theory and transtheoriethical theory in treatment of addiction. They also indicate that SDT is important for understanding beginning actions for change and other factors which orient

people to succeed the change. Therefore both model of motivation is related to addiction.

2.4.5 Relationship between Attachment Style and Motivation

Ryan, Deci and Vansteenkiste (2016) explain that according to self-determination theory (SDT), autonomy, which is an important part in SDT, is related to person's secure attachment style. People with avoidant attachment styles play games for immersion rather than social and achievement (Lidia Suárez+, Cephas F. W. Thio, 2012). This shows people with different attachment styles have different motivation to play. Furthermore, Isabel Soares, Marina S. Lemos, and Cristina Almeida (2005) supports empirically that there is a difference between people having secure and insecure attachment styles in motivational strategies they have used in classroom environment. Thus, attachment style is relational to the flexibility of motivational behavior of people.

2.4.6 Relationship between Game Addiction and Motivation

Dong and Potenza (2014) support that the motivations that are bound to reward-seeking are related to internet gaming disorder. They thought this linkage lessens the cognitive control to manage motivations to play games in a controlled way. That's why people play for long period of time in which they can't control. They also support that cognitive behavioral therapy which is centered on these motivational drives can be beneficial to inhibit continuation of gaming disorder. It is aimed to make game addicts to be able to control their cravings caused by motivations.

Moreover, a study done by Brewer, Elwafi and Davis (2013) shows that addiction progress with motivational positive and negative cues. Positive cue gives signals about reward which initiates addictive behavior and negative cue which is salience continues addictive behavior by making person get rid of negative feelings because of stopping the addictive behavior. That shows the two dimensions of vicious cycle in IGD as positive and negative cues resulting in positive and negative emotions. Brewer, Elwafi and

Davis (2013) calls this cycle as addictive loop. Taylor, Ph and Potenza (2003) explains in neurobiological manner that when reward is given repeatedly to brain, motivation to behavior becomes stronger in addition to making person more sensitive to rewarding stimuli. This research is important to understand the linkage between motivation and game addiction. Thus it is important to understand more linkage between all types of motivation and game addiction.

2.5 The Hypotheses

The hypotheses of the study are:

1. There is positive correlation between insecure attachment styles (preoccupied, dismissing and fearful) and game addiction whereas there is negative correlation between secure attachment style and game addiction.
2. There is positive relationship between external regulation and game addiction.
3. There is positive relationship between suppressive emotion regulation strategy and game addiction whereas there is negative relationship between cognitive emotion regulation and game addiction.
4. Participants who use suppressive emotion regulation have higher game addiction scores than participants who use cognitive emotion regulation.
5. Fearful attachment style is negatively correlated with cognitive emotion regulation and positively with suppressive emotion regulation.
6. There is positive association between dismissive attachment style and suppressive emotion regulation.
7. There is positive relationship between integrated motivation and fearful attachment style.

CHAPTER III

METHODS AND PROCEDURES

3. 1 Participants

The participants are selected from high school students in various high schools in Erzurum. The schools are randomly selected and volunteer students from those schools are chosen for the study. Demographic information about participants is in Table 1.

Table 3.1 Demographic Information

Variable	Frequency	Percent (%)
Age		
12	1	0.3
13	5	1.4
14	49	14
15	102	29.1
16	76	21.7
17	67	19.1
18	44	12.5
19	7	2
Total	351	100
Gender		
Male	174	49.6
Female	177	50.4
Number of Siblings		
Between 1-3	233	66.4
Between 3-5	95	27.1
Between 5-7	20	5.7
7 and more	3	0.9
Level of Education of Mother		
Never go to school	23	6.6
Primary School	185	52.7
High School	80	22.8
University	53	15.1
Post Graduate	10	2.8

Table 3.1 continued

Level of Education of Father		
Primary School	99	28.2
High School	110	31.3
University	110	31.3
Post Graduate	32	9.1
Family Income		
Between 0 and 3000 TL	103	29.3
Between 3000 and 5000 TL	100	28.5
Between 5000 and 7000 TL	68	19.4
Between 7000 and 9000 TL	30	8.5
9000 TL and above	50	14.2

TL=Turkish Lira

As shown in Table 1, there are 351 participants in total. Age of participants vary from 12 to 19. Mean age is 15.88. Number of female and male participants is merely same. Most of the participants have one to three siblings (66.4 %). Level of education of mothers of participants is mostly primary education (52.7 %). Fathers' level of education is evenly distributed to primary (28.2 %), high school (31.3 %) and university (31.3 %). 29.3 % of participants have family income between 0 and 3000 Turkish Lira and 28.5 % of participants have family income between 3000 TL and 5000TL.

3.2 Materials

The data is obtained by using these instruments; Socio-demographic Information Form, Game Addiction Scale Short Form, Relationships Questionnaire Scale, Game Motivation Scale, Emotion Regulation Scale.

3.2.1 Socio-demographic Information Form

Socio-demographic information form helps to get information about age, gender, economic status, level of education of family. In addition, the form helps to learn about gaming behavior of participants, type of game they play and place where the participants

play games. The form is useful to consider additional factors that may enroll in the study and learn more about the how participants play game.

3.2.2 Game Addiction Scale Short Form

Game Addiction Scale was first developed by Lemmens, Valkenburg, & Peter, (2009). They made a study to develop and validate addiction scale to assess game addiction. Lemmens et al. (2009) made 21 items for assessing 7 criteria of addiction. Some of those are; mood modification, salience, tolerance. The scale had Cronbach's alpha as 0, 94 and 0, 92 in first and second group. The scale was successful to differentiate excessive gaming from game addiction.

Ilgaz (2015) made Turkish adaptation of Game Addiction Scale. The study found that Turkish version of the scale is valid according to confirmatory factor analysis. Also Turkish version of the scale was found to be reliable with 0,92 value of Cronbach's Alpha.

Game Addiction Scale Short Form is adapted by Anlı & Taş (2018) . It is a continuous scale. It's adapted the study done by 1022 students ages from 12-19 from different socio economic status. Anlı & Taş (2018) made short form by applying factor analysis and gathering 9 items at the end. They used the scale to students to assess the validity and reliability the scale. It is found that there is a correlation (r=.74) between Game Addiction Scale adapted by Ilgaz (2015) and the short form of the scale adapted by Anlı & Taş (2018). Items are questions like "Do you feel stress because of not playing game?"(Anlı & Taş, 2018) Cronbach Alpha value of the scale found to be .81 which showed that the scale is internally consistent. It is a likert scale in which the items are answered on 5 point scale, 1 is never, 3 is sometimes and 5 is very often. More point means more severe game addiction. There is no cut off point in the scale. Minimum value is 9 and maximum value is 45.

3.2.3 Relationships Scales Questionnaire

It was first developed by Griffin and Bartholomew (1994). It was designed to assess the attachment styles in dimensions of secure and insecure. These attachment styles are; secure, preoccupied, dismissing and fearful. It was a categorical scale in which there are 30 items 17 of which are used for assessing attachment styles. Secure and dismissing attachment styles are measured by five items and fearful and preoccupied attachment styles are measured by four items. The average score in each category is counted. The highest score of category shows the attachment style of person. The scores in each category can also be used as continuous score. It has high test retest reliability and construct validity but low internal consistency Also, the items in this scale assesses information about self and other together that is reason for low internal consistency. (Sümer, 1999)

Turkish adaptation of Relationships Scales Questionnaire (RSQ) was done by Sümer (1999b). The study found that RSQ has convergent validity with Relationships Questionnaire which is another scale for assessing attachment style with four paragraphs. Further, RSQ has enough reliability and discriminant validity. The study showed that model of four attachment styles is valid for Turkish culture. Turkish adaptation of RSQ has construct validity with items showing properties about model of self and others. Participants rate the sentences according to their relationships;" I don't trust others easily" Answers are likert with 7 levels. (1=it does not define me, 7=It definitely defines me). The scale can be used as both categorical and continuous. If person gets more score in one subcategory than any other category, it means this person belongs to that category. Also, more points in every subcategory mean the person has more features in that subcategory.

3.2.4 Game Motivation Scale

It is developed by Lafrenière, Verner-Filion & Vallerand (2012) on basis of self-determination theory. This scale was designed to assess type of motivation for playing

games. It is a likert scale consisting of 18 items within 6 subgroups. The subgroups of scale are; external, introjected, identified, integrated regulation, intrinsic motivation and amotivation. The scale begins with question “why do you play?” Participants rate the items about different motivations from 1 to 7 (1 = I don’t agree at all, 7 = very strongly agree). Lafrenière et al. (2012) found that Game Motivation Scale scores are correlated with frequency of gaming and need satisfaction for playing games. The scale is internally consistent and structure of six factors is approved. Alpha coefficients for subscales found to be above .75 which showed the scale is internally reliable.

Turkish adaptation of Game Motivation Scale is done by Akin, Kaya, & Demirci (2015). The psychometric properties show that it is valid and reliable scale. The Cronbach alpha scores of subscales found to be between .76 and .89 which shows the scale has good internal reliability. The items in each of the subscale are added and that score shows the participant’s motivation score for that motivation type.

3.2.5 Emotional Regulation Scale

Emotion Regulation Scale consisting of ten items was developed by Gross & John (2003). It was designed to evaluate people's strategy for regulating emotions such as suppression and cognitive reappraisal. The scale is a likert in which the participants rate the items from 1 to 7 (1 = strongly disagree, 7 = strongly agree). Six items are designed to assess reappraisal and four items are designed for suppression. Factor analysis done with ten items showed that model could be explained by two factors: suppression and reappraisal. The alpha coefficients for internal reliability are .79 and .73 for reappraisal and suppression respectively. Test-retest reliability of the scale found to be .69. The psychometric properties showed that the scale is valid and reliable.

Turkish adaptation of Emotion Regulation Scale is done by Emine Tuna, (2011). The scores are evaluated as continuous in two different dimensions; reappraisal and suppression. Emine Tuna, (2011) made factor analysis and found that there are two

factors; suppression and reappraisal. The scale found to be internally consistent with coefficients of .78 and .64.

3.4 Process

Ethical permissions are taken from Ibn Haldun University. Permissions are taken from Erzurum Directorate of National Education. All of the scales and forms are designed in Google Forms to collect data in pandemic circumstances due to Covid 19. Then I get contact with principals of high schools in Erzurum. The scales and forms are sent to school principals, and then they send in to parents of students. By permission of the parents, volunteer students fill the forms. Some of students who fill the forms are awarded randomly and some presents are sent to their homes. This method is used to encourage students to fill the forms. The answers from the forms are getting into Microsoft Excel; some of the invalid answers are deleted. Then valid answers are entered into SPSS to make further analysis.

CHAPTER IV

RESULTS

4.1 Gaming Behavior of Participants

Table 4.1 Information about Game Behavior of Participants

Variable	Frequency	Percent (%)
Play time (daily)		
Between 1 and 3 hours	232	66.1
Between 3 and 5 hours	79	22.5
Between 5 and 7 hours	21	6
7 hours and more	19	5.4
Game Type		
Offline and Single	88	25.1
Offline and Multiplayer	9	2.6
Online Multiplayer	215	61.3
Others	39	11.1
Onset of Playing Game (age)		
Between 2 and 5	15	4.3
Between 5 and 8	60	17.1
Between 8 and 11	81	23.1
Between 11 and 14	122	34.8
Between 14 and 17	69	19.7
Between 17 and 19	4	1.1
Game Device		
Mobile Phone	209	59.5
Tablet	23	6.6
Computer	110	31.3
Playstation	6	1.7
Others	3	0.9
Game Place		
at Home	335	95.4
at playrooms	11	3.1
Others	5	1.4

Table 2 shows information about gaming behavior of participants. It shows that 66.1% of participants play games about one to three hour for a day. 22.5 % of participants play three to five hour for a day. 25.1 % of participants play offline and single games whereas 61.3 % of participants play online and multiplayer games. 34.8% of participants have started playing game at age of 11 to 14. 23.1 % of participants have started gaming at age of 8 to 11 whereas 19.7% of them have started at age of 14 to 17. 59.5 % of participants use mobile phone for playing game and 31.3 % of them use computer for playing game.

4.2 Percentage of Participants having Game Addiction for Polythetic and Monothetic Formats

Game addiction is decided by considering two formats; monothetic, polythetic. Monothetic format requires fulfillment of all of the criteria whereas polythetic format requires fulfillment of half of the criteria (Lemmens et al., 2009) . Game Addiction Scale consists of 9 items in total. Thus, in monothetic format, people who fulfill requirements of 9 items in total are decided to be game addict. The requirement for fulfillment is getting score 3 (sometimes) or more out of 5 point scale. In polythetic format, people who fulfill requirements of 5 items are decided to be game addict. The requirement for fulfillment is getting score 3 (sometimes) or more out of 5 point scale. Information about percentage of participants having game addiction is given in Table 3.

Table 4.2 Frequency of Game Addiction in Polythetic and Monothetic Format within different Genders

	Polythetic Format		**Monothetic Format**	
Gender	**Frequency**	**Percentage (%)**	**Frequency**	**Percentage (%)**
Male	52.00	29.90	3.00	1.70
Female	41.00	23.20	4.00	2.30
Total	93.00	26.50	7.00	2.00

As shown in Table 3, by considering those two formats, number of people who are game addict for monothetic format is 7. Thus, 2 % of people are in that category. Moreover, number of people who are game addict for polythetic format is 93. 26.50 % of people are in that category.

4.3 Comparison of Genders by Game Addiction Scores

Table 4.3 Comparison of Genders according to Game Addiction score by t test

Gender	Frequency	$\bar{X}$	SD	t	df	p
Male	174	19.787	6.522	2.662	349	0.008
Female	177	17.831	7.227			

An Independent Samples t-test is done to compare mean of Game addiction scores of male and female participants. The results show that male participants (M=19.79, SD=6.52, N=174) have higher game addiction scores than female participants (M=17.83, SD=7.23, N=177), t (349) =2.66, p< .05, two tailed.

4.5 Comparison Levels of Education of Mothers of Participants According to Game Addiction Score

Mothers of participants are compared by their level of education by using ANOVA. The results show that there is no statistically significant difference between groups, F (4,346) =1.069, p=.372.

4.6 Comparison Levels of Education of Fathers of Participants According to Game Addiction Score

Fathers of participants are compared by their level of education by using ANOVA. The results show that there is no statistically difference between groups;
(F (3,347) = 2.032, p=.109).

4.7 Comparison of Participants having different Levels of Family Income According to Game Addiction

Participants from different levels of income are compared according to game addiction score by using ANOVA. There is no statistically difference in game addiction score between different levels of income; (F (4,346) =2.167, p=.072).

4.8 Comparison of different types of Games according to Game Addiction

Table 4.4 Comparison of Game Addiction score between different types of Game by using ANOVA

	Sum of Squares	Df	Mean Square	F	p
Between Groups	1959.316	3	653.105	15.181	0
Within Groups	14928.724	347	43.022		
	168888.04	350			

Table 4.5 Mean Differences of Game Addiction between Groups by using ANOVA Post Hoc Tukey

Type of Game	N	$\bar{X}$	SD	Offline and Single	Offline and Multiplayer	Online Multiplayer	Others
Offline and Single	88	15.796	5.135				
Offline and Multiplayer	9	16.889	9.090	p>.05			
Online Multiplayer	215	20.674	6.980	p<.05	p>.05		
Others	39	15.692	6.387	p>.05	p>.05	p<.05	

The results of one way ANOVA show that there is statistically significant difference in total game addiction scores between different types of games (F (3,346) =15.181, p< .05). Post hoc analysis using Tukey shows that participants who play online multiplayer games (M=20.67, N=215, SD=6.98) have statistically higher game addiction scores than people who play offline and single player games (M=15.80, N=88, SD=5.14). There is no significant difference between participants who play online multiplayer games (M=20.67, N=215, SD=6.98) and people who play offline and multiplayer (M=16.90, N=9, SD=9.09).

4.9 Comparison of Game Addiction Scores between Different Time of Play

Table 4.6 Comparison of Game Addiction Scores between Different times of Play by using ANOVA

	Sum of Squares	df	Mean Square	F	p
Between Groups	3016.252	3	1005.417	25.15	<.001
Within Groups	13871.788	347	39.976		
	16888.04	350			

Table 4.7 Comparison of Game Addiction Scores between Different times of Play by using ANOVA Post Hoc Tukey

Time of Play (daily)	N	$\bar{X}$	SD	1 to 3 hours	3 to 5 hours	5 to 7 hours	7 hours and more
1 to 3 hours	232	16.918	6.006				
3 to 5 hours	79	21.051	7.181	p<.05			
5 to 7 hours	21	26.905	6.648	p<.05	p<.05		
7 hours and more	19	23.474	5,929	p<.05	p>.05	p>.05	

Results of one way ANOVA show that there is statistically significant difference in total game addiction scores between groups of time of play ($F(3,347) = 25.150$, $p<0.05$). Post hoc analysis using Tukey shows that participants who play for 5 to 7 hours ($M=26.91$, $N=21$, $SD=6.65$) have significantly higher game addiction scores than people who play for 1 to 3 hours ($M=16.92$, $N=232$, $SD=6.01$) and people who play for 3 to 5 hours ($M=21.05$, $N=79$, $SD=7.18$) and no difference with participants who play 7 and more ($M=23.48$, $N=19$, $SD= 5.93$). There is no difference between participants who play 7 and more hours ($M=23.48$, $N=19$, $SD= 5.93$) and participants who play for 3 to 5 hours ($M=21.05$, $N=79$, $SD=7.18$).

4.10 Comparison of Game Addiction Scores between different onset of Game Play

One way ANOVA is done to compare age to start playing game. Results show that there is no statistically difference in game addiction scores between different groups of onset of game play by game addiction score ($F(5,345) = 1.569$, $p= .168$).

4.11 Comparison of Game Addiction Scores between Game Vehicles

One way ANOVA is done to compare different game vehicles by game addiction score. Results show that there is no statistically difference in game addiction scores between different groups of vehicle of game ($F(4,346) = 1.100$, $p= .356$).

4.12 Comparison of Attachment Styles According to Game Addiction Score

Table 4.8 Predictive features of Attachment styles for Game Addiction by using Regression

	B	SE.	β	t	p	R	R2	F	p
Secure	-0.544	0.397	-0.077	-1.373	0.171	0.189	0.036	3.208	0.013
Fearful	-0.294	0.347	-0.056	-0.848	0.397				
Preoccupied	0.994	0.329	0.163	3.015	0.003				
Dismissive	0.779	0.383	0.13	2.035	0.043				

Multiple Linear Regression is done to see if attachment styles predict total game addiction scores. Preoccupied attachment style and dismissive attachment style are predictor of game addiction ($p<.05$). Order of predictor importance of attachment styles are; preoccupied attachment style ($\beta = .163$) and dismissive attachment style ($\beta =.130$).Secure and fearful attachment styles are not predictors for game addiction ($p<.05$).

These results illustrated by table 7 are helpful to evaluate some of the hypotheses. The first hypothesis stating that "attachment styles (fearful, dismissive, preoccupied, secure) are predictors of game addiction" is not supported because secure and fearful attachment styles are not predictors of game addiction.

4.13 Relationship between Game Addiction and Game Motivations

Table 4.9 Predictive Features of Game Motivations for Game Addiction by using Regression

	B	SE.	β	t	p	R	R2	F	p
Intrinsic Motivation	0.115	0.043	0.091	2.69	0.007	0.918	0.842	305.175	0
Integrated Motivation	1.955	0.063	0.296	30.945	.000				
Identified Motivation	0.049	0.035	0.041	1.395	0.164				
Introjected Motivation	0.237	0.04	0.177	5.91	.000				
External Regulation	-0.05	0.038	-0.042	-1.319	0.188				
Amotivation	-0.023	0.03	-0.018	-0.772	0.441				

Multiple Linear Regression is done to see if game motivations predict total game addiction scores. Game motivations are predictor of game addiction score ($F(6,344) = 305.175$, $p<.05$). Game motivations predict 84 % of total game addiction intrinsic motivation, integrated motivation, and introjected motivation are predictor of game addiction ($p<.05$).The second hypothesis stating "There is positive relationship between external regulation and game addiction" is not supported since p value is equal to .188.

4.14 Relationship between Emotion Regulation and Game Addiction

Table 4.10 Predictive Features of Emotion Regulation Strategy for Game Addiction by using Regression

	B	SE.	β	t	P	R	R2	F	p
Suppressive Emotion Regulation	1.052	0.407	0.14	2.584	0.01	0.158	0.025	4.442	0.012
Cognitive Emotion Regulation	-0.761	0.386	-1.972	-1.972	0.049				

Multiple Linear Regression is done to see if emotion regulation strategies predict total game addiction scores. Results show that emotion regulation strategies are predictor of game addiction score (F (2,348) =4.442, p<.05). Emotion regulation strategies predict 2.5 % of game addiction. Results show that one increase in Suppression results in 1.052 increase in total game addiction score. Also, one increase in cognitive emotion regulation results in 0.761 decrease in game addiction.

The third hypothesis stating that "there is positive relationship between suppressive emotion regulation strategy and game addiction whereas there is negative relationship between cognitive emotion regulation and game addiction" is accepted due to p value is lower than .05.

Table 4.11 Comparison of Suppressive and Cognitive Emotion Regulation Strategies by Game Addiction Score with using t test

	Frequency	**$\bar{X}$**	**SD**	**t**	**df**	**p**
Cognitive Emotion Regulation	248	18.282	6.896	-2.263	340	0.024
Suppressive Emotion Regulation	94	20.181	7.008			

Game addiction means of suppression and cognitive groups are compared by independent samples t test. The results show that participants using cognitive emotion regulation (M=18,28, SD=6.90, N=248) have less game addiction scores than participants using suppressive emotion regulation (M=2.18, SD=7.01, N=94), t(340) =-2.263 , p<0.05, two tailed.

The fourth stating that "participants who use suppressive emotion regulation strategy have higher game addiction scores than participants who use cognitive emotion regulation strategy" is accepted due to p value is lower than .05.

4.15 Is there any relationship between different attachment styles and different emotional regulation strategies?

Table 4.12.1 Comparison of Attachment Styles According to Suppressive Emotion Regulation Score by using ANOVA

	Sum of Squares	df	Mean Square	F	p
Between Groups	8.967	3	2.989	3.598	0.014
Within Groups	270.791	326	0.831		
	279.758	329			

Table 4.12.2 Comparison of Attachment Styles According to Suppressive Emotion Regulation Score by using ANOVA Post Hoc Tukey

	N	$\bar{X}$	SD	Secure	Fearful	Preoccupied	Dismissive
Secure	58	2.957	.980				
Fearful	69	3.268	.964	p>.05			
Preoccupied	55	3.096	.952	p>.05	p>.05		
Dismissive	148	3.385	0.841	p<.05	p>.05	p>.05	

Result of one way ANOVA shows that there is statistically difference in suppressive emotion regulation scores between different attachment styles ($F(3,326)=3.598$, $p<0.05$). Post hoc analysis using Tukey shows that participants who have dismissive attachment style (M=3.39, N=148, SD=.841) have significantly higher suppressive emotion regulation than people who have secure attachment style(M=2.96, N=58, SD=.980).

Table 4.13.1 Comparison of Attachment Styles According to Cognitive Emotion Regulation Strategy Score

	Sum of Squares	Df	Mean Square	F	p
Between Groups	9.96	3	2.653	2.877	.036
Within Groups	300.627	326	0.922		
	308.587	329			

Table 4.13.2 Post Hoc LSD

	N	$\bar{X}$	SD	Secure	Fearful	Preoccupied	Dismissive
Secure	58	3.779	.838				
Fearful	69	3.739	1.007	p>.05			
Preoccupied	55	3.688	.833	p>.05	p>.05		
Dismissive	148	4.044	1.024	p>.05	p<.05	p<.05	

Result of one way ANOVA shows that there is statistically significant difference in cognitive emotion regulation between attachment styles ($F(3,326)=2.877$, $p<0.05$). Post hoc analysis using LSD shows that participants who have dismissive attachment style (M=4.044, N=148, SD=.1.024) have significantly higher cognitive emotion regulation than people who have fearful attachment style(M=3.739, N=69, SD=1.007) and preoccupied attachment style (M=3.688, N=55, SD=.833) .

Table 4.14 Predictive Features of Attachment Styles for Cognitive Emotion Regulation

	B	SE.	β	T	p	R	R2	F	p
Secure	0.045	0,056	0.046	0.814	0.416	0.187	0.024	3.12	0.015
Fearful	-0.007	0.049	-0.009	-0.144	0.886				
Preoccupied	-0.102	0.046	-0.12	-2.215	0.027				
Dismissive	0.099	0.054	0.118	1.852	0.065				

Multiple Linear Regression is done to examine relationship between attachment styles and cognitive emotion regulation strategy. Results show that attachment styles are predictor of cognitive emotion regulation strategy ($F(4,346)=3.120$, $p<.05$). Attachment styles predict 2.4 % of cognitive emotion regulation strategy. Preoccupied attachment style is predictor of cognitive emotion regulation strategy. Dismissive attachment style is merely predictor of cognitive emotion regulation strategy ($p=.065$).

Table 4.15 Predictive Features of Attachment Styles for Suppressive Emotion Regulation

	B	SE.	β	t	P	R	R^2	F	p
Secure	-0.066	0.051	-0.071	1.292	0.197	0.29	0.084	7.968	0
Fearful	0.09	0.045	0.129	2.016	0.045				
Preoccupied	-0.018	0.043	0.022	-0.422	0.045				
Dismissive	0.137	0.05	0.171	2.764	0.006				

Multiple Linear Regression is done to examine relationship between attachment styles and suppressive emotion regulation strategy. Results show that attachment styles are

predictor of cognitive emotion regulation strategy ($F(4,346)=7.968$, $p<.05$). Attachment styles predict 7.4 % of suppressive emotion regulation strategy. Fearful attachment style and dismissive attachment style are predictor of suppressive emotion regulation strategy ($p<0.05$). Order of predictor importance of suppressive emotion regulation strategy are; dismissive attachment style (beta= .137) and fearful attachment style (beta = .090).

The fifth hypothesis stating that " Fearful attachment style is negatively correlated with cognitive emotion regulation and positively with suppressive emotion regulation" is not supported because there is no negative correlation between fearful attachment style and cognitive emotion regulation shown in Table 14 . The sixth hypothesis stating that "there is positive association between dismissive attachment style and suppressive emotion regulation" is accepted due to p value is lower than .05.

4.16 Is there any relationship between attachment styles and game motivations?

Table 4.16 Correlations between Game Motivations and Attachment Styles

	1	2	3	4	5	6	7	8	9	10
Intrinsic Motivation	1	.302**	.628**	.532**	.701**	.177**	.089	-.082	.105*	-.033
Integrated Motivation		1	.137*	.478**	.351**	.358**	-.113*	.003	.094	.039
Identified Motivation			1	.482**	.519**	.030	.175**	-.079	.094	-.044
Introjected Motivation				1	.572**	.297**	-.070	-.016	.152**	-.013
External Regulation					1	.151**	.043	-.125*	.088	-.087
Amotivation						1	-.147**	.054	.132*	.018
Secure Attachment Style							1	-.306**	.029	-.044
Fearful Attachment Style								1	-.153**	.526**
Preoccupied Attachment Style									1	-.224**
Dismissive Attachment Style										1

*p<.05

**p<.01

Pearson correlation is done to examine correlation between attachment styles and game motivations. There is negative correlation between secure attachment style and amotivation (r=-.147, N=351 p<.01). There is positive correlation between secure attachment style and identified motivation(r=.175, N=351 p<.01). There is negative correlation between fearful attachment style and extrinsic motivation. (r=-.125, N=351 p<.01). There is positive correlation between preoccupied attachment style and intrinsic motivation (r=.105, N=351 p<.05). There is positive correlation between preoccupied attachment style and amotivation (r=.132, N=351 p<.05).

The seventh hypothesis stating that "there is positive relationship between integrated motivation and fearful attachment style" is not supported due to p value is bigger than .05.

Table 4.17.1 Attachment styles and Integrated Motivation Regression Analysis

	B	SE.	β	t	p	R	R2	F	p
Secure	-.386	.162	-.134	-2.385	.018	.17	.029	2.568	0.038
Fearful	-.153	.142	-.071	-1.076	.283				
Preoccupied	.268	.135	.108	1.987	.048				
Dismissive	.232	.157	.095	1.483	.139				

Multiple Linear Regression is done to examine relationship between attachment styles and integrated motivation. Results show that attachment styles are predictor of integrated motivation ($F(4,346)=2.568$, $p<0.05$). Attachment styles predict 1.8 % of integrated motivation. Preoccupied attachment style and secure attachment style are predictor of integrated motivation ($p<0.05$).

Table 4.17.2 Attachment styles and Identified Motivation Regression Analysis

	B	SE.	β	t	P	R	R2	F	p
Secure	1.001	.33	.169	3.029	.003	.197	.039	3.487	.008
Fearful	-.034	.289	-.008	-.117	.907				
Preoccupied	.429	.274	.085	1.564	.119				
Dismissive	-.066	.319	-.013	-.207	.836				

Multiple Linear Regression is done to examine relationship between attachment styles and identified motivation. Results show that attachment styles are predictor of identified

motivation (F(4,346)=3.487, p<.05). Attachment styles predict 2.8 % of identified motivation. secure attachment style is predictor of identified motivation (beta = 1.001, p<.05).

Table 4.17.3 Attachment styles and Introjected Motivation Regression Analysis

	B	SE.	β	t	p	R	R2	F	p
Secure	-.449	.298	-.085	-1.507	.133	0.173	0.03	2.659	0.033
Fearful	-.15	.261	-.038	-.575	.566				
Preoccupied	.714	.248	.157	2.883	.004				
Dismissive	.171	.288	.038	.595	.552				

Multiple Linear Regression is done to examine relationship between attachment styles and introjected motivation. Results show that attachment styles are predictor of introjected motivation (F(4,346)=2.659, p<.05). Attachment styles predict 1.9 % of introjected motivation. Preoccupied attachment style is predictor of introjected motivation (beta=0.714, p<.05).

Table 4.17.4 Attachment styles and Amotivation Motivation Regression Analysis

	B	SE.	β	t	p	R	R^2	F	p
Secure	-.8	.307	-.146	-2.607	.01	.205	.042	3.798	.005
Fearful	.048	.268	.012	.18	.858				
Preoccupied	.692	.255	.147	2.714	.007				
Dismissive	.18	.296	.039	.608	.544				

Multiple Linear Regression is done to examine relationship between attachment styles and amotivation. Results show that attachment styles are predictor of amotivation ($F(4,346)=3.798$, $p<.05$). Attachment styles predict 3.1 % of amotivation . Secure attachment style and Preoccupied attachment style are predictor of amotivation ($p<.05$).

4.17 Correlation between Attachment Styles and Game Addiction when controlling variables are game motivations and emotion regulation strategies

Table 2 Correlation between Attachment Styles and Game Addiction when controlling variables are game motivations and emotion regulation strategies

	1	**2**	**3**	**4**	**5**
Secure Attachment Style	1	-.279**	.04	-.009	.088
Fearful Attachment Style		1	-.143**	.493**	.000
Preoccupied Attachment Style			1	-.205**	.108*
Dismissive Attachment Style				1	.054
Game Addiction					1

There is positive correlation between preoccupied attachment style and game addiction when emotion regulation strategies and game motivations are controlled ($r=.108$, $N=341$ $p<0.05$).

CHAPTER V

DISCUSSION

5.1 Evaluation of Variables about General Information

In this study, prevalence of game addiction in participants found to be 2% in monothetic format and 26.5 % in polythetic format. This is just based on results from Game Addiction Scale Short Form; this information isn't enough for diagnosis of game addiction. The results are similar to another study done by (Göldağ, 2018). He found game addiction is 3,3 % in monothetic format and 22,6% in polythetic format. Another study shows 2% in monothetic and 9% in polythetic format in Netherland (Lemmens et al., 2009). The prevalence of game addiction may differ in different cities and countries. Much more studies with quantitative and qualitative methods should be used to understand more realistic game addiction prevalence in Turkey. Experts in field should do a structured interview in addition to scales to diagnose game addiction in valid and reliable way.

Game addiction is found to be higher in male participants in this study. This result is in line with the results of study done by Lin et al. (2011) who found that being male is risk factor for game addiction. This result may be important for game addiction, but much more studies should be done to understand reason why game addiction is less in females.

Participants whose families have different level of income don't have difference in game addiction scores. The result is different from a study which found out that there is difference in game addiction scores between participants from families having good and bad level of income (Ekinci, Yalçın, Özer, & Kara, 2017). However in that study level of income is not stated by numbers, so it is not certain levels. Karaca et al. (2020) support that having a personal pc is a risk factor for game addiction. That's why people

having opportunity to buy a personal pc and game are at risk for game addiction. However, after having personal pc, game and mobile phone, level of income may not affect gaming behavior. That may be reason for difference between this study and study done by Ekinci, Yalçın, Özer, & Kara (2017).

This study found that participants who play online multiplayer games have more game addiction score than participants who play offline-single. It is shown that there is difference between multiplayer and single game players. This result is similar to study done with adolescents in Hong Kong (Wang et al., 2014). This may be because people play long hours and there are strong motivations like socialization, achievement when they play with others.

The results also show that participants who play for longer hours have higher game addiction scores. Participants playing 5-7 hours for a day have higher game addiction than participants playing 3-5 hours for a day. However, there is no difference in game addiction scores between participants playing 3-5 hours and participants playing 7 and more hours for a day. These results are similar to the study done by Lin et al. (2011).

When people play long hour they gain some items, rewards and also they have completed something like being stronger in game, having special items. They need to keep playing to maintain their earnings and gain more. That may be reason that causes association between long hours of play and game addiction.

There is no difference in game addiction scores between participants who use different vehicles for playing game. Participants play games mostly from mobile phones (59.5 %) and personal computers (31.3%). That shows us that game addiction is not related to personal computers, new technologies in processors in pc, it is a situation in which vehicle isn't important. The important part is playing digital game. A study done by Chen & Leung (2016) shows that people can be addicted to a social mobile phone game. That shows us mobile games are also addictive and they can be evaluated together with personal computer games. Research should be done to compare mobile games and pc

games in game addiction to understand difference between them in causing game addiction.

5.2 Evaluation of Relationship between Attachment Styles and Game Addiction

Another result of the study is that there is relationship between game addiction and attachment styles according to regression analysis. The hypothesis supporting positive relationship between attachment styles and game addiction is accepted by that result. Thus the result also supports the findings of Savcı and Aysan (2017). In addition, the way to determine attachment styles is actually a limitation for that part. Structured interviews can be helpful to determine attachment styles in valid way. Also, this result is general for attachment styles, thus it is examined for very specific attachment style to decide relationship between game addictions in more detailed way.

The study also supports that there is relationship between preoccupied attachment style and game addiction. This confirms the hypothesis stating positive relationship between game addiction and preoccupied attachment style. The study finds out that there is positive relationship between dismissive attachment style and game addiction. In literature review, (Lin et al., 2011) there is positive relationship between insecure attachment styles (preoccupied, dismissive, fearful) and game addiction. (Odaci & Çikrikçi, 2014) state that game addiction correlates positively with preoccupied attachment style and dismissive attachment style.

One of the results of the study is that there is no relationship between fearful attachment style and game addiction. This finding rejects the hypothesis supporting positive relationship between fearful attachment style and game addiction. The literature review supports that there is positive association between game addiction and anxious and avoidance attachment orientations (Monacis, De Palo, Griffiths, & Sinatra, 2017). They use different format to decide attachment style, but fearful attachment style is similar to anxious and avoidance attachment, because people in those two groups avoids intimacy have same attachment features. However, in the study there is no association between

fearful attachment style and game addiction. The study should be replicated with different attachment style scales to be sure that deciding the attachment orientation in correct way. It can be about number of participants, properties of the scale used in the study.

The study also finds out that there is no relationship between secure attachment style and game addiction. This result does not support the hypothesis supporting negative relationship between secure attachment style and game addiction. The literature review supports that there is negative association between secure attachment style and game addiction (Monacis, De Palo, Griffiths, & Sinatra, 2017). The results can show that the study done in Erzurum support that having secure attachment style is not preventive factor for game addiction. Alternatively it can show that the scale used for determining attachment styles may not be effective determining secure attachment style. Next, the study should be done repeatedly with more participants.

5.3 Evaluation of Relationship between Game Addiction and Game Motivations

Thus study finds out that there is positive relationship between game addiction and game motivations (intrinsic, integrated, identified, introjected, and extrinsic). The result confirms hypothesis supporting positive association between game addiction and external regulation. The literature about game motivations together with game addiction is not very rich to evaluate specific relationships with every motivation type. However Dong and Potenza (2014) supports that people play to seek rewards in games and this cycle keeps continue and make people play as game addict. Too much research should be done about game motivations to understand why people play. That answer can be important to understand mechanisms in game addiction better.

Results of the study show that game motivations predict game addiction. Especially intrinsic, integrated and introjected motivations are important in predicting game addiction. Integrated motivation is most important to predict game addiction. That means people play because they associate playing game with their identity. Further,

Williams and Yee (2008) finds out that game motivations are important for people to play for long hour. They find that achievement, socialization and immersion are important motivations for people to play multiplayer games.

5.4 Evaluation of Relationship between Game Addiction and Emotion Regulation Strategy

The results show that there is positive correlation between game addiction and suppressive emotion regulation strategy. This result confirms the hypothesis supporting positive association between suppressive emotion regulation strategy and game addiction. Additionally, results show that Participants who use suppression for regulating emotion have more game addiction score than participant who use cognitive emotion regulation. The result confirms the hypothesis about that relationship. Amendola, Spensieri, Guidetti and Cerutti (2019) support that emotion dysregulation is important risk factor in formation of game addiction and problematic use of technology for adolescents. Liu and Ma (2019) add that adolescents play to cope with negative feelings and there is a link between emotional dysregulation and behavioral addictions including problematic internet use.

The study finds out that Emotion regulation strategies are predictors for game addiction. There is positive relationship between supressive emotion regulation and game addiction. There is negative relationship between cognitive emotion regulation and game addiction. These results confirm the hypotheses number nine and ten which sho relationship between emotion regulation strategy and game addiction. A study supports that participants who are game addict suppress their emotions more and use cognitive emotion regulation strategies less than others (Yen et al., 2018). They also add that people may play to cope with negative feelings and they continue playing for same aim.

5.5 Evaluation of Relationship between Attachment Styles and Emotion Regulation Strategy

Results of the study show that Participants having dismissive attachment style use suppressive emotion regulation strategy more than people with secure attachment style. This result confirms the hypothesis supporting that relationship. The literature shows that the adolescents who have insecure attachment styles have problems about coping with negative feelings (Cooper et al., 1998).

In addition, the study shows that there is no relationship between fearful avoidant attachment style and cognitive emotion regulation strategy. This result rejects the hypothesis supporting negative association between fearful attachment style and cognitive emotion regulation strategy. Different scales and methods should be done to evaluate way of emotional strategies of participants. The study should be replicated with much more people. In addition, one of the results of the study is that fearful and dismissive attachment styles are predictors of suppressive emotion regulation strategy. This confirms hypothesis supporting positive association between fearful attachment style and suppressive emotion regulation strategy. Gross and John (2003) states that people with avoidant attachment style are more likely to suppress their emotions. However, people with fearful attachment style may use also cognitive strategies to regulate their emotions.

5.6 Evaluation of Relationship between Attachment Styles and Game Motivation

The study shows that there is no association between integrated motivation and fearful attachment style. This result rejects the hypothesis supporting positive association between integrate motivation and fearful attachment style. In addition, the results show that preoccupied attachment style and secure attachment style is predictor of integrated motivation. People with secure and preoccupied attachment styles play games in a way they associate playing as part of their identity. There is no too much information in

literature about relationship between attachment styles and game motivation since it is a specific area. The findings about this relation can be new contribution to literature.

5.7 Implications

The study has implications on research, theory and real life about game addiction and treatment. Firstly, the study shows that game addiction is complex problem. The study shows the complexity of the problem by examining its relation to some variables. Game addiction has relation with attachment styles especially, preoccupied and dismissive. Also, game addiction has positive association with suppressive emotion regulation and negative association with cognitive emotion regulation. Moreover, game motivations are positively correlated with game addiction.

Secondly, apart from enabling understanding game addiction and its relationships better, the study also shows information about prevention programs. People can use scales and interviews to learn about attachment styles, type of emotion regulation strategies and motivations of people to play game. Then, as the study shows people who have preoccupied and dismissive attachment styles are at risk for developing game addiction. That is why these people need attention. Then people having suppressive emotion regulation need to be in prevention program to have skills to cope with negative emotions. Teachers and psychological counsellors in school are important for reducing game addiction in children and adolescents. Training programs can be designed in schools to educate teachers, counsellors and parents about attachment styles that are related to game addiction. The awareness about that issue may help in early identification and intervention of children and adolescents who are at risk of game addiction.

Cognitive emotion regulation strategy has negative association with game addiction, thus parents and school stuff can be educated about the emotion regulation strategy that is related to game addiction. Then, game players who are at risk for game addiction can be in prevention program to learn skills to cope with emotions with cognitions. Also, motivations of people to play game are important. Motivations of adolescents for

playing game can be learned so that they can be enrolled in prevention programs. Those people can be encouraged to do activities in which they have the same motivation. For example, they can do sport regularly or play real life games like Taboo, Scrabble in which socialization can be important motivation. This may prevent them to play games for long hours.

5.8 Limitations of the Study

The data collection process is done in 2021 when the pandemic is actively affecting daily life in Turkey. At that time most of the places were closed, people could go to outside their homes for just necessary work. This drastic change in lifestyle may have effect on results of the study. Participants may spend much more time with technology and especially games. Moreover, psychology of participants may be affected by the current restrictions and these changes may have effect on the results.

Due to Covid 19, education was done mostly online. That's why the only way to collect data was collecting it online. Thus data is collected online in that study. The scales are designed in Google Forms and participants answer questions by that way. This may have an effect on the results since it is unknown in which circumstances the participants answer scales.

The study is done with scales only. All of the variables in the study (game addiction, attachment style, emotion regulation strategy, and game motivation) can also be measured with interviews. Using scale to understand such complex construct is limitation of the study. Also, the theoretical framework of the study by using these variables is complex and using only scales to understand the framework is a limitation.

5.9 Suggestions for Further Study

There are too many quantitative researches in the field of game addiction. However qualitative research is needed to better understand the individuals in deeper way. A structured interview can be used to understand game addiction better. Firstly, interviewer needs to have qualification to diagnose game addiction. At least some symptoms of game addiction can be understood and level of game addiction can be observed in the research. The other variables such as game motivation, attachment styles and emotion regulation can also be understood by structured interviews. It can be difficult to do interview but it can be better contribution to literature of game addiction.

Other than understanding reasons for game addiction, useful methods to prevent game addiction can be mentioned for future studies. Game addiction is important topic. However, as the study mentions it is a serious problem and preventive methods need to be understood to deal with that problem. There are very few studies focusing on prevention of game addiction. By understanding most important game motivations participants can be canalized to other activities in which they can find those motivations such as socializing. Some prevention programs can be centered on regulating negative emotions to deal with game addiction. These need to be considered in future studies.

5.10 Conclusion

The study aims to find out the mechanisms under the game addiction. To understand that, relationship between attachment styles, emotion regulation strategies, game motivation and game addiction is examined. The results show that there is positive relationship between game addiction and preoccupied attachment style and dismissive attachment style. Also there is positive relationship between suppressive emotion regulation strategy and game addiction. Accordingly there is negative relationship between game addiction and cognitive emotion regulation strategy. Next, there is positive relationship between game addiction and game motivations.

The study also finds out some information about relationship between game addiction and demographic information. Game addiction is observed in male participants more than females. Moreover, vehicle to play game, level of income, education level of parents are not important factors in game addiction. Time for spending to play game and type of game are important factors in formation of game addiction.

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APPENDIX

APPENDIX A

Socio-Demographic Information Form

Email adresiniz:
Hangi okulda öğrenim görüyorsunuz?
Yaş:
Cinsiyet:
Kaç Kardeşsiniz: A)1-3 B)3-5 C)5-7 D)7 ve daha fazla
Kaçıncı Sınıfsınız:
Annenizin Eğitim Düzeyi:
Babanızın Eğitim Düzeyi:
Ailenizin Gelir Durumu? A) 0-3000TL B) 3001-5000TL C) 5001-7000TL D)7001-9000TL E)9001TL ve üzeri
Günlük ortalama kaç saat dijital oyunlar oynuyorsunuz? A)1-3 saat B)3-5 saat C)5-7 saat D)7 saat üzeri
En çok oynadığınız oyun türünü işaretleyiniz. Çevrimdışı (offline) Tekli Oyunculu Oyunlar Çevrimdışı (offline) Çok Oyunculu Oyunlar Çevrimiçi (online) Çok Oyunculu Oyunlar Diğer
Dijital oyun oynamaya kaç yaşında başladınız? A)2-5 yaş arası B)5-8 yaş arası C)8-11 yaş arası D)11-14 yaş arası E)14-17 yaş arası F)17-19 yaş arası

Oyun oynamak için en çok hangi cihazı tercih ediyorsunuz? 1.)Telefon 2.)Tablet
3.)Bilgisayar 4.)Playstation 5.)Diğe
En çok Nerede Oynuyorsunuz? 1.)Evde 2.)İnternet Kafede 3.)Diğer

APPENDIX B

Emotion Regulation Scale

Aşağıda insanların duygularını kontrol etmekte kullandıkları bazı yöntemler verilmiştir. Lütfen her durumu dikkatlice okuyunuz ve her birinin sizin için ne kadar doğru olduğunu içtenlikle yanıtlayınız. Yanıtınızı uygun cevap önündeki yuvarlak üzerine çarpı (X) koyarak işaretleyiniz.

	iç	Çok az	B Bazen	K ısmen	O ldukça	T amamen
1. Duygularımı içinde bulunduğum durum hakkındaki düşüncelerimi değiştirerek kontrol ederim.						
2. Hissettiğim olumsuz duyguları azaltmak istediğimde, içinde bulunduğum durum hakkındaki düşüncelerimi değiştiririm.						
3. Hissettiğim olumlu duyguları arttırmak istediğimde, içinde bulunduğum durum hakkındaki düşüncelerimi değiştiririm.						
4. Hissettiğim olumlu duyguları (sevinç veya eğlence/çoşku gibi) arttırmak istediğimde, düşündüğüm şeyleri değiştiririm.						
5. Hissettiğim olumsuz duyguları (üzüntü veya						

kızgınlık gibi) azaltmak istediğimde, düşündüğüm şeyleri değiştiririm.						
6. Stres yaratan bir durumla karşılaştığımda, sakin kalmama yardımcı olacak şekilde düşünmeye çalışırım.						
7. Duygularımı onları belli etmeyerek kontrol ederim.						
8. Olumsuz duygular hissettiğimde, onları belli etmemek için elimden geleni yaparım.						
9. Duygularımı kendime (içimde) saklarım.						
10. Olumlu duygular hissettiğimde onları belli etmemeye özen gösteririm.						

APPENDIX C

Relationships Questionaire

Aşağıda yakın duygusal ilişkilerinizde kendinizi nasıl hissettiğinize ilişkin çeşitli ifadeler yer almaktadır. Yakın duygusal ilişkilerden kastedilen arkadaşlık, dostluk, romantik ilişkiler ve benzerleridir. Lütffen her bir ifadeyi bu tür ilişkilerizi düşünerek okuyun ve her bir ifadenin sizi ne ölçüde tanımladığını 7 aralıklı ölçek üzerinde değerlendiriniz.

1. Başkalarına kolaylıkla güvenememem.	
2. Kendimi bağımsız hissetmem benim için çok önemli.	
3. Başkalarıyla kolaylıkla duygusal yakınlık kurarım.	
4. Baskalarıyla yakın duygusal iliskilerim olmadıgı sürece oldukça rahatım.	
5. Baskalarıyla tam anlamıyla duygusal yakınlık istiyorum.	
6. Baskalarına rahatlıkla güvenip baglanabilirim	
7. Baskalarına tamamıyla güvenmekte zorlanırım.	
8. Baskalarının bana dayanıp bel bağlaması konusunda oldukça rahatımdır.	
9. Kendi kendime yettigimi hissetmembenim için çok önemli	
10. Baskalarının bana, benim istedigim kadar yakınlasmakta gönülsüz olduklarını düsünüyorum	
11. Baskalarına baglanmamayı tercih ederim.	
12. Kendi kendime yettiğimi hissetmem benim için çok önemli.	
13. Başkalarının bana bağlanmamalarını tercih ederim.	
14. Başkalarıyla yakın olmak beni rahatsız eder	
15. Başkalarının bana, benim istediğim kadar yakınlaşmakta gönülsüz olduklarını düşünüyorum.	
16. Başkalarına bağlanmamayı tercih ederim.	
17. Başkaları beni kabul etmeyecek diye korkarım.	

APPENDIX D

Game Addiction Scale

Aşağıda internette (cep tlf, bilgisayar, tablet) veya oyun salonlarında oynadığınız oyunlarla ilgili bazı sorular yer almaktadır. Maddelere yönelik düşüncelerinizi "Hiçbir zaman", "Nadir olarak", "Bazen", "Sık sık" ve "Her zaman" şeklinde karşılarında yer alan parantezlere (X) işareti koyarak belirtiniz. Lütfen her ifadeyi dikkatlice okuyup tüm maddeleri son bir yıldaki durumunuzu göz önüne alarak cevaplayınız.

Son 1 yılda	**Hiçbir zaman**	**Nadir olarak**	**azen**	**ık sık**	**Her zaman**
(1) Oyun oynamadığınız zamanlarda, zihninizi tekrar ne zaman oyun oynayacağınız ile meşgul halde bulduğunuz oldu mu?					
(2) Her geçen gün daha fazla oyun oynadığınız için rahatsızlık hissettiniz mi?					
(3) Oyun oynamadığınız için strese girdiniz mi?					
(4) Oyun oynamayı bırakmak istediğiniz halde					

kendinizi yine oyun oynarken bulduğunuz oldu mu?					
(5) Oyun oynadığınız için yapmanız gereken birçok şeyi (ev işleri, eğitim, spor, hobi) ertelediğiniz oldu mu?					
(6) Çok fazla oyun oynadığınız için diğer insanlarla problem yaşadınız mı?					
(7) Oyunlara ayırdığınız sürenin miktarı ile ilgili ailenizi, arkadaşlarınızı ve size yardımcı olmak isteyen uzmanları kandırdınız mı?					
(8) Olumsuz duygulardan kurtulmak için oyun oynadınız mı?					
(9) Çok fazla oyun oynadığınız için anne-babanız, kardeşleriniz ve diğer kişilerle ciddi çatışmalar yaşadınız mı?					

APPENDIX E

Game Motivation Scale

	Lütfen aşağıdaki soruya cevap olabilecek ifadeleri okuduktan sonra kendinizi değerlendirip sizin için en uygun seçeneğin karşısına çarpı (X) işareti koyunuz. Seçenekler 1'den (Hiç Katılmıyorum) 7'ye (Tamamen Katılıyorum) doğru sıralanmaktadır. 'Neden video oyunları oynuyorsunuz?'							
1	Oynamak heyecan verici olduğu için	1	2	3	4	5	6	7
2	Yeni oyun seçeneklerini (örneğin, sınıflar, karakterler, takımlar, yarışlar, ekipman) denemenin zevki için	1	2	3	4	5	6	7
3	Oynarken yaşadığım yeterlik duygusu için	1	2	3	4	5	6	7
4	Kişiliğime uygun olduğu için	1	2	3	4	5	6	7
5	Hayatımın ayrılmaz bir parçası olduğu için	1	2	3	4	5	6	7
6	Kişisel değerlerimle uyumlu olduğu için	1	2	3	4	5	6	7
7	Önemli yönlerimi geliştirmeme katkı sağladığı için	1	2	3	4	5	6	7
8	Bana yararlı olan toplumsal ve düşünsel yeteneklerimi geliştirmeme katkı sağladığı için	1	2	3	4	5	6	7
9	Kişisel açıdan bir öneme sahip olduğu için	1	2	3	4	5	6	7
10	Kendimi düzenli olarak oynamak zorunda hissettiğim için	1	2	3	4	5	6	7
11	Kendimi iyi hissetmek için oynamak zorunda olduğumdan	1	2	3	4	5	6	7
12	Yapmazsam kendimi kötü hissedeceğim için	1	2	3	4	5	6	7
13	Güçlü ve az bulunan eşyalar (örneğin, zırh, silah) ve sanal para birimleri (örneğin, altın parçaları, mücevherler) elde etmek için, ya da oyunun gizli/kısıtlanmış öğelerini (örneğin, yeni karakterler, ekipman, haritalar) açmak için	1	2	3	4	5	6	7
14	İyi bir oyuncu olmanın saygınlığı için	1	2	3	4	5	6	7
15	Oyun içi ödül ve kupaları kazanmak veya karakter/avatarların seviyelerini ve deneyim puanlarını arttırmak için.	1	2	3	4	5	6	7

16	Benim için artık açık değil; bazen bunun benim için iyi olup olmadığını kendime soruyorum	1	2	3	4	5	6	7
17	Önceleri iyi nedenlerim vardı; ama şimdi devam edip etmeyeceğimi kendime soruyorum	1	2	3	4	5	6	7
18	Dürüst olmak gerekirse, bilmiyorum; zamanımı boşa harcadığımı düşünüyorum.	1	2	3	4	5	6	7

APPENDIX F

Ethical Permission

T.C.

İBN HALDUN ÜNİVERSİTESİ

SOSYAL VE BEŞERI BILIMLER BILIMSEL ARAŞTIRMALAR VE YAYIN ETIĞI KURULU BAŞKANLIĞI KARAR FORMU

BAŞVURU BİLGİLERİ	ARAŞTIRMANIN AÇIK ADI	Investigation of relationship between game addiction, attachment styles, game motivation and emotion regulation			
	KOORDİNATÖR/SORUMLU ARAŞTIRMACI UNVANI/ADI/SOYADI	Psikolog-Yakup Güntay			
	KOORDİNATÖR/SORUMLU ARAŞTIRMACININ UZMANLIK ALANI	Klinik Psikoloji			
	KOORDİNATÖR/SORUMLU ARAŞTIRMACININ BULUNDUĞU MERKEZ	İstanbul			
	ARAŞTIRMAYA KATILAN MERKEZLER	TEK MERKEZ ☒	ÇOK MERKEZLİ ☐	ULUSAL ☐	ULUSLARARASI ☐

	Belge Adı	Tarihi	Versiyon Numarası	Dili
Değerlendirilen Belgeler	ETİK KURUL BAŞVURU FORMU	06.08.2019		Türkçe☒ İngilizce☐ Diğer☐
	BİLGİLENDİRİLMİŞ GÖNÜLLÜ OLUR FORMU	06.08.2019		Türkçe ☒ İngilizce ☒ Diğer ☐
	SOSYODEMOGRAFİK FORM	06.08.2019		Türkçe ☒ İngilizce ☐ Diğer ☐
	KARAR NO: 2019/18-1	TARİH: 08.08.2019		

Karar Bilgileri

KARAR: Kurulumuza başvuran **Sn. Yakup Güntay "Investigation of relationship between game addiction, attachment styles, game motivation and emotion regulation"** isimli proje; amaç, araştırma türü ve örneklem, veri toplama araçları, süreç ve işlemler, veri analizleri dikkate alınmak suretiyle değerlendirilerek aşağıdaki sonuca ulaşılmıştır:

Proje etik açıdan uygun bulunmuştur	☒
Projenin etik açıdan geliştirilmesi gerekmektedir	☐
Proje etik açıdan uygun bulunmamıştır	☐

ETİK KURULDAKİ GÖREVİ	ADI SOYADI	İMZA
Etik Kurul Başkanı	Prof. Dr. Ekrem Tatoğlu	
Üye	Prof. Dr. Yüksel Özden	
Üye	Prof. Dr. Fuat Erdal	
Üye	Prof. Dr. Halil Berktay	
Üye	Prof. Dr. Bilal Aybakan	
Üye	Prof. Dr. Yusuf Çalışkan	
Üye	Prof. Dr. Üzeyir Ok	

APPENDIX G

Research Permission

T.C.
ERZURUM VALİLİĞİ
İl Millî Eğitim Müdürlüğü

T.C.
ERZURUM VALİLİĞİ

Sayı : E-36648235-605.01-23804468
Konu : Uygulama ve Anket Çalışma izni

07.04.2021

DAĞITIM YERLERİNE

İlgi: a) 22.03.2021 tarihli ve E.50097 sayılı yazınız.
b) 24.03.2021 tarihli ve E.2074 sayılı yazınız.

İlgi yazılar gereği; 1)Anadolu Üniversitesi Eğitim Bilimleri Enstitüsü Eğitim Bilimleri Ana Bilim Dalı Eğitim Programları ve Öğretim Tezli Yüksek Lisans Programı öğrencisi Şeyma KARABACAK'ın, Doç. Dr. Bilge ÇAM AKTAŞ'ın danışmanlığında; *"Pandemi Sürecinde Eğitim Bilişim Ağı (EBA) Aracılığıyla Gerçekleştirilen İngilizce Öğretiminin Niteliği: Öğretmen, Öğrenci ve Veli Görüşleri (Erzurum İli Örneği)"* konulu uygulama çalışması ile,

2)İBN Haldun Üniversitesi Lisansüstü Eğitim Enstitüsü Klinik Psikoloji Tezli Yüksek Lisans Programı 187049002 numara ile kayıtlı öğrenci Yakup GÜNTAY tarafından, İnsan ve Toplum Bilimleri Fakültesi Psikoloji Bölümü Öğretim Üyesi Prof. Dr. Mücahit ÖZTÜRK'ün danışmanlığında; *"Investigation of relationship between game addiction, attachment styles, game motivation and emotion regulation "* konulu uygulama çalışmasının kabulüne ilişkin 07/04/2021 tarihli ve E.23737920 sayılı Valilik Onayı yazımız ekinde gönderilmiştir.

Bilgilerinize arz ederim.

Salih KAYGUSUZ
İl Milli Eğitim Müdürü

Ek:
1- İlgi (a) yazı (10 sayfa)
2- İlgi (b) yazı (6 sayfa)

Dağıtım:
Anadolu Üniversitesi Rektörlüğüne
(Genel Sekreterlik, Yazı İşleri Müdürlüğü)

İBN Haldun Üniversitesi Rektörlüğüne
(Lisansüstü Eğitimi Enstitüsü Müdürlüğü)

Güvenli Elektronik İmzalı
Aslı İle Aynıdır
07.04.2021
Selçuk DİLBER

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Kep Adresi : meb@hs01.kep.tr
Belge Doğrulama Adresi : https://www.turkiye.gov.tr/meb-ebys
Bilgi için: Ar-Ge Birimi H.TEMEL
Unvan : Veri Hazırlama ve Kontrol İşletmeni
İnternet Adresi: arge25@meb.gov.tr
Faks:0 (442) 2351032

T.C.
ERZURUM VALİLİĞİ
İl Millî Eğitim Müdürlüğü

T.C.
ERZURUM VALİLİĞİ

Sayı : E-36648235-605.01-23737920
Konu : Uygulama ve Anket Çalışma izni

07/04/2021

VALİLİK MAKAMINA

İlgi: a) Anadolu Üniversitesi Rektörlüğünün 22.03.2021 tarihli ve E.50097 sayılı yazısı.
b) İBN Haldun Üniversitesi Rektörlüğünün 24.03.2021 tarihli ve E.2074 sayılı yazısı.

İlgi yazılar gereği; 1) Anadolu Üniversitesi Eğitim Bilimleri Enstitüsü Eğitim Bilimleri Ana Bilim Dalı Eğitim Programları ve Öğretim Tezli Yüksek Lisans Programı öğrencisi Şeyma KARABACAK'ın Doç. Dr. Bilge ÇAM AKTAŞ'ın danışmanlığında; *"Pandemi Sürecinde Eğitim Bilişim Ağı (EBA) Aracılığıyla Gerçekleştirilen İngilizce Öğretiminin Niteliği: Öğretmen, Öğrenci ve Veli Görüşleri (Erzurum İli Örneği)"* konulu uygulama çalışması ile,

2) İBN Haldun Üniversitesi Lisansüstü Eğitim Enstitüsü Klinik Psikoloji Tezli Yüksek Lisans Programı 187049002 numara ile kayıtlı öğrenci Yakup GÜNTAY tarafından, İnsan ve Toplum Bilimleri Fakültesi Psikoloji Bölümü Öğretim Üyesi Prof. Dr. Mücahit ÖZTÜRK'ün danışmanlığında; *"Investigation of relationship between game addiction, attachment styles, game motivation and emotion regulation "* konulu anket çalışması için izin talebinde bulunulmuştur.

İlgi yazı ve ekleri, Bakanlığımızın 21.01.2020 tarihli ve E.1563890 (2020/2) sayılı genelgesi çerçevesinde Komisyonumuzca incelenmiş olup; *"Araştırmaların, Eğitim Öğretim Faaliyetlerini Aksatmayacak Şekilde, gönüllülük esasıyla ve varsa veli onay belgesinin onaylatılması"* ve komisyon kararlarında belirtilen veri toplama araçlarının kullanılarak isimleri belirtilen okullarda uygulama ve anket çalışmasının yapılması, yapılan çalışmalarının sonuçlarının birer örneğinin Müdürlüğümüz, Strateji Geliştirme Şube Müdürlüğü (AR-GE Birimi)'ne gönderilmesi ve çalışmaların bir eğitim öğretim yılını kapsayacak şekilde yapılması Müdürlüğümüzce uygun görülmektedir.

Makamlarınızca da uygun görüldüğü takdirde olurlarınıza arz ederim.

Salih KAYGUSUZ
İl Milli Eğitim Müdürü

OLUR
Uğur KÖROĞLU
Vali a.
Vali Yardımcısı

Ek: İlgi Yazılar (2 adet dosya)

Bu belge güvenli elektronik imza ile imzalanmıştır
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E-Posta: arge25@meb.gov.tr
Kep Adresi : meb@hs01.kep.tr
Unvan : Veri Hazırlama ve Kontrol İşletmeni
İnternet Adresi: erzurummeb@meb.gov.tr
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.

FORM:2

T.C.
MİLLİ EĞİTİM BAKANLIĞI
Yenilik ve Eğitim Teknolojileri Genel Müdürlüğü

ARAŞTIRMA DEĞERLENDİRME FORMU

ARAŞTIRMA SAHİBİNİN

Adı Soyadı	Yakup GÜNTAY
Kurumu / Üniversitesi	İbn Haldun Üniversitesi
Araştırma yapılacak iller	Erzurum
Araştırma yapılacak eğitim kurumu ve kademesi.	Erzurum İli Aziziye, Palandöken ve Yakutiye İlçelerinde Bulunan Ortaokullar ve Ortaöğretim Kurumları
Araştırmanın konusu	Investigation of relationship between game addiction, attachment styles, game motivation and emotion regulation
Üniversite / Kurum onayı	Kurum Onayı İle
Araştırma / Proje /ödev / Tez önerisi	Araştırma İzni
Veri toplama araçları	Duygu Düzenleme Anketi, İlişki Ölçekleri Anketi, Ergenler İçin Oyun Bağımlılığı Ölçeği (Kısa Form), Oyun Motivasyonu Ölçeği,
Görüş İstenilecek Birim / Birimler.	

Milli Eğitim Bakanlığı Yenilik ve Eğitim Teknolojileri Genel Müdürlüğü'nün Araştırma, Yarışma ve Sosyal Etkinlik İzinleri konulu 2020/2 nolu genelge doğrultusunda yapılan incelemede araştırmanın kabulüne karar verildi.

Komisyon Kararı	Oybirliği ile Kabulüne
Muhalif Üyenin Adı ve Soyadı	

KOMİSYON

05.04.2021
Ömer Faruk PALA
Komisyon Başkanı
Şube Müdürü

Üye
Tunç AĞAVER

Üye
Mesut ARAS

CURRICULUM VITAE

Personal Information:

Name-Surname: Yakup GÜNTAY

Education:

2012-2016, BA in Psychology, İhsan Doğramacı Bilkent University

2018-2021, MA in Clinical Psychology, İbn Haldun University

Experience:

2019- Present, Psychologist, T.C. Minister of Health Erzurum City Hospital

12.11.2018- 3.05.2019, Psychologist, Piramit Akademi Rehabilitation Center

Internship:

2019, Psychologist, Ahenk Çocuk Psychological Counseling Center

2019, Psychologist, İbn Haldun University Psychotherapy Center (İPAM)

2018, Psychologist, 24 Kasım Anatolian High School

2015, Assistant Psychologist, Aydın Public Health Administration