

THE IMPACTS OF BEHAVIORAL FACTORS ON  
SOCIAL MEDIA ADDICTION

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THE IMPACTS OF BEHAVIORAL FACTORS ON  
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## DECLARATION OF ORIGINALITY

I, Gönül Zeynep Savacı, certify that

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## ABSTRACT

### The Impacts of Behavioral Factors on Social Media Addiction

In last decade, social media has started to play a crucial role on people' lives. Almost everyone uses at least one of the social media platforms which gives users an opportunity to be connected to the world. However, excessive social media usage can bring with social media addiction that causes failure in academic life, business life, and even in private life. In order to prevent social media addiction, it is important to understand which factors are effective upon social media addiction. The main aim of the present study is to discover the impacts of specific behavioral factors which are openness, loneliness, self-esteem, life satisfaction, creativity, stress, neuroticism, social intelligence, and narcissism on social media addiction. In this study, a survey was conducted with 506 participants. Descriptive statistics, independent sample t-tests, one-way analysis of variance tests, correlation analyses and structural equation modeling were applied to test the hypotheses and the theoretical model of the current study. The results of these analyses showed that while demographical factors which were gender, marital status, age, and education level affected social media addiction, income status and occupation had no influence on social media addiction. Moreover, positive relationships between openness and creativity, openness and self-esteem, self-esteem and life satisfaction, loneliness and neuroticism, and negative relationships between self-esteem and neuroticism, life satisfaction and stress were detected. In the present study, mainly, it was found that some behavioral factors as stress, neuroticism and social intelligence had a positive impact on social media addiction, though, openness, creativity, self-esteem, loneliness, life satisfaction and narcissism had no impact on social media addiction.

## ÖZET

### Davranışsal Faktörlerin Sosyal Medya Bağımlılığı Üzerindeki Etkileri

Sosyal medya, son on yıldan beri insanların yaşamları üzerinde çok önemli bir rol oynamaya başlamıştır. Neredeyse herkes, kullanıcılarına dünyayla doğrudan iletişimde olma fırsatı veren sosyal medya platformlarından en az birini kullanmaktadır. Ancak, aşırı sosyal medya kullanımı eğitim hayatında, iş hayatında ve hatta özel hayatta başarısızlığa neden olan sosyal medya bağımlılığını da beraberinde getirebilmektedir. Sosyal medya bağımlılığının önlenmesi için, sosyal medya bağımlılığı üzerinde etkili olan faktörlerin anlaşılması önemlidir. Bu çalışmanın temel amacı, açıklık, yalnızlık, öz saygı, yaşam doyumu, yaratıcılık, stres, nevroitiklik, sosyal zeka ve narsisizm gibi belirli davranışsal faktörlerin sosyal medya bağımlılığı üzerindeki etkisini araştırmaktır. Bu kapsamda, 506 kişinin katıldığı bir anket çalışması yapılmıştır. Bu çalışmanın teorik modelini ve hipotezlerini test etmek için tanımlayıcı istatistikler, bağımsız örneklem t testleri, tek yönlü varyans analizleri, korelasyon analizleri ve yapısal denklem modeli kullanılmıştır. Bu analizlerin neticesinde, sosyal medya bağımlılığını cinsiyet, medeni durum, yaş ve eğitim düzeyi gibi bazı demografik faktörlerin etkilediği, gelir durumunun ve mesleğin ise etkilemediği sonucuna ulaşılmıştır. Ayrıca, açıklık ve yaratıcılık, açıklık ve öz saygı, öz saygı ve yaşam doyumu, yalnızlık ve nevroitiklik ve öz saygı ve nevroitiklik arasında pozitif bir ilişki, yaşam doyumu ve stres arasında ise negatif bir ilişki tespit edilmiştir. Bu çalışma neticesinde, temel olarak, sosyal medya bağımlılığı üzerinde stres, nevroitiklik ve sosyal zeka gibi bazı davranışsal faktörlerin olumlu bir etkiye sahip olduğu; ancak açıklık, yaratıcılık, öz saygı, yalnızlık, yaşam doyumu ve narsisizm gibi faktörlerin herhangi bir etkisi olmadığı tespit edilmiştir.

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*To my mother and father*

*with lots of love...*

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## ABBREVIATIONS

ADHD	Attention deficit hyperactivity disorder
AMOS	Analysis of moment structure
ANOVA	Analysis of variance
BFI	Big five inventory
BFAS	Bergen's Facebook addiction scale
BSMAS	Bergen's social media addiction scale
CFI	Comparative fit index
EPQR	Eysenck personality questionnaire revised
EPQR-A	Eysenck personality questionnaire revised-abbreviated
NPI	Narcissistic personality inventory
OCD	Obsessive compulsive disorder
PSS	Perceived stress scale
RMSEA	Root mean square error of approximation
SEM	Structural equation modeling
SES	Self-esteem scale
SMA	Social media addiction
SNS	Social networking site
SPSS	Statistical package for the social sciences
SWLS	Satisfaction with life scale
ULS-8	Short version of UCLA loneliness scale
VIA-IS	Values in action inventory of strengths
YDQ	Young's diagnostic questionnaire

# CHAPTER 1

## INTRODUCTION

Nowadays, technology has an integral part in our lives because almost every person is dependent on technology and technology usage has been increasing gradually. For example, while there were only one million applications available in the Google Play Store in July 2013, there were three and a half million applications as of December 2017 (Statista, 2018). The reasons for this increase are that technology enables different opportunities for users and it facilitates our lives in different areas. Technology is an inevitable tool for the people in every area, from business to communication. The improvement in technology can help to have faster and healthier way of communication. Therefore, in the digital age, it is impossible to deny the central significance of computers and the Internet, as well as the prominent role social media plays (Kirik, Arslan, Cetinkaya, & Gul, 2015).

With the advancing technology, people can be more social, can reach information easily, can save time and spend less energy. New technologies enable people to access social media at any time and from any place. People can reach their social accounts just by one click on their mobile phones, tablets or computers. Social media usage rate has been rising especially with the increase in smart phone usage. In today's world almost everyone has a smart phone which makes people online in social media environments in order to share their ideas, become more popular, communicate with people etc. by means of many different applications.

Many people have had a different way of communication via social networks (Srinivasan, 2012). The number of those who use social network across the globe exceeded two billion by August 2016 and it is estimated to increase up to

approximately three billion by 2020, which is almost one third of the human population in the world (Aljohani, Nisbet, & Blincoe, 2016). Social media platforms are increasing day by day all over the world (Jaradat & Atyeh, 2017). The mission of Facebook (2019) company is stated as “give people the power to build community and bring the world closer together”. Since social networking sites (SNSs) like Facebook provide users to interact with other people free of charge, people show a tendency to use these social media platforms (Satici, 2019).

On the other hand, users should be careful about how much time they spend on online platforms because problematic usage of SNS might cause some diseases as well as social media addiction (Jaradat & Atyeh, 2017). Unfortunately, in today’s world, social media addiction is a rising problem (Montag et al., 2015). Social media may bring insecure exposure of knowledge, e-mobbing, venturesome actions and communication with hazardous people (Valenzuela, Park, & Kee, 2009). Internet supports many opportunities for users. However, if users spend too much time on the Internet, problems may occur such as ignoring what they are supposed to do in academia, work place or even domestic life (Hardie & Tee, 2007).

The reasons for problematic SNS usage need to be addressed in order to deal with social media addiction. Several demographic factors like gender, age, education, behavioral factors such as loneliness, extraversion, self-esteem, life satisfaction, psychological problems as well as anxiety, traditions etc. have an impact on Internet usage (Bozoglan, Demirer, & Sahin, 2013). Whether the demographic factors affect the social media usage or not is a controversial issue whereas behavioral factors play a significant role on social media addiction. Hardie and Tee (2007) studied 96 adult participants and used Young’s Internet Addiction Test to assess the impacts of behavioral factors on Internet addiction. In their research, they concluded that

average users are more extraverted and less neurotic, and do not suffer from social anxiety as much as addicted or excessive users (Hardie & Tee, 2007). Relation of lower self-esteem and life satisfaction to Facebook addiction was supported by a study conducted on 311 Turkish undergraduate students whose low levels of life satisfaction was associated with problematic Facebook use (Hawi & Samaha, 2017). Openness is another behavioral factor that increases social media usage (Hamid, Ishak, & Yazam, 2015; Jaradat & Atyeh, 2017). Moreover, positive relationship between social media addiction and psychiatric disorders such as attention deficit hyperactivity disorder (ADHD), obsessive compulsive disorder (OCD), anxiety, and depression is detected (Andreassen et al., 2016). Emotional exhaustion and stress incline social media usage where mindfulness declines time spent on social networking sites (Sriwilai & Charoensukmongkol, 2016).

To sum up, characteristics of people might alter the degree of social media addiction. There are a lot of influential behavioral factors on problematic SNS use such as loneliness, creativity, social intelligence, and narcissism in addition to extraversion, neuroticism, social anxiety, self-esteem, life satisfaction, stress, etc.

The main purpose of this study is to examine whether there is a relationship between social media addiction and behavioral factors such as loneliness, openness, life satisfaction, self-esteem, narcissism, neuroticism, creativity, social intelligence and stress.

This study includes 6 major chapters which are Introduction, Literature Review, Theoretical Framework, Research Methodology, Results, and Discussion and Conclusion. Chapter 1 is the Introduction chapter which contains general overview about the subject and the purpose of this study. Chapter 2 is the Literature Review chapter that details definition and history of social media, what social media

addiction is with its consequences and the main reasons for excessive social media usage. Chapter 3 is the Theoretical Framework chapter which consists of theoretical model of this study and hypotheses. Chapter 4 is the Research Methodology chapter describing participants, instruments and data analysis. Chapter 5 is the Results chapter that involves reliability tests, normality tests, descriptive statistics of quantitative data, correlation analyses, independent sample t-test analyses, analysis of variance (ANOVA) tests, measurement and structural model of this study in detail. Chapter 6 is the Discussion and Conclusion chapter.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Definition of social media

Social media involves cooperative works as well as Wikipedia, web-logs like WordPress, context groups such as Flickr, SNS like Instagram and cyber world as well as Second Life (Kircaburun & Griffiths, 2018). Social media has greatly influenced and changed the way people around the world communicate, interact and socialize with each other. It allowed them to get closer than ever before, regardless of their location in the world (Sriwilai & Charoensukmongkol, 2016). It also improves confidence among users by decreasing suspense thanks to providing detail knowledge about users such as their histories and hobbies. Another research also shows that SNS usage affects persons' social trust and attendance at public life favorably (Valenzuela et al., 2009).

The main reason for preferring social media usage is that SNS presents an amazing platform which includes many different activities not like television that is only for enjoyment or newspaper that is only for getting knowledge. Social media also gives users the right to announce their emotions, thoughts and the chance to win praises from other users (Casale & Fioravanti, 2018). So much so that leading organizations like Amnesty International manages remonstrations which are done in many different areas all over the world via SNS such as Facebook (Valenzuela et al., 2009).

In brief, social media platforms provide many diverse opportunities for users such as “identifying with others and gaining a sense of belonging; finding a basis for

conversation and social interaction; connecting with family, friends, and society; and gaining insight into the circumstances of others” (Valenzuela et al., 2009).

## 2.2 History of social media

1990s was the telecommunication and knowledge age, whereas 2000s might be called as the Internet era defined as reachable knowledge from everywhere (Bozoglan et al., 2013). Social networking, being one of the main indicators of the technology era, engages many people from all over the world, regardless of their age. The virtual world exceeds the real life with all kinds of applications offered (Kirik et al., 2015). Kuss and Griffith (2011) stated in their research that the first social networking site, called Six Degrees, was released in 1997. Within this website that is based on the idea that everybody is related to everybody else, there were six degrees of closeness. Today the social media has become an almost vital part of people’s lives (Sriwilai & Charoensukmongkol, 2016).

As WeAreSocial’s report (2016) cited in Hawi and Samaha (2017) stated, the social media was engaging almost 33% of the world’s population as of January 2016. Moreover, as of March 2016, Facebook had almost one billion daily active users; Instagram’s monthly active users exceeded 400 million and 80 million of them shared photos everyday while there were about three and a half billion likes made; Twitter’s monthly active users were about 310 million; and in case of LinkedIn the number of active users reached up to 433 million (Hawi & Samaha, 2017). In recent years, the total number of Internet users has risen rapidly. While there were 1,114,274,426 Internet users in 2007 (Hardie & Tee, 2007), this number reached to 4,208,571,287 in 2018 (Internet World Stats, 2018).

Today the number of social networking sites have escalated. Moreover, Facebook, Instagram, Snapchat, Twitter, interactive games and other messaging sites have become available free of charge on the Smartphone application stores (Pugh, 2017). The Smartphones deem it possible for the user to stay in touch with people, places and any kind of interest they may have, due to the advanced features they have. The Smartphone has a lot of sophisticated features for its users; one can store photos, videos, memories, personal information and many more. Moreover, it makes it possible for the users to take photos and videos with their high-quality cameras, granting them access to the endless amount of applications whether built-in or available to download for free, or for a small cost. These kinds of applications include online gaming applications, social networking sites, navigation applications, music players, email, and messaging applications (Pugh, 2017). Therefore, today it has become quite a usual phenomenon to see people facing down towards their smartphones to check their social media notifications during other activities, such as walking (Sriwilai & Charoensukmongkol, 2016).

It can be concluded that both the number of social media platforms and users have been rising day by day. Nowadays, almost everyone shows a tendency to use social media with the purpose of satisfying requirements of integration and social interaction (Valenzuela et al., 2009).

### 2.3 Definition and consequences of social media addiction

Social media addiction will remain as a major concern due to the constant growth of smartphone and tablet ownership, development of new technologies and substantial enhancement of applications (Hawi & Samaha, 2017).

Lee (2006) cited in Kwon, Kim, Cho and Yang (2013) claims that by definition, addiction meant just drug or substance misuse in the past. However, in today's world, the word addiction represents both drug, substance and gambling, games, or Internet. The reason for calling addiction to use Internet excessively is that its consequences like failure in academic, working, social or even in private life resemble results of chemical substance addiction (Johansson & Gotestam, 2004).

According to Kuss and Griffiths (2011), there exists five different types of Internet addiction, namely, computer addiction (i.e., computer game addiction), information overload (i.e., web surfing addiction), net compulsions (i.e., online gambling or online shopping addiction), cyber sexual addiction (i.e., online pornography or online sex addiction), and cyber-relationship addiction (i.e., an addiction to online relationships).

Internet addiction cogently is associated with gaming and social media (Van den Eijnden, Lemmens, & Valkenburg, 2016). Therefore, social media addiction might be accepted as a subcategory of excessive Internet usage (Jaradat & Atyeh, 2017). It is concluded that online social network addiction shows similarity with generalized Internet addiction (Montag et al., 2015).

Excessive Internet usage brings about many problems like academic failure, professional performance loss, social isolation, time distortion, breakdown of daily life routines, increased depression, loneliness, lying, decreased quality of life, increased anxiety, and psychiatric disorders (Bozoglan et al., 2013). Many smartphone users have a habit of looking at their phone first thing in the morning and last thing in the evening before they go to sleep (Pugh, 2017). For this reason, the sleep patterns are sometimes disturbed with late night logins, or the addicts may stay up surfing until late hours and face the reality of having to wake up early for work or

school (Young, 2004). Cao and Su (2007) also argue that Internet addiction causes changes in sleeping and eating habits. In the long term, people who are Internet addicted can have difficulties of not sleeping or losing appetite. Moreover, Facebook addiction is illustrated by some factors such as weekly time commitment, social motives, severe depression, anxiety, and insomnia (Sriwilai & Charoensukmongkol, 2016). ‘Facebook Addiction Disorder’ seem to exist in the people who use SNSs excessively because of the addiction criteria such as neglect of personal life, mental preoccupation, escapism, mood modifying experiences, tolerance, and concealing the addictive behavior (Kuss & Griffiths, 2011).

While the technological addictions, such as Internet and social networking sites, had positive associations to stress, anxiety, and depression, they had a negative association to academic performance, all of which affecting also the life satisfaction negatively (Hawi & Samaha, 2017). There are a few studies which confirm that social media addiction is real, as they exhibit most of the symptoms of behavioral addiction such as tolerance, withdrawal, conflict, salience, relapse, and mood modification (Hawi & Samaha, 2017). According to Young and Rodgers (1998), some users of the Internet became addicted to it in similar ways to those who were suffering from drug, alcohol or gambling addiction. All resulted in problems of work performance, academic performance, friendships, relationships, and even divorces (Pugh, 2017). As American Academy of Pediatrics (2011) states, pediatricians are in a very important position to aid families comprehend these sites and encourage healthy amounts of use. In addition, O’Keeffe and Clarke-Pearson (2011) argue that pediatricians urge parents to monitor for potential problems which can stem from cyberbullying, “Facebook depression”, sexting and exposure to inappropriate matters.

## 2.4 Reasons for social media addiction

Social media addiction can stem from many different factors and daily sparing duration on the Internet and how many times people checked their social media accounts defines many things about addiction level of them. For example, people who spend a lot of times on the Internet or social media platforms, their addiction level most probably is high (Kirik et al., 2015).

According to Hazar (2011) cited in Kirik and colleagues (2015) there are three fundamental factors in social media addiction: cognitive content addiction, emotional addiction and behavioral addiction. There are several studies which examine the impacts of behavioral, psychological and demographical factors on Internet or social media indulgence. For example, Young and Rodgers (1998) found that people who were awake, fragile and especially good at abstract thinking were more addicted to Internet. Not only characteristics of people but also environmental factors can trigger social media addiction. For instance, people who suffer from financial difficulties or work problems can demonstrate more disposition to Internet addiction (Johansson & Gotestam, 2004). Furthermore, demographic factors change both social media addiction level and the effects of behavioral factors on social media dependency. To illustrate, loneliness plays a significant role upon the social services usage for women, neither loneliness, extraversion nor neuroticism has a correlation with SNS use for men (Amichai-Hamburger & Ben-Artzi, 2003).

To sum up, in order to find the causes why people are addicted to social media, demographic factors like gender, age, marital status, education level, income level, and behavioral factors such as extraversion, openness, agreeableness, consciousness, loneliness, self-confidence and so on might be taken into consideration one by one.

#### 2.4.1 The impacts of demographical factors on social media addiction

Demographic variables include several personal features such as gender, age, education, occupation, nationality, marital status, income and so on. All these demographic variables might play a significant role on problematic social media usage.

##### 2.4.1.1 Gender

One of the essential demographic factors is gender. While females are found to use the technology for social reasons like maintaining close relationships, males are more inclined to focus on online gaming and entertainment reasons. Research by Kuss and Griffith (2011) revealed that females used SNS for communicating with their peers, entertainment and leisure while for men it was rather an instrumental way for social compensation, learning and forming social identity. Therefore, although both females and males can become addicted to technology, their main reasons are differentiated from each other. Research by Andreassen et al. (2016) shows that while men tend to become addicted to online video gaming, cyber-pornography, and online gambling, the women tend to addictively use social media, texting and online shopping.

On the other hand, Valenzuela et al. (2009) claim that gender is not an affective factor on Facebook use. Jaradat and Atyeh (2017) also found that sex, age and expenditures did not affect SNS addiction in a considerable extent.

While according to Hardie and Tee (2007), some demographic factors like age and gender are not effective upon excessive Internet use, according to research which was done by Cao and Su (2007) for Chinese adolescents, it was found that Internet addiction was more common among males than females.

#### 2.4.1.2 Age

There are specific demographic factors that tend to heighten the risk of SNS addiction, such as being young. Despite the fact that whoever has access to Internet has a potential to develop an addiction regardless of their age, sex or social status (Andreassen et al., 2016). It is an observable fact that the members of the generation Z are thought to be well engaged with technology and they use social media for interaction, which makes up a specific portion of their socialization. People born between mid-1990s and late 2000s are at the highest risk (Pugh, 2017). They prefer to use social media in order to maintain or to improve relationships with their friends not so much to make acquainted with new people (Valenzuela et al., 2009).

#### 2.4.1.3 Marital Status

Social media indulgence is affected positively by being single (Andreassen et al., 2016). 63% of the lawyers who were surveyed highlighted that the Internet is one of the main reasons for divorces that they have recently handled (Young, 2004). Besides, for people who do not have partners, social networking may entail a more significant social function and a platform for meeting potential partners, than the people who are already in a relationship (Andreassen et al., 2016).

As a summary, the effects of demographic variables, especially gender, upon social media addiction is a debating subject.

#### 2.4.2 The impacts of behavioral factors on social media addiction

There are many principles and models about significant impacts of identity distinctness on excessive online application usage. This means that people who have different personality characteristics have different addiction types derived from their

habitual diversities about social media usage or different reasons for preferring to use social media excessively (Kircaburun & Griffiths, 2018).

Social media sites have some common properties such as social interaction, creation and maintenance of social relationships as well as providing a stage for self-presentation and reflection of identity (Hawi & Samaha, 2017). In literature, many researchers examined the connection between self-esteem and use of social media sites (Bozoglan et al., 2013; Hawi & Samaha, 2017).

#### 2.4.2.1 Self-esteem

The term self-esteem relates to the scope of which a person values, approves and likes oneself. Moreover, it is linked with self-worth, self-respect and self-acceptance (Pugh, 2017). Self-esteem represents considerations of people about themselves for better or worse (Hawi & Samaha, 2017), so openness affects self-esteem positively. This means that people who feel close to new experiences and ideas have high self-esteem. Neuroticism is another factor which plays an important role on self-esteem level. Since neurotic people are unstable emotionally, neuroticism decreases self-esteem (Amirazodi & Amirazodi, 2011). Self-esteem is also significantly related with “time-management problems and interpersonal and health problems” (Bozoglan et al., 2013).

Kim and Davis (2009) argue that people who have high self-esteem spend time on the Internet less than the others who have low self-esteem. The results of research by Hawi and Samaha (2017) displayed that people with low self-esteem tend to utilize more social media tools to improve their self-image and esteem. According to study of Niemz, Griffiths and Banyard (2005), the Internet addiction within a sample of students across the UK, a relation between the high Internet use

and low self-esteem was found. They deduced that the lack of esteem and therefore shyness, motivated them to use Internet as an alternative platform of communication. Likewise, Vogel, Rose, Roberts, & Eckles (2014), marked that the people who very frequently used social media platforms such as Facebook, Twitter, or Instagram had lower levels of self-esteem. Actually, the feedback from online friends can better or worsen the self-esteem and well-being (Hawi & Samaha, 2017).

#### 2.4.2.2 Life satisfaction

Social capital which consists of three major dimensions: interpersonal which means to rely on people, intrapersonal which is related to life satisfaction level of people and behavioral that includes attendance at political and civic events plays an important role on reliable, influential democracies (Valenzuela et al., 2009).

To be online in SNS can have both positive and negative impacts on social capital according to purpose of its usage. For example, if people use Internet instead of one on one communication, it might decrease the social capital. On the other hand, if using Internet is replaced with malignant activities, it rises the social capital (Valenzuela et al., 2009). Therefore, life satisfaction as a part of social capital is needed to be focused on.

Life satisfaction refers what the people think about their lives and how much they are satisfied with it. Therefore, self-esteem and life satisfaction are strongly correlated with each other. If a person has high self-esteem, she or he has also high level of life satisfaction (Hawi & Samaha, 2017). However, Longstreet and Brooks (2017) emphasize that life satisfaction level of people is negatively affected by stress.

According to Ellison, Steinfield and Lampe (2007), using Facebook can be beneficial for users who have low self-esteem and low life satisfaction. The low life-

satisfaction becomes a motivation to use sites such as Facebook to get more friends and popularity through acceptance (Hawi & Samaha, 2017). Besides, Stepanikova, Nie and He (2010) found that Internet addiction and life satisfaction were negatively correlated. According to another study, people who have been users of Facebook for a long time and who check Facebook more frequently, think that other people are happier than them, have a better life and therefore the life is unfair (Hawi & Samaha, 2017). Longstreet and Brooks (2017) also state that there is a negative correlation between social media addiction and life satisfaction. However, according to Valenzuela and colleagues (2009), increasing life satisfaction increases Facebook use. In another research, an unmediated relationship between life satisfaction and problematic Internet use cannot be detected. It is argued that life satisfaction had an impact on problematic Internet use indirectly by means of loneliness and self-esteem (Bozoglan et al., 2013).

#### 2.4.2.3 Loneliness

Loneliness is also an influential factor for social media addiction. It involves emotions about insufficient communication with other people. In other words, people unsatisfied with their private and social relationships are alone (Satici, 2019).

According to Spitzberg and Canary (1985) cited in Bian and Leung (2015), lonely people prefer to pass the time mostly alone instead of attending social occasions. They show more tendency to spend unreasonable time on the Internet than the others (Bozoglan et al., 2013; Engelberg & Sjoberg, 2004; Hardie & Tee, 2007; Liu & Baumeister, 2016). Loneliness plays a significant role on smartphone addiction since these kinds of people prefer to use some tool when they are communicating with the others in order to reduce anxiety instead of having face to

face communication (Bian & Leung, 2015). That's why among the factors which are life satisfaction, self-esteem and loneliness, loneliness is the most effective factor upon excessive Internet usage (Bozoglan et al., 2013). According to research of Satici (2019), loneliness is positively correlated with Facebook addiction. Not only loneliness increases Facebook usage but also using Facebook more frequently can bring loneliness (Satici, 2019). Loneliness also has been associated with addictive video game usage (Andreassen et al., 2016). Moreover, Casey (2012) cited in Pugh (2017) explored Smartphone addiction and psychological traits within university students and came up with the correlation between loneliness and shyness, and addiction. The faceless community of the Internet makes it possible to be popular among new "friends" with a little effort in the whole world (Young, 2004).

#### 2.4.2.4 Shyness

Shyness represents an inadequate reliance. This means shy people are not comfortable when they meet others. The main factor for shyness is social anxiety (Pilkonis, 1977).

Shyness is another behavioral factor which has a positive impact on Facebook addiction (Satici, 2019). Shyness might bring not only social media addiction but also smartphone addiction because these kinds of addictions provide shy people disregard the uncomfortable public environment (Bian & Leung, 2015).

#### 2.4.2.5 Extraversion

Several researches have done to measure the relationship between social media addiction and personal traits of big five model, extraversion, agreeableness, conscientiousness, neuroticism and openness (Jaradat & Atyeh, 2017).

According to Priyadarshana, Yatigamma, & Sarathchandra (2017), socialization, making a dialogue, recreation and fun are affirmative factors for social network indulgence particularly Facebook addiction. According to Griffiths (2012), social networking addiction was classified a type of cyber-relationship addiction, where people get addicted to the rewards that are gained from interacting with people within the networks.

Extraversion is described as a level of sociability (Hardie & Tee, 2007). People who are extraverted are generally conversational, determined, matiness, restless and enterprising (Jaradat & Atyeh, 2017).

It is observed that the effects of some factors can be different from research to research. This is true for life satisfaction and also for extraversion. Hardie and Tee (2007) found that extravert people spend less time on online platforms. On the other hand, extraversion is positively correlated with social networking sites addiction (Hamid et al., 2015; Jaradat & Atyeh, 2017). In fact, both to be extravert and to be introvert can lead to social media addiction because of different usage purposes and reasons. While extravert people use social media in order to strengthen their relationships, introvert people show tendency to use SNS to make friends (Kircaburun & Griffiths, 2018).

#### 2.4.2.6 Openness and creativity

Openness which is defined as not to judge or not to find strange nonconventional things and opinions, to be open to changes, and to be creative (Jaradat & Atyeh, 2017). King, McKee Walker and Broyles (1996) observed that people who were open were more creative than others because openness to experiences exposed creativity.

These kinds of people like to experience new things. Therefore, social media is a convenient area for the openness persons due to including unusual ideas and objects which comes from many different traditions and organizations (Jaradat & Atyeh, 2017).

On the other hand, Kircaburun et al. (2018) claim that self-assurance and self/everyday creativity affect social media addiction negatively. Furthermore, to be afraid of missing out and to have inadequate presentational abilities enhance excessive social media usage and positive metacognitions which also raises excessive social media usage (Casale, Rugai, & Fioravanti, 2018).

#### 2.4.2.7 Agreeableness and conscientiousness

Agreeableness refers to be generous, cooperative and to give importance to peoples' needs. Conscientiousness means to be well-disciplined, to have the ability to take responsibilities, to perform duties in a timely manner and so on (Jaradat & Atyeh, 2017).

According to Kircaburun and Griffiths (2018), agreeableness and conscientiousness have unfavorable correlation with Instagram addiction. However, according to one analysis, excessive Instagram usage is affected from these behavioral factors favorably (Hamid et al., 2015).

#### 2.4.2.8 Mindfulness

Mindfulness relates to the ability to focus one's attention to an activity they are performing, without being easily distracted. This topic has recently gained a lot of attention in research. Studies reveal that mindfulness can contribute to psychological

well-being, improving focus and mental clarity, lowering stress and depression as well as heightening the quality of life (Sriwilai & Charoensukmongkol, 2016).

The logic behind this correlation is that when people are using social media addictively, their ability to be mindful to their actions in the present tends to be disturbed because of the distraction stemming from the urge to access social media constantly. It was found that people with high levels of social media addiction had lower mindfulness and their ways of coping with stress focused on the emotions (Sriwilai & Charoensukmongkol, 2016).

#### 2.4.2.9 Neuroticism

Neuroticism refers to sensual disproportion (Hardie & Tee, 2007) or to be inconsistent emotionally (Jaradat & Atyeh, 2017). Neuroticism has positive relationship with loneliness. Lonely people show more tendency to be neurotic (Mund & Neyer, 2019). In terms of excessive social media use, whether neurotics are more vulnerable or less vulnerable than others or not is a controversial issue.

One of the analysis indicated that neuroticism was negatively associated with social media dependency (Jaradat & Atyeh, 2017) whereas it was identified that there was a positive correlation between neuroticism and online platforms addiction in other studies (Cao & Su, 2007; Hardie & Tee, 2007).

#### 2.4.2.10 Narcissism

Narcissists like to present themselves, so it can be said that social media platforms are convenient places for them (Casale & Fioravanti, 2018). There are many studies which show the correlation between problematic SNS use and narcissism

(Andereassen et al., 2016; Casale & Fioravanti, 2018; Hawi & Samaha, 2017; Kuss & Griffiths, 2011; Liu & Baumeister, 2016).

According to Liu and Baumeister (2016), grandiose narcissism has a positive relationship with social media usage including accepting and adding many friends, sharing several remarkable photos and information about personal life. People who have grandiose narcissism have vanity and high self-respect and they do not abstain from manifesting themselves. Although people who have vulnerable narcissism try to protect their intimacy, not only grandiose narcissists but also vulnerable narcissists have higher addiction levels than others who are not narcissists, since narcissists' desire to be appreciated and this affects their Facebook addiction level positively (Casale & Fioravanti, 2018). Moreover, there is a positive relationship between the use of Instagram and narcissism, where the highly narcissistic users tend to post more selfies and spend more time using the application (Hawi & Samaha, 2017).

Another research conducted with 23,592 people using Facebook, Instagram and Twitter, shows that the addicted use of social media has a positive correlation with being female, narcissistic, and low in self-confidence (Andereassen et al., 2016). The correlation between narcissism and increased Facebook activity may stem from the fact that narcissists have an imbalanced sense of self, fluctuating between pretentiousness due to explicit agency and low self-confidence because of implicit vulnerability (Kuss & Griffiths, 2011).

#### 2.4.2.11 Psychiatric disorders

Showing a great resemblance to substance-related addictions, SNS addiction entails the experience of the 'classic' addiction symptoms, such as mood modification (Kuss & Griffiths, 2011). As Pugh (2017) states, the people who were identified with the

Internet addiction and the symptoms of ADHD as well as depression and hostility, are found to be also suffering from aggression, stress and loneliness.

Andreassen et al. (2016) highlights that some psychiatric disorders, particularly the emotional disorders such as anxiety and depression, also heighten the risk of developing an addiction. Those two disorders are both positively linked to the tendency to technology addiction in the correlation analysis. According to Kim and Davis (2009), anxiety plays a significant role on Internet addiction. Moreover, obsessive-compulsive personalities tend to be the ones who often access Facebook for helping themselves reduce their anxiety levels (Sriwilai & Charoensukmongkol, 2016). The people who struggle with severe social anxiety are inclined to withdraw themselves from social gatherings and isolate themselves (Pugh, 2017). The results of a survey, conducted on 170 students in US, indicated that the social factors were more significant motivations for social networking site usage than the individual ones (Kuss & Griffiths, 2011). Therefore, research by Andreassen et al. (2016) reveals that anxiety positively leads to addictive social networking, yet negatively to addictive video game playing. In terms of depression, the correlations are vice versa. As for why the symptoms of depression were negatively correlated with addictive social networking in the regression analysis may be explained with the fact that depression often brings about social withdrawal.

Besides, according to Cao and Su (2007), while sense of making use of the time well and efficient decreases the dependency of Internet, some disorders like hyperactivity or some diseases causing emotional symptoms and psychoticism increases Internet addiction. Some research shows that attention deficit hyperactivity disorder symptoms, depression, social-phobia, and enmity play rising effects upon Internet indulgence (Yen, Ko, Yen, Wu, & Yang, 2007). One of the researches which

was done by Khan et al. (2016) in health sector revealed that patients who were disobedient were using social media more than the other patients.

#### 2.4.2.12 Stress

Stress is one of the fundamental parts of the people's lives woefully. The nature of social media usage that requires multitasking induces people to shift their attention too fast from one screen to another. Thus, it was revealed that people were inclining to access social media sites as a buffer against stress.

For instance, study of George, Dellasega, Whitehead, and Bordon (2013) displayed a case of medical students who used Facebook in order to manage their stress levels. According to Longstreet and Brooks (2017) reduced stress and enhanced happiness might affect Internet and SNS dependency negatively by means of increasing life satisfaction.

#### 2.4.3 Problem Statement

There are many reasons for social media addiction. However, today all reasons are not detected or impacts of some of them are debated. According to many researches, demographic variables such as gender, age, marital status and psychological variables such as depression, anxiety, stress, loneliness, shyness, low self-esteem are more effective whether to be addicted to social media or not.

It can be argued that some correlations exist between psychological features and SNS usage (Casale & Fioravanti, 2018). For example, the university students who are highly addicted to social media highlighted lower levels of self-confidence compared to the students who are not that addicted to social media (Hawi & Samaha, 2017). Another example, self-esteem is negatively associated with online platforms

addiction. If people have low self-esteem, their addiction level can be high (Bozoglan et al., 2013; Hawi & Samaha, 2017). One of the other reasons for excessive Internet use is taking emotional support from social networking sites. It is so vital especially for people who have social anxiety (Hardie & Tee, 2007). Savci and Aysan (2017) also claim that social anxiety is effective upon Internet addiction. According to them, while self-censor is positively related to Internet addiction, self-monitoring is negatively related. Study by Whang, Lee and Chang (2003) conducted a behavior sampling analysis on the subject of Internet Addiction and a strong correlation between the addiction and the dysfunctional social behaviors were observed. It was also highlighted that those who were grouped as addicted users had the highest degree of loneliness, depression and compulsivity in regard to others.

To sum up, social media addiction is a growing problem. it is an undeniable fact that several factors play role on social media addiction. On the other hand, it is not possible to say that effects of these variables are certain or constant. While some researchers found positive correlations between one of these factors and social media addiction, other researchers would state that there was a negative correlation between them or even they would claim that these factors were ineffective upon social media addiction. In present study, the impacts of demographic variables and specific behavioral factors, loneliness, openness, life satisfaction, self-esteem, narcissism, neuroticism, creativity, social intelligence, and stress on social media addiction were investigated in order to determine which factors are effective.

## CHAPTER 3

### THEORETICAL FRAMEWORK

This chapter includes theoretical framework of the present study consisting of the theoretical model, factors which were found effective in literature but not included in present study with the reasons for why they were excluded, variables which were focused on and included in the model, and the hypotheses.

#### 3.1 Theoretical model

Theoretical model of this study was created with the knowledge gathered from literature review in order to find the impacts of behavioral factors on social media addiction.

In the literature, there are many demographical factors like gender, age, income, marital status, behavioral factors such as extraversion, openness, conscientiousness, agreeableness, neuroticism, loneliness, creativity, narcissism, self-esteem, self-confidence, mindfulness, life satisfaction, shyness and so on and psychiatric disorders like attention deficit hyperactivity disorder, depression, anxiety, obsessive compulsive disorder, social phobia, hostility, stress etc. which affect excessive social media use (Table 1). Table 1 was created from literature in order to demonstrate which variables positively or negatively correlate with Internet or social media addiction. Table 1 includes both Internet addiction and social media addiction as a dependent variable because social media addiction shows similarity with generalized Internet addiction in terms of their reasons (Montag et al., 2015).

Table 1. Factors Affecting Social Media Addiction

Authors	Dependent Variable	Positive Associations	Negative Associations
Amichai-Hamburger & Ben-Artzi, 2003	Internet Usage	Loneliness	
Andreassen et al., 2016	Social Media Addiction	ADHD, OCD, Anxiety, Depression, Gender (Female), Marital Status (Single)	Age
Bozoglan et al., 2013	Internet Addiction	Loneliness	Self-Esteem
Cao & Su, 2007	Internet Addiction	Neuroticism, Psychoticism, Lie, Emotional Symptoms, Problems, Hyperactivity	Sense of Control Over Time, Value Time, Time Efficacy
Casale & Fioravanti, 2018	Facebook Addiction	Narcissism	
Casale et al., 2018	Social Media Addiction	Positive Metacognitions, Fear of Missing Out, low Self-Presentational Skills	
Correa, Hinsley, & De Zuniga, 2010	Social Media Usage	Extraversion, Openness	Emotional Stability
Hamid et al., 2015	Social Media Usage	Extraversion	
Hardie & Tee, 2007	Internet Addiction	Loneliness, Neuroticism, Social Anxiety	Extraversion
Hawi & Samaha, 2017	Social Media Addiction		Self-Esteem
Jaradat & Atyeh, 2017	Social Media Addiction	Extraversion, Openness	Neuroticism
Johansson & Gotestam, 2004	Internet Addiction	Financial and Work-Related Problems	
Khan et al., 2016	Social Media Addiction	Non-Compliance Attitude of Patients	
Khan, Rahman & Qazi, 2016	Internet Usage	Income	Age
Kim & Davis, 2009	Internet Addiction	Anxiety	Self-Esteem
Kircaburun & Griffiths, 2018	Instagram Addiction		Agreeableness Conscientiousness
Kircaburun et al., 2018	Social Media Addiction		Self-Confidence, Self/Everyday Creativity
Kirik et al., 2015	Social Media Addiction	Daily Spent Time and Frequency of Visiting SNS	Age (18)
Liu & Baumeister, 2016	Social Media Usage	Narcissism, Loneliness	Self-Esteem
Longstreet & Brooks, 2017	Social Media Addiction		Life Satisfaction
Niemz et al., 2005	Internet Addiction		Self-Esteem
Priyadarshana et al., 2017	Social Media Addiction	Social Interaction, Entertainment, Communication	
Satici, 2019	Facebook Addiction	Loneliness, Shyness	
Savci & Aysan, 2017	Internet Addiction	Social Anxiety, Self-Censor	Self-Monitoring
Sriwilai & Charoensukmongkol, 2016	Social Media Addiction	Stress, Emotional Exhaustion	Mindfulness
Stepanikova et al., 2010	Internet Usage	Loneliness	Life Satisfaction
Valenzuela et al., 2009	Facebook Usage	Life Satisfaction, Social Trust, Civic Engagement, Political Participation	
Vogel et al., 2014	Social Media Usage		Self-Esteem
Whang et al., 2003	Internet Addiction	Stress, Loneliness	
Yen et al., 2007	Internet Addiction	ADHD Symptoms, Depression, Social Phobia, Hostility	
Young & Rodgers, 1998	Internet Addiction	Abstract Thinkers, Sensitive, Vigilant, Private Individuals	

The factors self-confidence, shyness, extraversion, agreeableness, consciousness, and mindfulness were not included in the study due to some reasons such as the similar results they produce. According to Kircaburun and Griffiths (2018), significant effect of agreeableness and consciousness over of social media dependency was not detected, so it was not added as a factor to the model. Additionally, since self-confidence showed similarities with self-esteem, and shyness indicated similarities with loneliness in previous studies, these factors were also excluded. Another factor is extraversion which was not included because according to Hardie and Tee (2007), extraversion is negatively associated with excessive SNS use and according to Hamid and colleagues (2015) it is positively associated. Many researchers cannot build consensus about the impacts of being extravert on social media addiction. Both to be introvert and to be extravert may cause problematic use of social media. Effect of this factor can show differences from person to person. Thus, it was seen that to take extraversion as a factor into the model would not be meaningful. Mindfulness affects characteristics of people from various perspectives. This is not only effective for social media addiction but also trigger factor for psychological aspects of people (Sriwilai & Charoensukmongkol, 2016). Therefore, mindfulness should be examined in different study in detail.

For this model, variables selected are openness, loneliness, stress, creativity, social intelligence, self-esteem, life satisfaction, neuroticism, and narcissism. All correlations between each factor and social media addiction were examined and based on literature. However, there is no model like this which covers all the above mentioned factors. Therefore, this model is a new model to understand the effects of specific behavioral factors upon social media addiction.

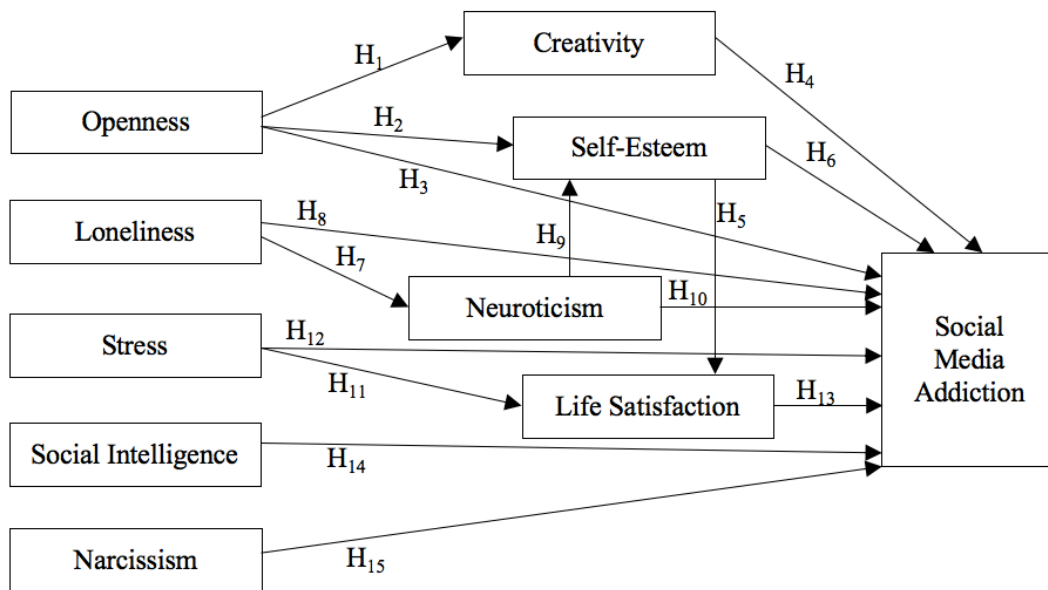


Figure 1 Theoretical framework

Figure 1 demonstrates the theoretical model of this study. This model contains five independent variables which are openness, loneliness, stress, social intelligence and narcissism, four intervening variables which are creativity, self-esteem, neuroticism and life satisfaction, and one dependent variable which is social media addiction. Moreover, variables and their corresponding hypotheses were exhibited in Figure 1.

### 3.2 Hypotheses

According to theoretical model of this study, 23 hypotheses were created to be tested.

#### 3.2.1 Openness

Openness can be defined as to be open to new experiences and ideas. It is one of the big five characteristics of people (Jaradat & Atyeh, 2017). It can be claimed that openness might affect the decisions and the behaviors of the people. In literature, it is

seen that openness increases both self-esteem (Amirazodi & Amirazodi, 2011) and creativity (King et al., 1996). Moreover, positive relationship between openness to experience and SNS usage was detected (Correa et al., 2010).

In this model, openness is one of the independent variables in order to measure openness degree of participants. It influences creativity, self-esteem and social media addiction. Thus, three hypotheses are issuable. One of them is to prove the impacts of openness on creativity, other one is to assert the impacts of openness on self-esteem and the last one is to show the impacts of openness on social media addiction.

H<sub>1</sub>: Openness has a significant positive impact on creativity.

H<sub>2</sub>: Openness has a significant positive impact on self-esteem.

H<sub>3</sub>: Openness has a significant impact on social media addiction.

### 3.2.2 Creativity

Creativity is a controversial issue. While Lee and Hong (2016) argue that creativity makes a great contribution to social media use, Kircaburun and colleagues (2018) support that there is a negative relationship. However, many researchers have common view that creativity which is influenced by openness has an impact on excessive social media usage.

In this model, creativity was taken as an intervening variable in order to measure creativity of participant. Hypothesis was created to see whether there is a relationship between creativity and social media addiction or not.

H<sub>4</sub>: Creativity has a significant impact on social media addiction.

### 3.2.3 Self-esteem

Self-esteem includes beliefs and comments of people about how they are good or bad (Hawi & Samaha, 2017). Therefore, the level of self-esteem affects many aspects of people and is affected from several characteristics of people. It is mainly affected by openness and neuroticism (Amirazodi & Amirazodi, 2011) and it is one of the major factors which plays an important role on life satisfaction (Hawi & Samaha, 2017).

According to Bozoglan et al. (2013), low self-esteem causes problematic social media use. Thus, it is observed that self-esteem has an influence on also problematic SNS use both directly and indirectly.

In this model, self-esteem is an intervening factor which measures self-esteem degree of participants. There are two different hypotheses which indicate correlations between life satisfaction and self-esteem, and social media addiction and self-esteem.

H<sub>5</sub>: Self-esteem has a significant positive impact on life satisfaction.

H<sub>6</sub>: Self-esteem has a significant negative impact on social media addiction.

### 3.2.4 Loneliness

Loneliness refers to feeling alone. Unfortunately, lonely people cannot make satisfactory contact with others (Satici, 2019). Therefore, they tend to use excessive Internet (Engelberg & Sjoberg, 2004) instead of socializing with face to face communication. Furthermore, lonely people are prone to be neurotic, since when they become isolated, they can have difficulties protecting their emotional stability (Mund & Neyer, 2019).

In this model, loneliness is one of the independent variables in order to measure loneliness level of participants. It was investigated that loneliness has an influence on neuroticism and social media addiction.

H<sub>7</sub>: Loneliness has a significant positive impact on neuroticism.

H<sub>8</sub>: Loneliness has a significant positive impact on social media addiction.

### 3.2.5 Neuroticism

Neurotic people have lability of mood (Jaradat & Atyeh, 2017). Neuroticism is affected from some behavioral factors particularly loneliness. Loneliness might trigger neuroticism (Mund & Neyer, 2019) and to be neurotic causes several problems. For instance, it can cause lower self-esteem (Amirazodi & Amirazodi, 2011). Bozoglan et al. (2013) state that both loneliness and lower self-esteem are significant reasons for social media addiction. According to Cao and Su, (2007) neuroticism also increases social media addiction.

In this model, neuroticism is an intervening variable. There are two hypotheses relating with correlations between neuroticism and self-esteem, and neuroticism and social media addiction.

H<sub>9</sub>: Neuroticism has a significant negative impact on self-esteem.

H<sub>10</sub>: Neuroticism has a significant positive impact on social media addiction.

### 3.2.6 Stress

Stress is one of the fundamental factors affecting life satisfaction (Longstreet & Brooks, 2017). Stress affects not only life satisfaction but also affects behaviors and characteristics of people. In today's world, people spend time on social media platforms in order to handle stress (Sriwilai & Charoensukmongkol, 2016).

In this model, stress is an independent variable which has an impact on degree of life satisfaction and social media addiction level. Hypotheses were created to observe the effects of stress upon life satisfaction and social media addiction.

H<sub>11</sub>: Stress has a significant negative impact on life satisfaction.

H<sub>12</sub>: Stress has a significant positive impact on social media addiction.

### 3.2.7 Life satisfaction

Life satisfaction means for people to be happy and to be satisfied with their life (Hawi & Samaha, 2017). This factor is affected negatively by stress level (Longstreet & Brooks, 2017) and positively by self-esteem level of people (Hawi & Samaha, 2017). Longstreet and Brooks (2017) also claim that high level of life satisfaction reduces time spending on SNS.

In this model, life satisfaction is an intervening variable to measure life satisfaction level of participants. It is affected from stress and self-esteem among the all variables which are placed in theoretical model of present study and affects social media addiction degree of participants. Hypothesis about whether there is a correlation between life satisfaction and social media addiction or not was prepared.

H<sub>13</sub>: Life satisfaction has a significant negative impact on social media addiction.

### 3.2.8 Social intelligence

Social intelligence represents how people construe attitudes of other people such as their feelings, needs, beliefs, aspirations and so on, how people manage their private and public relationships, and how much they show empathy towards others (Baron-Cohen et al., 1999). Although in the literature, there is not much research about the

impacts of social intelligence on social media addiction, as a new research subject, it can be argued that social intelligence may play a crucial role on excessive social media usage.

In this model, social intelligence is one of the independent variables in order to define level of people's social intelligence. A hypothesis was created about the impact of social intelligence on social media addiction level of people.

H<sub>14</sub>: Social intelligence has a significant impact on social media addiction.

### 3.2.9 Narcissism

Narcissists have difficulties about feeling empathy with others (Ritter et al., 2011). According to many researches, narcissist people show tendency to use social media excessively (Andereassen et al., 2016; Casale & Fioravanti, 2018; Hawi & Samaha, 2017). Therefore, narcissism is another factor which should be taken into consideration to understand the impacts of behavioral factors on social media addiction.

In this model, narcissism was contained as an independent variable in order to measure the effect of narcissism upon excessive SNS use. A hypothesis about the correlation between narcissism and social media addiction was created.

H<sub>15</sub>: Narcissism has a significant positive impact on social media addiction.

### 3.2.10 Social media addiction

Social media addiction means over usage of social media platforms. Nowadays, it is a common problem all over the world. Almost every person has several social media accounts and they spend most of their times on SNS. Excessive use of social media brings with many problems in people's private life, social life, and also professional

life (Hardie & Tee, 2007). In order to prevent problems deriving from social media addiction, it is important to find the reasons for social media addition.

In this theoretical model of the study, social media addiction was defined as a dependent variable to determine social media addiction level of participants and this variable was assumed to be affected from openness, creativity, self-esteem, loneliness, neuroticism, stress, life satisfaction, social intelligence and narcissism. Fifteen hypotheses are created to test the correlations between these behavioral factors and social media addiction. In addition to these hypotheses, six hypotheses were also created to measure the impacts of demographical factors which were gender, marital status, age, education level, income level and occupation.

H<sub>16</sub>: There is a significant difference between females and males in terms of social media addiction.

H<sub>17</sub>: There is a significant difference between single and married participants in terms of social media addiction.

H<sub>18</sub>: There is a significant difference among different age groups in terms of social media addiction.

H<sub>19</sub>: There is a significant difference among different education levels in terms of social media addiction.

H<sub>20</sub>: There is a significant difference among different income levels in terms of social media addiction.

H<sub>21</sub>: There are significant differences among different occupational groups in terms of social media addiction.

Moreover, two hypotheses were created to understand social media usage habits of the participants. Daily spending times on social networking sites of the

participants and how many times they check their social media accounts in a day might be positively correlated to social media addiction degree of the participants.

H<sub>22</sub>: There is a positive correlation between daily spending times on social networking sites and social media addiction level of the participants.

H<sub>23</sub>: There is a positive correlation between how many times participants check their social media accounts and their social media addiction level.

## CHAPTER 4

### RESEARCH METHODOLOGY

This chapter includes detail information about technical methods of the present study. It consists of three parts which are participants, instruments and data analysis. In the present study, a questionnaire was developed and conducted in online environment in order to find the impacts of specific behavioral factors on social media addiction. Quantitative analyses were made to evaluate the results of survey and to test the hypotheses which were mentioned in Chapter 3.

#### 4.1 Participants

Convenience sampling method was used to select the participants. A survey was prepared by means of one of the online survey providers called SurveyMonkey. The survey was sent to people as a link via social media platforms which were Facebook, and LinkedIn. These social media platforms made it easier to reach people in Turkey with different demographics. Participants filled out the survey anonymously. In total 862 people participated in the survey, but not all of them completed the survey. After incomplete and missing data containing surveys were excluded, responses of 506 participants were included in the analysis.

Structural Equation Modeling (SEM) was used in the analysis. According to Hair, Black, Babin and Anderson (2014), if the model includes more than seven constructs which is defined as total of dependent and independent variables, sample size should be at least 500. In the present study, there were 506 participants. Therefore, the number of respondents was appropriate to use SEM.

## 4.2 Instruments

The questionnaire consists of 20 questions. First two questions are related to which social networking sites are usually used. Third and fourth questions are to understand daily social media usage duration of the participants (Genc, 2015), and the number of participants' checks their social media accounts (Wang, Niiya, Mark, Reich, & Warschauer, 2015). Last six questions are to gain general demographical information about the respondents such as their gender, age range, marital status, education level, income status and occupation. Other questions are to measure the variables of this study. These questions were directly received from literature.

In the present study, Bergen's Social Media Addiction Scale (BSMAS) was used to measure social media addiction level of each participant, Big Five Inventory (BFI) scale was used to measure openness level, short version of Values in Action Inventory of Strengths (VIA-IS) scale was used to measure creativity level and social intelligence level, Eysenck Personality Questionnaire Revised-Abbreviated form (EPQR-A) was used to measure neuroticism level, Rosenberg's Self-Esteem Scale (SES) was used to measure self-esteem level, Satisfaction with Life Scale (SWLS) was used to measure life satisfaction level, short version of UCLA Loneliness Scale (ULS-8) was used to measure loneliness level, Perceived Stress Scale (PSS) was used to measure stress level and short version of Narcissistic Personality Inventory (NPI) was used to measure narcissism level of each participant.

### 4.2.1 Scales for social media addiction variable

Social media addiction is a dependent variable of the present study. In literature, many different scales were used to measure the degree of social media addiction or Internet addiction.

One of these scales is Young's Diagnostic Questionnaire (YDQ). In several studies, YDQ was applied in order to measure Internet addiction (Bian & Leung, 2015; Cao & Su, 2007; Johansson & Gotestam, 2004; Hardie & Tee, 2007; Kircaburun & Griffiths, 2018; Longstreet & Brooks, 2017; Montag et al., 2015; Savci & Aysan, 2017; Young et al., 1998; Young, 2004). The other scale is Bergen's Social Media Addiction Scale. BSMAS was used in many studies to evaluate social media addiction degree (Andreassen et al., 2016; Casale et al., 2018; Lin et al., 2017; Monacis, De Palo, Griffiths, & Sinatra, 2017). One of the other scales is Bergen's Facebook Addiction Scale (BFAS). BFAS was used for testing addiction degree of one of the specific social networking sites named Facebook (Casale & Fioravanti, 2018; Ulke, Noyan, & Dilbaz, 2017; Satıcı, 2019; Sriwilai & Charoensukmongkol, 2016). In researches, not only YDQ, BSMAS and BFAS scales but also the other scales like Chen Internet Addiction Scale (Bozoglan et al., 2013; Yen et al., 2007), Compulsive Internet Use Scale (Van den Eijnden et al., 2016), Facebook Intensity (Valenzuela et al., 2009), Generalized Problematic Internet Use Scale (Montag et al., 2015), The Korean Self-Reporting Internet Addiction Scale (Kwon et al., 2013), Online Social Network Addiction Scale (Montag et al., 2015), Social Media Disorder Scale (Van den Eijnden et al., 2016; Savci, Ercengiz & Aysan, 2018), Social Networking Status Scale (Kirik et al., 2015), Social Media Addiction Scale (Jaradat & Atyeh, 2017), and Social Media Use Questionnaire (Kircaburun et al., 2018) were used to examine Internet addiction and social media addiction.

In order to find the most appropriate scale for identifying social media addiction level of the participants, Table 2 which includes scales which were used to measure Internet or social media addiction level of participants and their citing references was created.

Table 2. Scales to Measure Internet or Social Media Addiction Level

Scales	Authors
Bergen's Facebook Addiction Scale	Casale & Fioravanti, 2018
	Ulke et al., 2017
	Satici, 2019
	Sriwilai & Charoensukmongkol, 2016
Bergen's Social Media Addiction Scale	Andreassen et al., 2016
	Casale et al., 2018
	Lin et al., 2017
Chen Internet Addiction Scale	Monacis et al., 2017
	Bozoglan et al., 2013
Compulsive Internet Use Scale	Yen et al., 2007
Facebook Intensity	Van den Eijnden et al., 2016
Generalized Problematic Internet Use Scale	Valenzuela et al., 2009
The Korean Self-Reporting Internet Addiction Scale	Montag et al., 2015
Online Social Network Addiction	Kwon et al., 2013
Social Media Disorder Scale	Montag et al., 2015
Social Networking Status Scale	Van den Eijnden et al., 2016
Social Media Addiction Scale	Savci et al., 2018
Social Media Use Questionnaire	Kirik et al., 2015
Young's Diagnostic Questionnaire	Jaradat & Atyeh, 2017
	Kircaburun et al., 2018
	Bian & Leung, 2015
	Cao & Su, 2007
	Hardie & Tee, 2007
	Johansson & Gotestam, 2004
	Kircaburun & Griffiths, 2018
	Longstreet & Brooks, 2017
	Montag et al., 2015
	Savci & Aysan, 2017
Young & Rodgers, 1998	
Young, 2004	

The main purpose of this research is to investigate the impacts of specific behavioral factors which are openness, loneliness, creativity, social intelligence, stress, self-esteem, life satisfaction, neuroticism and narcissism on social media addiction. Therefore, a scale which measures addiction level should be directly linked to social media. Thus, among scales which were reported in Table 2, Bergen's Social Media Addiction Scale seemed to be the most useful scale for the present study.

#### 4.2.1.1 Bergen's Social Media Addiction Scale

BSMAS was adapted from Bergen's Facebook Addiction Scale by using the word social media instead of Facebook (Andreassen et al., 2016). BFAS is for measuring just the degree of Facebook addiction (Andreassen, Torsheim, Brunborg, & Pallesen, 2012). However, BSMAS eliminates the negative sites of BFAS by evaluating general social media activities instead of only considering Facebook activities. BSMAS comprises of six items (Andreassen et al., 2016). Items of BSMAS can be found in Appendix A. For each item, five-point Likert scale ranging from strongly disagree to strongly agree (1 to 5) was used in the questionnaire.

#### 4.2.2 Scales for behavioral factors

Openness, creativity, social intelligence, self-esteem, life satisfaction, loneliness, stress, neuroticism and narcissism are independent variables of this research. In order to decide which scales might be used to measure degree of these factors, Table 3 was created from the literature and includes some of the behavioral and psychological scales.

Table 3. Scales to Measure Behavioral Factors

Authors	Scales
Andreassen et al., 2016	Attention-Deficit/Hyperactivity Disorder Self-Rated Scale Obsession-Compulsive Inventory-Revised
Bozoglan et al., 2013	Satisfaction with Life Scale Self-Esteem Scale UCLA Loneliness Scale
Cao & Su, 2007	Time Management Disposition Scale Eysenck Personality Questionnaire Revised
Casale & Fioravanti, 2018	Narcissistic Personality Inventory Admiration-Seeking Behavior Scale
Casale et al., 2018	Fear of Missing Out Scale Social Control Subscale of The Social Skill Inventory
Van den Ejinden et al., 2016	10 Item Loneliness Scale Attention-Deficit/Hyperactivity Disorder Self-Rated Scale Rosenberg's Self-Esteem Scale
Hardie & Tee, 2007	International Personality Item Pool 6-item Social Anxiety subscale of the Self-Consciousness Wittenberg's Emotional and Social Loneliness Scale
Jaradat & Atyeh, 2017	Big Five Inventory
Kircaburun & Griffiths, 2018	Satisfaction with Life Scale Big Five Inventory
Kircaburun et al., 2018	UCLA Loneliness Scale Creative Personality Traits Scale Short Depression-Happiness Scale Kaufman Domains of Creativity Scale
Lee, Foo, Adams, Morgan, & Frewen, 2015	Values in Action Inventory of Strengths
Lin et al., 2017	Attention-Deficit/Hyperactivity Disorder Self-Rated Scale Depression Anxiety Stress Scale
Longstreet & Brooks, 2017	Satisfaction with Life Scale Oxford Happiness Questionnaire Short Form Perceived Stress Scale
Pugh, 2017	Rosenberg's Self-Esteem Scale Interaction Anxiousness Scale
Satici, 2019	UCLA Loneliness Scale Syhness Scale Satisfaction with Life Scale
Valenzuela et al., 2009	Satisfaction with Life Scale Social Trust is Rosenberg's (1956) Faith in People Scale
Yen et al., 2007	Attention-Deficit/Hyperactivity Disorder Self-Rated Scale
Young & Rodgers, 1998	Sixteen Personality Factor Inventory

In the present research, after the evaluation with two subject experts, BFI scale was decided to be used for openness variable, short version of VIA-IS for creativity and social intelligence, EPQR-A for neuroticism, SES for self-esteem, SWLS for life satisfaction, short version of UCLA Loneliness Scale for loneliness, PSS for stress and short version of NPI for narcissism.

#### 4.2.2.1 Big Five Inventory scale

BFI consists of 44 items but only 10 of them is related to measuring openness level (John & Srivastava, 1999). Therefore, only those 10 items which were selected can be found in Appendix B. In the questionnaire, five-point Likert scale ranging from strongly disagree indicating 1 to strongly agree indicating 5 was applied.

#### 4.2.2.2 Short version of Values in Action Inventory of Strengths

VIA-IS includes 240 items for 24 different characteristics. For each characteristic, there are 10 items (Peterson & Seligman, 2004). In present research, short version of VIA-IS was used in order to detect creativity level and social intelligence level of the participants. Short version of VIA-IS has most correlated five items of 10 items for each strength (Littman-Ovadia, 2015). Participants of this study answered five different items for their creativity level and five different items for their social intelligence level on five-point Likert scale which is ranging from strongly disagree (1) to strongly agree (5). Items which are related to creativity can be found in Appendix C and items which are related to social intelligence can be found in Appendix D (Lee et al., 2015).

#### 4.2.2.3 Eysenck Personality Questionnaire Revised-Abbreviated form

EPQR-A which was adapted from Eysenck Personality Questionnaire Revised (EPQR) includes 24 items for evaluating four different features including neuroticism. Each feature can be measured by six items (Francis, Brown, & Philipchalk, 1992). EPQR-A was used in order to define the neuroticism level of respondents in the present study. Respondents expressed their agreement level on five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) for six items which were related to neuroticism. Items related to neuroticism of EPQR-A (Karanci, Dirik, & Yorulmaz, 2007; Tiwari, Singh, & Singh, 2009) can be found in Appendix E.

#### 4.2.2.4 Rosenberg's Self-Esteem Scale

Following Van den Ejinden et al. (2016) and Pugh (2017), the present study used Rosenberg's SES originally devised by Rosenberg (1965) to measure self-esteem. This scale consists of 10 items (Appendix F) (Buyukgungor, 2016) and five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) was applied.

#### 4.2.2.5 Satisfaction with Life Scale

SWLS comprising of five items which was developed by Diener, Emmons, Larsen, and Griffin (1985) was used commonly in previous studies such as Bozoglan et al. (2013), Kircaburun & Griffiths (2018), Satici (2019) and so on. Therefore, it was selected as a scale in order to evaluate how participants are satisfied with their life. Participants gave an answer for each item on five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Items of SWLS can be found in Appendix G (Dagli & Baysal, 2016; Diener et al., 1985).

#### 4.2.2.6 Short version of UCLA Loneliness Scale

ULS-8 was adopted to this study in order to detect loneliness degree of the participants. ULS-8 which is a short form of UCLA loneliness scale consists of 8 items to measure loneliness level (Hays & DiMatteo, 1987). These items can be found in Appendix H. Five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) was applied for ULS-8.

#### 4.2.2.7 Perceived Stress Scale

PSS was used to evaluate stress level of respondents in this study. PSS includes 14 items and these items asks the questions beginning with “how often” to understand the frequency of being stressed (Cohen, Kamarck, & Mermelstein, 1983; Eskin, Harlak, Demirkiran, & Dereboy, 2013). In this research, these items were revised to learn agreement level of participants with the statements instead of their interval of being stressed. Therefore, participants indicated their agreement level by means of five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Items can be found in Appendix I.

#### 4.2.2.8 Short version of Narcissistic Personality Inventory

Short version of NPI was used to measure narcissism degree of each participant in the present study since NPI including 40 couple items was too long for this study. Short version of NPI includes 16 couple items. In this scale, each pair item includes both narcissistic and non-narcissistic responses. Respondents should choose one corresponding item according to their selves of each pair item (Ames, Rose, & Anderson, 2006; Buyukgungor, 2016). Items can be found in Appendix J.

#### 4.2.3 The summary of scales used in the present study

Scales were determined based on the literature. In this study, there were one dependent variable and nine independent variables. In order to detect variables' degree of participants, nine different scales were adopted which are Bergen's Social Media Addiction Scale, Big Five Inventory Scale, short version of UCLA Loneliness Scale, Eysenck Personality Questionnaire Revised-Abbreviated form, Short version of Values in Action Inventory of Strengths, Perceived Stress Scale, Rosenberg's Self-Esteem Scale, Satisfaction with Life Scale and short version of Narcissistic Personality Inventory.

Table 4 summarizes the type of the scales used for each variable. The number of scales' items and questioning approach are also demonstrated in Table 4.

Table 4. Summary of Variables and Scales

Variables	Scale	Items	Approach
Social Media Addiction	Bergen's Social Media Addiction Scale	6	5-point Likert Scale
Openness	Big Five Inventory Scale	10	5-point Likert Scale
Creativity	Short version of Values in Action Inventory of Strengths	5	5-point Likert Scale
Social Intelligence	Short version of Values in Action Inventory of Strengths	5	5-point Likert Scale
Neuroticism	Eysenck Personality Questionnaire Revised-Abbreviated form	6	5-point Likert Scale
Self-Esteem	Rosenberg's Self-Esteem Scale	10	5-point Likert Scale
Life Satisfaction	Satisfaction with Life Scale	5	5-point Likert Scale
Loneliness	Short version of UCLA Loneliness Scale	8	5-point Likert Scale
Stress	Perceived Stress Scale	14	5-point Likert Scale
Narcissism	Short version of Narcissistic Personality Inventory	16	Selection from Couple Items

The questionnaire which consists of several scales and many demographic questions was prepared both in English and Turkish. In English version of the survey all scales were directly received from the literature (Appendix K). On the other hand, in Turkish version of the survey indicated in Appendix L, some of the scales were taken directly from literature. However, the ones that are not found in Turkish literature are translated from English to Turkish. Turkish version of the survey was applied to the participants.

### 4.3 Data Analysis

Data was collected from 506 participants by means of the questionnaire. Reverse items of scales were recoded into different variables and occupational groups were created according to the open-ended answers of the participants. Reliability tests, normality tests, descriptive statistics, independent sample t-tests, one-way ANOVA tests, and correlation analyses were performed using IBM Statistical Package for the Social Sciences (SPSS) program and structural equation modeling was applied by analysis of moment structure (AMOS) program.

## CHAPTER 5

### RESULTS

This chapter includes analyses which were applied to test the hypotheses of the present study mentioned in Chapter 3 and the results of these analyses. In the present study, reliability tests were conducted to see reliability of the scales used. Normality tests were conducted to learn whether data was normally distributed or not.

Descriptive statistics were applied to perceive the demographic features of the participants, to understand social media usage habits of the participants, and to gain knowledge about social networking sites preferences of the participants. Independent sample t-tests and one-way analysis of variance tests were applied to learn the impacts of demographic variables and social media usage habits on social media addiction level of the participants. Correlation analyses were used to measure the correlations between behavioral factors and social media addiction. Structural equation modeling was used to evaluate the theoretical model of this study and to detect the impacts of independent variables on the dependent variable, social media addiction.

#### 5.1 Reliability tests

After the arrangement of data, even though scales were directly retrieved from literature, reliability tests were applied to measure the consistency of each item with other items in each scale. According to Cronbach (1951), Cronbach's alpha value of each scale should be greater than .70 in order to state that the scale is reliable.

Reliability test results illustrate that all scales provide reliability condition with Cronbach's alpha values above .70 (Table 5).

Table 5. Reliability Analysis of Scales

Variables	Number of Items	Cronbach's Alpha
Social Media Addiction	6	.773
Openness	10	.800
Loneliness	8	.874
Neuroticism	6	.822
Creativity	5	.893
Stress	14	.890
Self-Esteem	10	.733
Social Intelligence	5	.706
Life Satisfaction	5	.839
Narcissism	16	.703

## 5.2 Normality tests

Normality is one of the other prerequisites for many statistical tests. Therefore, skewness and kurtosis values are checked to see whether the data is normally distributed or not. Normality test results of data are displayed in Table 6.

Table 6. Normality Test Results of Data

Variables	Skewness	Kurtosis
Social Media Addiction	.318	-.275
Openness	-.355	.354
Loneliness	.814	.459
Neuroticism	.115	.427
Creativity	-.489	.567
Stress	.460	.163
Self-Esteem	-.545	-.176
Social Intelligence	-.414	1.186
Life Satisfaction	-.164	-.371
Narcissism	.382	.341

According to Tabachnick and Fidell (2013), skewness and kurtosis values should be between -1.5 and 1.5 in order to support normality assumption of data. All skewness and kurtosis values shown in Table 6 are between this range. Therefore, it can be stated that data collected by questionnaire is normally distributed for each variable.

### 5.3 Descriptive statistics

Frequency tables about demographical factors, social media usage habits and social networking sites preferences of the participants were created by means of SPSS.

#### 5.3.1 Frequencies of demographic variables

In the present study, gender, age, marital status, education level, income status and occupations of the participants were taken into consideration as demographic factors.

Gender distribution of the participants is displayed in Table 7. According to Table 7, 357 of 506 participants were female whereas 149 of participants were male.

Table 7. Gender Distribution of the Participants

Gender	Female	Male
Frequency	357	149
Percent	70.6	29.4

Table 8 shows age distribution of the participants. Participants were in different age groups; 147 participants were aged between 18 and 24, 127 participants were aged between 25 and 29, 153 participants were aged between 30 and 49, 76 participants were aged between 50 and 64, and three participants were above the age of 64.

Table 8. Age Distribution of the Participants

Age	18-24	25-29	30-49	50-64	>64
Frequency	147	127	153	76	3
Percent	29.1	25.1	30.2	15	0.6

Besides, Table 9 shows that 283 respondents were singles and 223 respondents were married.

Table 9. Marital Status Distribution of the Participants

Marital Status	Single	Married
Frequency	283	223
Percent	55.9	44.1

According to Table 10, fourteen participants were primary school graduates, 58 participants were high school graduates, 113 of them were undergraduate students, 203 of them had bachelor's degree, 81 of them were graduate or PhD student, and 37 participants had graduate or PhD degree.

Table 10. Education Level Distribution of the Participants

Education Level	Primary School Graduate	High School Graduate	Undergraduate Student	Bachelor's Degree	Graduate / PhD Student	Graduate/ PhD Degree
Frequency	14	58	113	203	81	37
Percent	2.8	11.5	22.3	40.1	16	7.3

Moreover, respondents had different income levels; 32 of 506 participants earned less than 1600 Turkish Liras (TL) monthly, 102 participants earned between 1600 and 3200 TL, 101 of them selected 3201-4800 TL option as their monthly

income, 92 of 506 participants earned between 4800 and 6400 TL whereas 179 participants earned more than 6400 TL monthly (Table 11).

Table 11. Income Status Distribution of the Participants

Income	Less than 1600 TL	1600-3200 TL	3201-4800 TL	4801-6400 TL	More than 6400 TL
Frequency	32	102	101	92	179
Percent	6.3	20.2	20	18.2	35.4

Furthermore, participants were in many different occupations and they are grouped in Table 12.

Table 12. Distribution of Categorized Occupations of the Participants

Occupation	Frequency	Percent
Architecture	11	2.2
Arts & Communication	11	2.2
Business Management	29	5.7
Education	62	12.3
Engineering	38	7.5
Finance	12	2.4
Government & Public Administrations	28	5.5
Health Science	39	7.7
Housewife	35	6.9
Human Services	35	6.9
Information Technology	14	2.8
Law	15	3
Manufacturing	10	2
Marketing	11	2.2
Retired	18	3.6
Student	108	21.3
Transportation, Distribution & Logistics	24	4.7

### 5.3.2 Frequencies of social media usage of the participants

Daily spending times on social networking sites of the participants and how many times they check their social media accounts in a day were asked in order to gain knowledge about social media usage habits of the participants. Duration frequencies and check time frequencies are different from each other because of the differences in social media usage habits of the participants. For example, some people maybe check their accounts less than six times a day because they are busy during the day, but they might spend hours nonstop on social media platforms before they go to sleep. Therefore, both two conditions play significant role on understanding social media usage habits of the participants.

Distribution of daily spending duration of the participants on SNS can be seen in Table 13. According to Table 13, 131 of the participants stated that they spent less than one hour on social media platforms, 269 of them chose between two and three hours as their daily spending time on SNS, 67 of them were online between four and five hours, and 39 of them spent more than five hours on social media.

Table 13. Distribution of Daily Spending Duration of the Participants

Duration	0-1 Hour	2-3 Hours	4-5 Hours	More than 5 Hours
Frequency	131	269	67	39
Percent	25.9	53.2	13.2	7.7

Distribution of how many times participants check their social media accounts can be seen in Table 14. According to Table 14, 116 participants notified that they checked their social media accounts less than six times a day, 156 participants thought that they checked their social media accounts between six and ten times, 111 of them chose between 11 and 20 as their checking time, 64 respondents stated their

social media checking times as between 21 and 30, and 59 of 506 participants ticked more than 30 as their social media checking times.

Table 14. Distribution of the number of Checks Social Media of the Participants

Check Time	Less than 6	6-10	11-20	21-30	More than 30
Frequency	116	156	111	64	59
Percent	22.9	30.8	21.9	12.6	11.7

### 5.3.3 Frequencies of social networking sites preferences of the participants

There are many social media platforms which are commonly used all over the world. In the present study, most common 16 social media platforms; Facebook, WhatsApp, Twitter, Instagram, LinkedIn, Swarm, YouTube, Periscope, Snapchat, Skype, Tinder, Pinterest, Spotify, Tumblr, Reddit and Flickr were included in the questionnaire. The participants marked the social networking sites they use among these 16 options and if they were using one of the other social media platforms which were not included these 16 options, participants chose the other option.

Frequencies of social media platforms are demonstrated in Table 15. In Table 15, the most used social media platform was WhatsApp, 493 of 506 participants stated that they were using WhatsApp. Following WhatsApp, YouTube (413 users), Instagram (401 users), and Facebook (348 users) were the most preferable social networking sites. Twitter (227 users), LinkedIn (200 users), Spotify (175 users), Pinterest (119 users), and Skype (114 users) were also favorable platforms for some participants. On the other hand, Flickr (6 users), Periscope (10 users), and Tinder (12 users) were the least used SNSs among the participants. Moreover, 19 of 506 participants notified that they were using other social media platforms such as Bip, Quara, Telegram, WeChat, Medium, and so on.

Table 15. Frequencies of Commonly used Social Media Platforms

Social Networking Sites	Frequency	Percent
Facebook	348	68.8
WhatsApp	493	97.4
Twitter	227	44.9
Instagram	401	79.2
LinkedIn	200	39.5
Swarm	31	6.1
YouTube	413	81.6
Periscope	10	2
Snapchat	83	16.4
Skype	114	22.5
Tinder	12	2.4
Pinterest	119	23.5
Spotify	175	34.6
Tumblr	29	5.7
Reddit	19	3.8
Flickr	6	1.2
Other	19	3.7

Moreover, participants were asked to specify five platforms that they use commonly (Table 16). When Table 15 and Table 16 are compared, it is observed that the numbers of users for each SNS in Table 16 is less than Table 15, since every user preferred to use different five applications from each other. However, for WhatsApp, there is no difference and for Instagram, distance between the numbers in Table 15 and Table 16 is only one. This means that 493 of 493 WhatsApp users had a priority for WhatsApp and 400 of 401 users had a priority for Instagram. In other words, WhatsApp and Instagram users showed relatively more tendency to be addicted than others.

Table 16. Frequencies of the Most Preferred Five Social Media Platforms

Social Networking Sites	Frequency	Percent
Facebook	301	59.5
WhatsApp	493	97.4
Twitter	181	35.8
Instagram	400	79.1
LinkedIn	93	18.4
Swarm	14	2.8
YouTube	381	75.3
Periscope	2	0.4
Snapchat	39	7.7
Skype	36	7.1
Tinder	5	1
Pinterest	59	11.7
Spotify	127	25.1
Tumblr	5	1
Reddit	7	1.4
Flickr	0	0
Other	8	1.6

#### 5.4 Independent sample t-test analyses and analysis of variance tests

Independent sample t-test analyses were applied to find whether there was a difference between females and males, and between single and married participants in terms of social media addiction level or not. Participants were also grouped by age, education, income, and occupation. These demographic variables may change social media addiction degree of the participants. In order to understand the effects of age, education level, income status and occupation groups upon social media addiction, one-way ANOVA tests were applied. One-way ANOVA tests were also used to learn whether there was a correlation between daily spending times on social

networking sites and social media addiction degree of the participants, and between how many times they check their social media accounts in a day and their social media addiction level.

Social media addiction variable which was recoded as SMA is a dependent variable of this study. In order to measure social media addiction level of the participants, five-point Likert scale was used. Therefore, mean of SMA was calculated for each participant and it was used as a factor in independent sample t-test analyses and one-way ANOVA tests.

#### 5.4.1 Gender differences in terms of social media addiction

Independent sample t-test was used to test Hypothesis 16 which claims that there is a significant difference between females and males in terms of social media addiction. Group statistics of gender is illustrated in Table 17. According to Table 17, SMA mean of female participants ( $M = 2.55, SD = .82$ ) is higher than male participants ( $M = 2.19, SD = .74$ ).

Table 17. Gender Category Statistics in terms of SMA

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Mean.SMA	Female	357	2.5486	.81906	.04335
	Male	149	2.1946	.73685	.06036

In order to understand whether the difference between means of males and females in terms of SMA is significant or not, the independent sample t-test results of gender categories should be looked at. Table 18 shows Levene's test for equality of variances for gender categories. According to Field (2013), if  $p$  value is smaller than .05, then equal variances across groups are not assumed.

Table 18. Levene's Test for Equality of Variances for Gender

		Levene's Test for Equality of Variances	
		F	Sig.
Mean.SMA	Equal variances assumed	4.589	.033
	Equal variances not assumed		

For this data,  $p$  value equals to .033 which is smaller than .05. Therefore, in Table 19, a row labeled equal variances not assumed should be taken into consideration to evaluate independent sample t-test for gender. According to Table 19,  $p$  value equals to .00 which is smaller than .05. Therefore, difference between female and male participants in terms of SMA is significant  $t(306.15) = 4.76$ ,  $p < .05$ . Thus, Hypothesis 16 was accepted.

Table 19. Independent Sample T-Test for Gender

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
Mean.SMA	Equal variances assumed	4.560	504	.000	.35392
	Equal variances not assumed	4.762	306.156	.000	.35392

#### 5.4.2 Marital status differences in terms of social media addiction

Hypothesis 17 which is that there is a significant difference between single and married participants in terms of social media addiction was tested by means of independent sample t-test. Group statistics of marital status is shown in Table 20.

Table 20. Marital Status Category Statistics in terms of SMA

	Marital Status	N	Mean	Std. Deviation	Std. Error Mean
Mean.SMA	Single	283	2.5689	.79080	.04701
	Married	223	2.2862	.81105	.05431

Table 20 indicates that SMA mean of single participants ( $M = 2.57, SD = .79$ ) is higher than married participants ( $M = 2.29, SD = .81$ ). In other words, singles have relatively higher social media addiction level than married ones. Results of Levene's test for equality of variances for marital status are shown in Table 21.

Table 21. Levene's Test for Equality of Variances for Marital Status

		Levene's Test for Equality of Variances	
		F	Sig.
Mean.SMA	Equal variances assumed	.020	.889
	Equal variances not assumed		

According to Table 21,  $p$  value is .889 which is bigger than .05. Therefore, it can be assumed that there is no difference between variances of single and married participants. In table 22, according to row labeled equal variances assumed, there is a significant difference between single and married participants in terms of SMA  $t(504) = 3.95, p < .05$ . As a result of independent sample t-test for marital status, Hypothesis 17 was accepted.

Table 22. Independent Sample T-Test for Marital Status

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
Mean.SMA	Equal variances assumed	3.947	504	.000	.28266
	Equal variances not assumed	3.935	471.077	.000	.28266

#### 5.4.3 Age groups differences in terms of social media addiction

One-way ANOVA test was applied to evaluate Hypothesis 18 which claims that there is a significant difference among different age groups in terms of social media addiction. Descriptive statistics of age groups are indicated in Table 23.

According to Table 23, SMA means of young participants is generally higher than old ones. This means that young people usually show more tendency to social media addiction than older people.

Table 23. Descriptive Statistics of Age Groups in terms of SMA

Age Groups	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
18-24	147	2.6746	.76980	.06349	2.5491	2.8001
25-29	127	2.5367	.81755	.07255	2.3932	2.6803
30-49	153	2.2941	.82135	.06640	2.1629	2.4253
50-64	76	2.1513	.71346	.08184	1.9883	2.3143
>64	3	2.3333	1.00000	.57735	-.1508	4.8175
Total	506	2.4443	.81124	.03606	2.3735	2.5152

Test of homogeneity of variances result is shown in Table 24. According to Table 24, since  $p$  value (.613) is bigger than .05, the assumption of homogeneity of variances is supported.

Table 24. Homogeneity of Variances Table of Age Groups

Mean.SMA			
Levene Statistic	df1	df2	Sig.
.670	4	501	.613

A one-way analysis of variance, ANOVA, was carried out to observe whether the difference between age groups was significant or not. The results obtained from ANOVA uncovered that age groups differs from each other in terms of social media addiction and the results are statistically significant,  $F(4, 501) = 7.55, p = .000$ .

Table 25 demonstrates results of ANOVA measuring the difference in SMA across age groups. Thus, the result of this test supports Hypothesis 18.

Table 25. ANOVA Table of Age Groups

Mean.SMA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18.894	4	4.723	7.550	.000
Within Groups	313.455	501	.626		
Total	332.349	505			

A significant main effect of age upon SMA was detected in ANOVA. One-way ANOVA can reveal any significant difference between groups but cannot cater for which groups differ from each other. Therefore, multiple pairwise comparisons were conducted through post-hoc analyses of Bonferroni which is shown in Table 26.

Table 26. Post-Hoc Analyses of Age Groups

Dependent Variable: Mean.SMA							
	(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Bonferroni	18-24	25-29	.13786	.09583	1.000	-.1323	.4080
		30-49	.38049*	.09135	.000	.1229	.6381
		50-64	.52329*	.11175	.000	.2082	.8384
		>64	.34127	.46131	1.000	-.9594	1.6420
	25-29	18-24	-.13786	.09583	1.000	-.4080	.1323
		30-49	.24263	.09495	.109	-.0251	.5103
		50-64	.38543*	.11471	.008	.0620	.7089
		>64	.20341	.46204	1.000	-1.0993	1.5061
	30-49	18-24	-.38049*	.09135	.000	-.6381	-.1229
		25-29	-.24263	.09495	.109	-.5103	.0251
		50-64	.14280	.11100	1.000	-.1702	.4558
		>64	-.03922	.46113	1.000	-1.3394	1.2610
	50-64	18-24	-.52329*	.11175	.000	-.8384	-.2082
		25-29	-.38543*	.11471	.008	-.7089	-.0620
		30-49	-.14280	.11100	1.000	-.4558	.1702
		>64	-.18202	.46560	1.000	-1.4948	1.1308
>64	18-24	-.34127	.46131	1.000	-1.6420	.9594	
	25-29	-.20341	.46204	1.000	-1.5061	1.0993	
	30-49	.03922	.46113	1.000	-1.2610	1.3394	
	50-64	.18202	.46560	1.000	-1.1308	1.4948	

Table 26 illustrates pairwise comparisons of age groups in terms of participants' social media addiction degree. According to Table 26, it is seen that the participants aged between 18 and 24 ( $M = 2.67$ ,  $SD = .77$ ) in terms of the means of SMA are significantly different from the participants aged between 30 and 49 ( $M = 2.29$ ,  $SD = .82$ ) and aged between 50 and 64 ( $M = 2.15$ ,  $SD = .71$ ). Moreover, there is a significant difference between the participants aged between 25 and 29 ( $M = 2.54$ ,  $SD = .82$ ) and aged between 50 and 64 ( $M = 2.15$ ,  $SD = .71$ ).

#### 5.4.4 Education level differences in terms of social media addiction

To measure Hypothesis 19, there is a significant difference among different education levels in terms of social media addiction, one-way ANOVA test was used. Table 27 illustrates descriptive statistics of the participants' education levels.

Table 27. Descriptive Statistics of Education Levels in terms of SMA

Education Levels	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Primary School Graduate	14	2.1429	.73629	.19678	1.7177	2.5680
High School Graduate	58	2.3448	.77727	.10206	2.1405	2.5492
Undergraduate Student	113	2.6549	.80262	.07550	2.5053	2.8045
Bachelor's Degree	203	2.3924	.81620	.05729	2.2795	2.5054
Graduate / PhD Student	81	2.5494	.85450	.09494	2.3604	2.7383
Graduate / PhD Degree	37	2.1261	.61665	.10138	1.9205	2.3317
Total	506	2.4443	.81124	.03606	2.3735	2.5152

Before evaluating the results of one-way ANOVA test, homogeneity of variances table (Table 28) should be examined. According to Table 28,  $p$  value equals to .463 which is bigger than .05. This means that variances of education level groups are homogeneous.

Table 28. Homogeneity of Variances Table of Education Levels

Mean.SMA			
Levene Statistic	df1	df2	Sig.
.926	5	500	.463

Table 29 shows the results of one-way ANOVA test. According to Table 29, there is a significant difference among different education levels in terms of social media addiction  $F(5, 500) = 3.76, p = .002$ . Since  $p$  value is smaller than .05, Hypothesis 19 was accepted.

Table 29. ANOVA Table of Education Levels

Mean.SMA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.042	5	2.408	3.760	.002
Within Groups	320.307	500	.641		
Total	332.349	505			

In order to figure out which groups created this significant difference, throughout post-hoc analyses Bonferroni test was applied, since variances of education levels groups are equal and Bonferroni test is not required for equal sample size. Table 30 indicates the results of post-hoc analyses of education levels groups in terms of social media addiction level of the participants as pairwise comparisons.

According to Table 30, although there are mean differences among all education level groups in terms of social media addiction levels, there is a significant difference only between two groups according to participants' education levels which are group of undergraduate students ( $M = 2.65, SD = .78$ ) and a group which consist of the participants who have Graduate or PhD degree ( $M = 2.13, SD = .62$ ).

Table 30. Post-Hoc Analyses of Education Levels

	(I) Education	(J) Education	Mean Difference (I-J)	Std. Error	Sig.
Bonferroni	Primary School Graduate	High School Graduate	-.20197	.23833	1.000
		Undergraduate Student	-.51201	.22678	.366
		Bachelor's Degree	-.24959	.22116	1.000
		Graduate / PhD Student	-.40653	.23166	1.000
		Graduate / PhD Degree	.01673	.25114	1.000
	High School Graduate	Primary School Graduate	.20197	.23833	1.000
		Undergraduate Student	-.31004	.12928	.253
		Bachelor's Degree	-.04762	.11917	1.000
		Graduate / PhD Student	-.20456	.13767	1.000
		Graduate / PhD Degree	.21870	.16840	1.000
	Undergraduate Student	Primary School Graduate	.51201	.22678	.366
		High School Graduate	.31004	.12928	.253
		Bachelor's Degree	.26242	.09394	.081
		Graduate / PhD Student	.10548	.11652	1.000
		Graduate / PhD Degree	.52874*	.15160	.008
	Bachelor's Degree	Primary School Graduate	.24959	.22116	1.000
		High School Graduate	.04762	.11917	1.000
		Undergraduate Student	-.26242	.09394	.081
		Graduate / PhD Student	-.15694	.10519	1.000
		Graduate / PhD Degree	.26632	.14307	.949
Graduate / PhD Student	Primary School Graduate	.40653	.23166	1.000	
	High School Graduate	.20456	.13767	1.000	
	Undergraduate Student	-.10548	.11652	1.000	
	Bachelor's Degree	.15694	.10519	1.000	
	Graduate / PhD Degree	.42326	.15882	.119	
Graduate / PhD Degree	Primary School Graduate	-.01673	.25114	1.000	
	High School Graduate	-.21870	.16840	1.000	
	Undergraduate Student	-.52874*	.15160	.008	
	Bachelor's Degree	-.26632	.14307	.949	
	Graduate / PhD Student	-.42326	.15882	.119	

#### 5.4.5 Income status differences in terms of social media addiction

Hypothesis 20 argue that there is a significant difference among different income levels in terms of social media addiction. In order to detect impacts of income levels on SMA, one-way ANOVA test was used. Table 31 shows the descriptive statistics.

Table 31. Descriptive Statistics of Income Levels in terms of SMA

Mean.SMA						
Income Levels	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Less than 1600 TL	32	2.5729	.96900	.17130	2.2236	2.9223
1600-3200 TL	102	2.5261	.74600	.07386	2.3796	2.6727
3201-4800 TL	101	2.5429	.85233	.08481	2.3746	2.7112
4801-6400 TL	92	2.4130	.80463	.08389	2.2464	2.5797
More than 6400 TL	179	2.3352	.78988	.05904	2.2187	2.4517
Total	506	2.4443	.81124	.03606	2.3735	2.5152

Table 32 shows test of homogeneity of variances. According to Table 32,  $p$  value is .284 which is greater than .05. Therefore, variances of groups are equally assumed.

Table 32. Homogeneity of Variances Table of Income Levels

Mean.SMA			
Levene Statistic	df1	df2	Sig.
1.261	4	501	.284

The result of one-way ANOVA test illustrated in Table 33 shows that there is no significant difference among the groups which are created according to income level of the participants  $F(4, 501) = 1.69, p = .152$  which is greater than .05. As a result of Table 33, Hypothesis 20 was rejected.

Table 33. ANOVA Table of Income Levels

Mean.SMA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.415	4	1.104	1.686	.152
Within Groups	327.934	501	.655		
Total	332.349	505			

#### 5.4.6 Occupational group differences in terms of social media addiction

The participants had different occupations. Hypothesis 21 asserts that there are significant differences among different occupational groups in terms of social media addiction. Whether social media addiction level change from occupation to occupation or not was tested by one-way ANOVA. Descriptive statistics of occupational groups in terms of SMA are demonstrated in Table 34.

Table 34. Descriptive Statistics of Occupational Groups in terms of SMA

Occupation Groups	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval Mean	
					Lower Bound	Upper Bound
Architecture	11	2.5758	1.10896	.33436	1.8307	3.3208
Arts & Communication	11	2.3333	.96032	.28955	1.6882	2.9785
Business Management	29	2.5690	.74071	.13755	2.2872	2.8507
Education	62	2.4973	.79702	.10122	2.2949	2.6997
Engineering	38	2.2325	.66727	.10825	2.0131	2.4518
Finance	12	2.1806	.97302	.28089	1.5623	2.7988
Government & Public Administration	28	2.3810	.99882	.18876	1.9936	2.7683
Health Science	39	2.4744	.77849	.12466	2.2220	2.7267
Housewife	35	2.2524	.75987	.12844	1.9914	2.5134
Human Services	35	2.3762	.83953	.14191	2.0878	2.6646
Information Technology	14	2.4643	.99610	.26622	1.8892	3.0394
Law	15	2.6889	.48332	.12479	2.4212	2.9565
Manufacturing	10	2.3167	.77559	.24526	1.7618	2.8715
Marketing	11	1.9242	.72405	.21831	1.4378	2.4107
Retired	18	2.3611	.75678	.17837	1.9848	2.7374
Student	108	2.6806	.78244	.07529	2.5313	2.8298
Transportation, Distribution & Logistics	24	2.2014	.81942	.16726	1.8554	2.5474
Total	500	2.4470	.81357	.03638	2.3755	2.5185

According to Table 34, by comparing means of occupational groups in terms of SMA, it can be said that people working in law area ( $M = 2.69$ ,  $SD = .48$ ) and students ( $M = 2.68$ ,  $SD = .78$ ) are relatively more addicted to social media platforms

than the others. Furthermore, participants working in marketing area ( $M = 1.92$ ,  $SD = .72$ ) and participants working in finance sector ( $M = 2.18$ ,  $SD = .97$ ) are relatively less addicted to social media platforms than the others. ANOVA table should be viewed to see whether these differences are significant or not.

According to Table 35, there is no significant difference among the variances of occupational groups in terms of social media addiction degree of the participants ( $p = .352 > .05$ ).

Table 35. Homogeneity of Variances Table of Occupational Groups

Mean.SMA			
Levene Statistic	df1	df2	Sig.
1.100	16	483	.352

Table 36 demonstrates the results gained from ANOVA revealed that occupational groups are not significantly different from each other in terms of social media addiction  $F(16, 483) = 1.60$ ,  $p > .05$ . Therefore, Hypothesis 21 was rejected.

Table 36. ANOVA Table of Occupational Groups

Mean.SMA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.696	16	1.043	1.607	.063
Within Groups	313.594	483	.649		
Total	330.290	499			

#### 5.4.7 Relationship between daily spending time on social media and SMA

Social media usage habits alter from people to people and this might affect social media addiction level of people. According to Hypothesis 22, there is a positive correlation between daily spending times on social networking sites and social media addiction level of the participants. One-way ANOVA test was applied to see

differences between participants who spend more time on social media and participants who spend less time on social media. Descriptive statistics of groups which are created by taking into consideration of the participants' daily spending times on SNS are shown in Table 37.

Table 37. Descriptive Statistics of Daily Time in terms of SMA

Daily Time	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
0-1 Hour	131	2.0318	.75931	.06634	1.9006	2.1631
2-3 Hours	269	2.4461	.74402	.04536	2.3568	2.5354
4-5 Hours	67	2.7861	.71528	.08738	2.6116	2.9605
More than 5 Hours	39	3.2308	.74400	.11913	2.9896	3.4719
Total	506	2.4443	.81124	.03606	2.3735	2.5152

In Table 37, it is obviously seen that when daily spending time on SNS are increasing, means of social media addiction level is increasing. People who spend more times on social media have higher level of social media addiction.

According to Table 38, there are almost no difference among the variances of groups which are created according to daily spending time of people ( $p = .971$ ).

Table 38. Homogeneity of Variances Table of Daily Time

Mean.SMA			
Levene Statistic	df1	df2	Sig.
.079	3	502	.971

ANOVA results which are displayed in Table 39 indicate that groups which are created according to daily spending time on SNS of the participants are significantly different from each other,  $F(3, 502) = 32.63, p = .000$ . Therefore, Hypothesis 22 was accepted.

Table 39. ANOVA Table of Daily Time

Mean.SMA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	54.239	3	18.080	32.635	.000
Within Groups	278.109	502	.554		
Total	332.349	505			

Bonferroni test through post-hoc analyses was conducted because a significant main effect of daily spending time upon SMA was found. According to Table 40 which shows the results of post-hoc analysis, all groups are significantly different from each other. While the participants who spend less than an hour on social media have the lowest social media addiction level among the participants ( $M = 2.03$ ,  $SD = .76$ ), the participants who spend more than five hours have the highest social media addiction level ( $M = 3.23$ ,  $SD = .74$ ). Moreover, people who spend between four and five hours ( $M = 2.79$ ,  $SD = .72$ ) on SNS have higher score in SMA than people who spend between two and three hours ( $M = 2.45$ ,  $SD = .74$ ).

Table 40. Post-Hoc Analyses of Daily Time

Dependent Variable: Mean.SMA					
	(I) DailyTime	(J) DailyTime	Mean Difference (I-J)	Std. Error	Sig.
Bonferroni	0-1 Hour	2-3 Hours	-.41429*	.07930	.000
		4-5 Hours	-.75426*	.11179	.000
		More than 5 Hours	-1.19896*	.13577	.000
	2-3 Hours	0-1 Hour	.41429*	.07930	.000
		4-5 Hours	-.33997*	.10163	.005
		More than 5 Hours	-.78467*	.12753	.000
	4-5 Hours	0-1 Hour	.75426*	.11179	.000
		2-3 Hours	.33997*	.10163	.005
		More than 5 Hours	-.44470*	.14991	.019
	More than 5 Hours	0-1 Hour	1.19896*	.13577	.000
		2-3 Hours	.78467*	.12753	.000
		4-5 Hours	.44470*	.14991	.019

#### 5.4.8 Relationship between amount of social media checks and SMA

While some people prefer to spend a long time on social media without any break, some people spend the same duration by checking their social media accounts several times instead of once in a day. Therefore, check time is another parameter to define social media usage habits. Hypothesis 23 asserts that there is a positive correlation between how many times participants check their social media accounts and their social media addiction level. In order to understand whether check time is effective upon SMA or not, a one-way ANOVA analysis was conducted. Descriptive statistics of groups according to the participants' check times of their social media accounts are indicated in Table 41 which reveals that, the more the participants check their social media accounts, relatively the more addicted they become.

Table 41. Descriptive Statistics of Check Time in terms of SMA

Check Times	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Less than 6 Times	116	2.0819	.78312	.07271	1.9379	2.2259
6-10 Times	156	2.3729	.71695	.05740	2.2595	2.4863
11-20 Times	111	2.5180	.77959	.07399	2.3714	2.6647
21-30 Times	64	2.6927	.83846	.10481	2.4833	2.9021
More than 30 Times	59	2.9379	.78838	.10264	2.7324	3.1433
Total	506	2.4443	.81124	.03606	2.3735	2.5152

Test of homogeneity of variances are illustrated in Table 42. According to Table 42,  $p$  value equals to .285, so group variances can be accepted as homogenous.

Table 42. Homogeneity of Variances Table of Check Time

Mean.SMA			
Levene Statistic	df1	df2	Sig.
1.261	4	501	.285

After the homogeneity of variances assumption was supported, ANOVA table was evaluated. ANOVA results about the impact of the amount of the participants' social media checks on SMA are placed in Table 43. These results which support Hypothesis 23 shows that there are significant differences in terms of the SMA among the groups which are created how many times the participants check their social media accounts in a day,  $F(4, 501) = 14.72, p = .000$ .

Table 43. ANOVA Table of Check Time

Mean.SMA	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	34.956	4	8.739	14.722	.000
Within Groups	297.393	501	.594		
Total	332.349	505			

In order to find which groups generated this significant difference, after the application of one-way ANOVA test, a Bonferroni test among post-hoc analyses was conducted. Table 44 demonstrates the results of post-hoc analysis of the amount of social media check times in terms of social media addiction.

According to Table 44, differences between participants who check their social media accounts less than six times ( $M = 2.08, SD = .78$ ) and others are statistically significant. Participants who check their social media accounts between six and ten times ( $M = 2.37, SD = .72$ ) and participants who check their social media accounts between 11 and 20 times ( $M = 2.52, SD = .78$ ) are significantly different from participants who check their social media accounts more than 30 times ( $M = 2.93, SD = .79$ ). Besides, it can be also claimed that there is a significant difference between participants who check their social media accounts between six and ten times ( $M = 2.37, SD = .72$ ) and participants who check their social media

accounts between 21 and 30 times ( $M = 2.69$ ,  $SD = .84$ ), since  $p$  value equals to .054 which is so close to .05.

Table 44. Post-Hoc Analyses of Check Time

Dependent Variable: Mean.SMA					
	(I) CheckTime	(J) CheckTime	Mean Difference (I-J)	Std. Error	Sig.
Bonferroni	Less than 6 Times	6-10 Times	-.29097*	.09446	.022
		11-20 Times	-.43612*	.10230	.000
		21-30 Times	-.61081*	.11997	.000
		More than 30 Times	-.85596*	.12320	.000
	6-10 Times	Less than 6 Times	.29097*	.09446	.022
		11-20 Times	-.14515	.09567	1.000
		21-30 Times	-.31985	.11437	.054
		More than 30 Times	-.56499*	.11775	.000
	11-20 Times	Less than 6 Times	.43612*	.10230	.000
		6-10 Times	.14515	.09567	1.000
		21-30 Times	-.17469	.12092	1.000
		More than 30 Times	-.41984*	.12413	.008
	21-30 Times	Less than 6 Times	.61081*	.11997	.000
		6-10 Times	.31985	.11437	.054
		11-20 Times	.17469	.12092	1.000
		More than 30 Times	-.24514	.13905	.785
More than 30 Times	Less than 6 Times	.85596*	.12320	.000	
	6-10 Times	.56499*	.11775	.000	
	11-20 Times	.41984*	.12413	.008	
	21-30 Times	.24514	.13905	.785	

### 5.5 Correlation analyses

Correlation analyses based on the theoretical model of present study mentioned in Chapter 3 were applied to detect whether there is a significant correlation among the variables or not. In results, while negative  $r$  values represent negative correlations, positive  $r$  values represent positive correlations between variables. To understand whether the correlation is significant or not,  $p$  values of tests should be less than .05.

Table 45 shows the result of correlation tests about the openness variable. According to correlation test results, openness variable is significantly and positively correlated with creativity ( $r = .65, p = .000$ ) and self-esteem ( $r = .28, p = .000$ ). Although there is no significant correlation between openness and SMA at .05 alpha level ( $r = -.75, p = .090$ ),  $p$  value is in acceptable range for 90% confidence interval. Thus, it can be concluded that openness has a significant correlation with creativity, self-esteem and social media addiction.

Table 45. Correlation Analysis Results of Openness

Variables		Creativity	Self-Esteem	SMA
Openness	Pearson Correlation	.654	.283	-.075
	Sig. (2-tailed)	.000	.000	.090

Correlation analysis results about the creativity variable are shown in Table 46. According to Table 46, creativity has a significant correlation with social media addiction ( $r = -.129, p = .004$ ) in addition to openness variable ( $r = .65, p = .000$ ).

Table 46. Correlation Analysis Results of Creativity

Variables		Openness	SMA
Creativity	Pearson Correlation	.654	-.129
	Sig. (2-tailed)	.000	.004

Moreover, in Table 47, it is seen that self-esteem is significantly correlated with four different variables which are openness ( $r = .28, p = .000$ ), life satisfaction ( $r = .50, p = .000$ ), neuroticism ( $r = -.53, p = .000$ ) and SMA ( $r = -.32, p = .000$ ).

Table 47. Correlation Analysis Results of Self-Esteem

Variables		Openness	Life Satisfaction	Neuroticism	SMA
Self-Esteem	Pearson Correlation	.283	.505	-.533	-.324
	Sig. (2-tailed)	.000	.000	.000	.000

Table 48 indicates that there is a significant association between loneliness and neuroticism ( $r = .54, p = .000$ ), and between loneliness and social media addiction level of the participants ( $r = .22, p = .000$ ).

Table 48. Correlation Analysis Results of Loneliness

Variables		Neuroticism	SMA
Loneliness	Pearson Correlation	.538	.216
	Sig. (2-tailed)	.000	.000

Table 49 shows that neuroticism is significantly correlated with not only loneliness ( $r = .54, p = .000$ ) and self-esteem ( $r = -.53, p = .000$ ) but also social media addiction ( $r = .31, p = .000$ ).

Table 49. Correlation Analysis Results of Neuroticism

Variables		Self-Esteem	Loneliness	SMA
Neuroticism	Pearson Correlation	-.533	.538	.311
	Sig. (2-tailed)	.000	.000	.000

In Table 50 called correlation analysis results of stress, it is seen that stress has a significant association with both life satisfaction ( $r = -.48, p = .000$ ) and social media addiction ( $r = .38, p = .000$ ).

Table 50. Correlation Analysis Results of Stress

Variables		Life Satisfaction	SMA
Stress	Pearson Correlation	-.480	.379
	Sig. (2-tailed)	.000	.000

In addition to self-esteem and stress, life satisfaction is also significantly associated with social media addiction according to correlation analysis results indicated in Table 51.

Table 51. Correlation Analysis Results of Life Satisfaction

Variables		Self-Esteem	Stress	SMA
Life Satisfaction	Pearson Correlation	.505	-.480	-.197
	Sig. (2-tailed)	.000	.000	.000

The result of correlation analysis which was conducted in order to observe correlation between social intelligence and social media addiction is demonstrated in Table 52. According to Table 52, there is a negatively significant correlation in 95% confidence interval ( $r = -.14, p = .002$ ) between social intelligence level and social media addiction level of the participants.

Table 52. Correlation Analysis Results of Social Intelligence

Variables		SMA
Social Intelligence	Pearson Correlation	-.139
	Sig. (2-tailed)	.002

Narcissism is one of the behavioral factors which affects social media addiction level of the participants according to theoretical model of the present study mentioned in Chapter 3. However, correlation test results in Table 53 illustrate that there is no significant correlation between narcissism and social media addiction level ( $r = .030, p = .504$ ). Therefore, Hypothesis 15 which argues that narcissism has a significant positive impact on social media addiction was rejected directly by looking at the correlation results of narcissism and SMA. Besides, according to this result, it was decided not to include the narcissism variable in SEM analysis.

Table 53. Correlation Analysis Results of Narcissism

Variables		SMA
Narcissism	Pearson Correlation	.030
	Sig. (2-tailed)	.504

## 5.6 Structural equation modeling

Structural equation modeling which estimates different multiple regression equations at the same time and provides to test complex models by evaluating each separate correlation among observed independent variables and dependent variables (Hair et al., 2014) was applied to test the hypotheses H<sub>1</sub>, H<sub>2</sub>, H<sub>3</sub>, H<sub>4</sub>, H<sub>5</sub>, H<sub>6</sub>, H<sub>7</sub>, H<sub>8</sub>, H<sub>9</sub>, H<sub>10</sub>, H<sub>11</sub>, H<sub>12</sub>, H<sub>13</sub>, and H<sub>14</sub> of the theoretical model. These hypotheses are analyzed to understand the impacts of specific behavioral factors on social media addiction level of the participants, and to detect whether there is a significant relationship among these variables in the model or not. Although narcissism is a part of the theoretical framework of this study, it is excluded from the SEM analysis, since narcissism does not have any correlation with social media addiction level of the participants according to the results of correlation analyses.

### 5.6.1 Confirmatory factor analysis

The first step of SEM is confirmatory factor analysis. A measurement model including nine latent variables named openness, stress, life satisfaction, creativity, social intelligence, loneliness, neuroticism, self-esteem and SMA was created to see standardized regression weights of each item of all factors by using maximum likelihood method.

Factor loadings based on this measurement model were estimated. Hair and colleagues (2014) claimed that if sample consists of 350 or more people, factor loadings should be at least .30 to be significant, but .50 or greater is more acceptable for significance. Therefore, some items which had a value smaller than .50 were removed from the model. After deleting some items, measurement model was revised twice until there were no items which had lower factor loading value.

### 5.6.1.1 Measurement model first version

In first version of measurement model, life satisfaction variable has five items, openness variable has 10 items, stress variable has 14 items, creativity variable has five items, social intelligence variable has five items, loneliness variable has eight items, neuroticism variable has six items, self-esteem variable has 10 items and SMA variable has six items. First version of measurement model is shown in Figure 2.

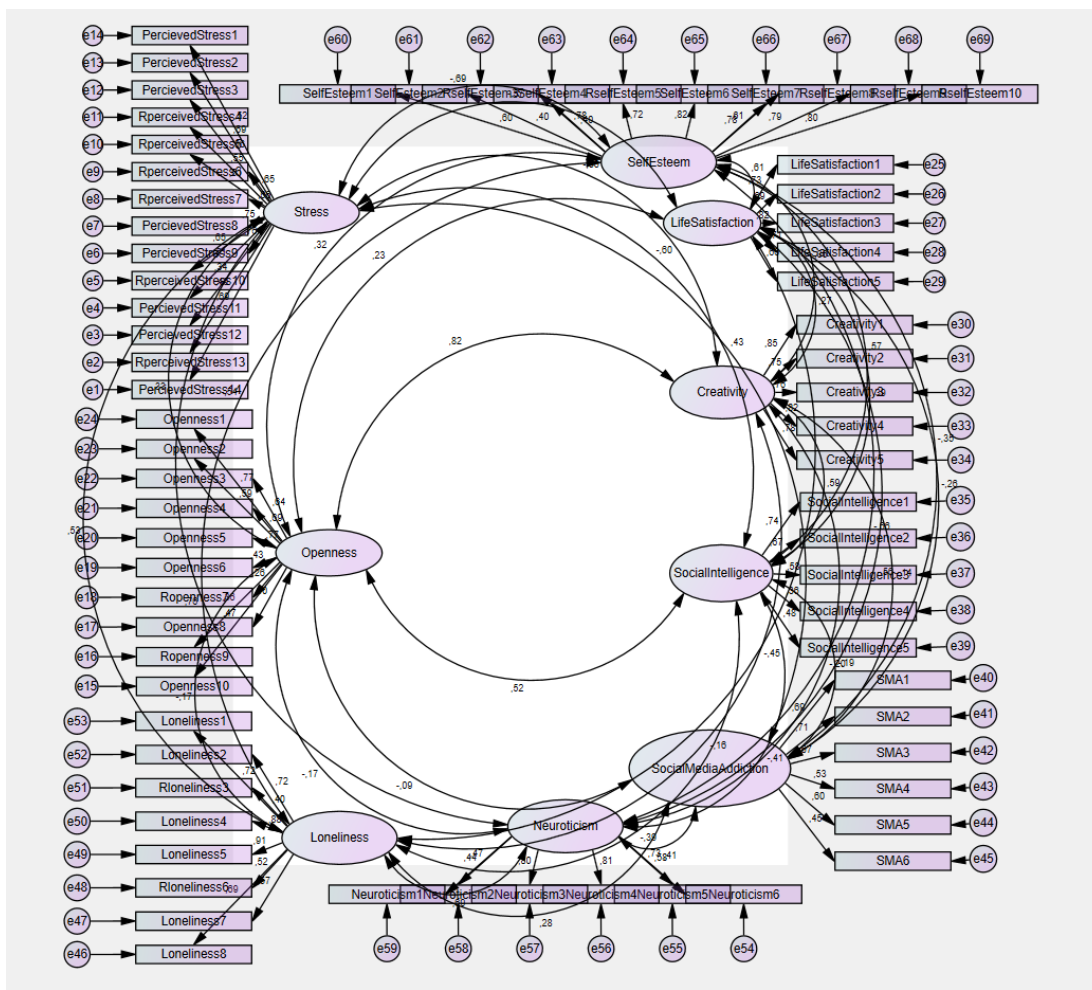


Figure 2 Measurement model first version

Factor loadings of each item of life satisfaction variable as a latent variable are indicated in Table 54. According to Table 54, all six items of life satisfaction

variable were significant because the loading factors are greater than .50. Thus, it is not needed to delete any item.

Table 54. Factor Loadings of Items in Life Satisfaction as a Latent Variable

Latent Variable	Items	Loading Factors
Life Satisfaction	LifeSatisfaction1	.725
	LifeSatisfaction2	.687
	LifeSatisfaction3	.817
	LifeSatisfaction4	.712
	LifeSatisfaction5	.655

Table 55 shows the factor loadings of items in openness variable. Items called Openness6 (.43), Ropenness7 (.25), Openness8 (.39), ROpenness9 (.36), and Openness10 (.47) were removed from the model, since factor loadings were smaller than .50.

Table 55. Factor Loadings of Items in Openness as a Latent Variable

Latent Variable	Items	Loading Factors
Openness	Openness1	.773
	Openness2	.591
	Openness3	.643
	Openness4	.685
	Openness5	.774
	Openness6	.430
	Ropenness7	.255
	Openness8	.395
	Ropenness9	.358
	Openness10	.473

Factor loadings of each item of stress variable are demonstrated in Table 56. According to Table 56, the items which are labelled PercievedStress12 (.34) and RPercievedStress13 (.49) were deleted, since they were not significant. The other items of stress scale had significant loading factors which were greater than .50.

Table 56. Factor Loadings of Items in Stress as a Latent Variable

Latent Variable	Items	Loading Factors
Stress	PercievedStress1	.518
	PerceivedStress2	.695
	PercievedStress3	.664
	RpercievedStress4	.553
	RperceivedStress5	.610
	RpercievedStress6	.653
	RpercievedStress7	.657
	PerceivedStress8	.754
	PerceivedStress9	.756
	RperceivedStress10	.647
	PerceivedStress11	.507
	PercievedStress12	.338
	RPercievedStress13	.488
	PercievedStress14	.694

In Table 57, it is obviously seen that all items of creativity variable are significant because of the values of loading factors.

Table 57. Factor Loadings of Items in Creativity as a Latent Variable

Latent Variable	Items	Loading Factors
Creativity	Creativity1	.851
	Creativity2	.746
	Creativity3	.755
	Creativity4	.822
	Creativity5	.781

Factor loadings of items in social intelligence variable are shown in Table 58. According to Table 58, SocialIntelligence4 item (.36) and SocialIntelligence5 item (.48) should be removed from the measurement model.

Table 58. Factor Loadings of Items in Social Intelligence as a Latent Variable

Latent Variable	Items	Loading Factors
Social Intelligence	SocialIntelligence1	.737
	SocialIntelligence2	.669
	SocialIntelligence3	.576
	SocialIntelligence4	.363
	SocialIntelligence5	.482

Table 59 illustrates factor loadings of items in loneliness variable. Only Rloneliness3 item value which equaled to .39 and smaller than .50 was deleted. The others were significant.

Table 59. Factor Loadings of Items in Loneliness as a Latent Variable

Latent Variable	Items	Loading Factors
Loneliness	Loneliness1	.716
	Loneliness2	.716
	Rloneliness3	.395
	Loneliness4	.879
	Loneliness5	.906
	Rloneliness6	.519
	Loneliness7	.574
	Loneliness8	.693

Items of neuroticism variable with their loading factors are demonstrated in Table 60. It is seen that items labelled Neuroticism1 and Neuroticism2 were not significant for this model. Therefore, these items were not included revised measurement model.

Table 60. Factor Loadings of Items in Neuroticism as a Latent Variable

Latent Variable	Items	Loading Factors
Neuroticism	Neuroticism1	.440
	Neuroticism2	.466
	Neuroticism3	.804
	Neuroticism4	.805
	Neuroticism5	.734
	Neuroticism6	.582

Table 61 indicates loading factor of each item in self-esteem variable. According to Table 61, loading factor value of SelfEsteem2 item and SelfEsteem4 is .40 which is smaller than acceptable ratio. Thus, these two items were removed from the measurement model.

Table 61. Factor Loadings of Items in Self-Esteem as a Latent Variable

Latent Variable	Items	Loading Factors
Self-Esteem	SelfEsteem1	.603
	SelfEsteem2	.404
	RselfEsteem3	.780
	SelfEsteem4	.400
	RselfEsteem5	.719
	SelfEsteem6	.816
	SelfEsteem7	.781
	RselfEsteem8	.613
	RselfEsteem9	.793
	RselfEsteem10	.802

Social media addiction labelled SMA is a dependent variable of this research. Loading factors of items in SMA variable are illustrated in Table 62. According to Table 62, only loading factor of SMA6 (.45) is smaller than .50. Therefore, just this item among the items of SMA was deleted from this model. The other items were kept in the model.

Table 62. Factor Loadings of Items in Social Media Addiction as Latent Variable

Latent Variable	Items	Loading Factors
Social Media Addiction	SMA1	.695
	SMA2	.707
	SMA3	.667
	SMA4	.533
	SMA5	.598
	SMA6	.449

In this model, chi-square ( $\chi^2$ ) and degrees of freedom ( $df$ ) as goodness of fit indices, root mean square error of approximation (RMSEA) and normed chi-square ( $\chi^2 / df$ ) as absolute fit measures and comparative fit index (CFI) as an incremental fit index were taken into consideration to evaluate fitness of the model.

According to Hair and colleagues (2014), root mean square error of approximation is one of the most appropriate methods to measure fitness of the models especially for large samples which includes more than 500 participants. If the

sample consists of more than 500 people, the value of RMSEA should be between .03 and .08 in order to say that the model is acceptable. Besides, normed chi-square should be equal to or smaller than three in order to mention better-fitting model. Moreover, if the value of CFI which changes from zero to one is above .90, it can be stated that this model fits greatly with the data.

First version of measurement model fit summary is shown in Table 63 which includes chi-square (6143.724), degrees of freedom (2241), RMSEA (.059), normed chi-square (2.74) and CFI (.778). In addition to these values, *p* value is equal to .000 in this measurement model.

Table 63. First Version of Measurement Model Fit Summary

Goodness of Fit Indices		Absolute Fit Measures		Incremental Fit Indices
Chi-Square	Degrees of Freedom	RMSEA	Normed Chi-Square	CFI
6143.724	2241	.059	2.74	.778

#### 5.6.1.2 Measurement model second version

Measurement model second version which is indicated in Figure 3 was created by removing some items that had values smaller than .50 from the first version of the measurement model.

Second version of the measurement model which consists of five items for life satisfaction variable, five items for openness variable, 12 items for stress variable, five items for creativity variable, three items for social intelligence variable, seven items for loneliness variable, four items for neuroticism variable, eight items for self-esteem variable and five items for social media addiction variable was generated.

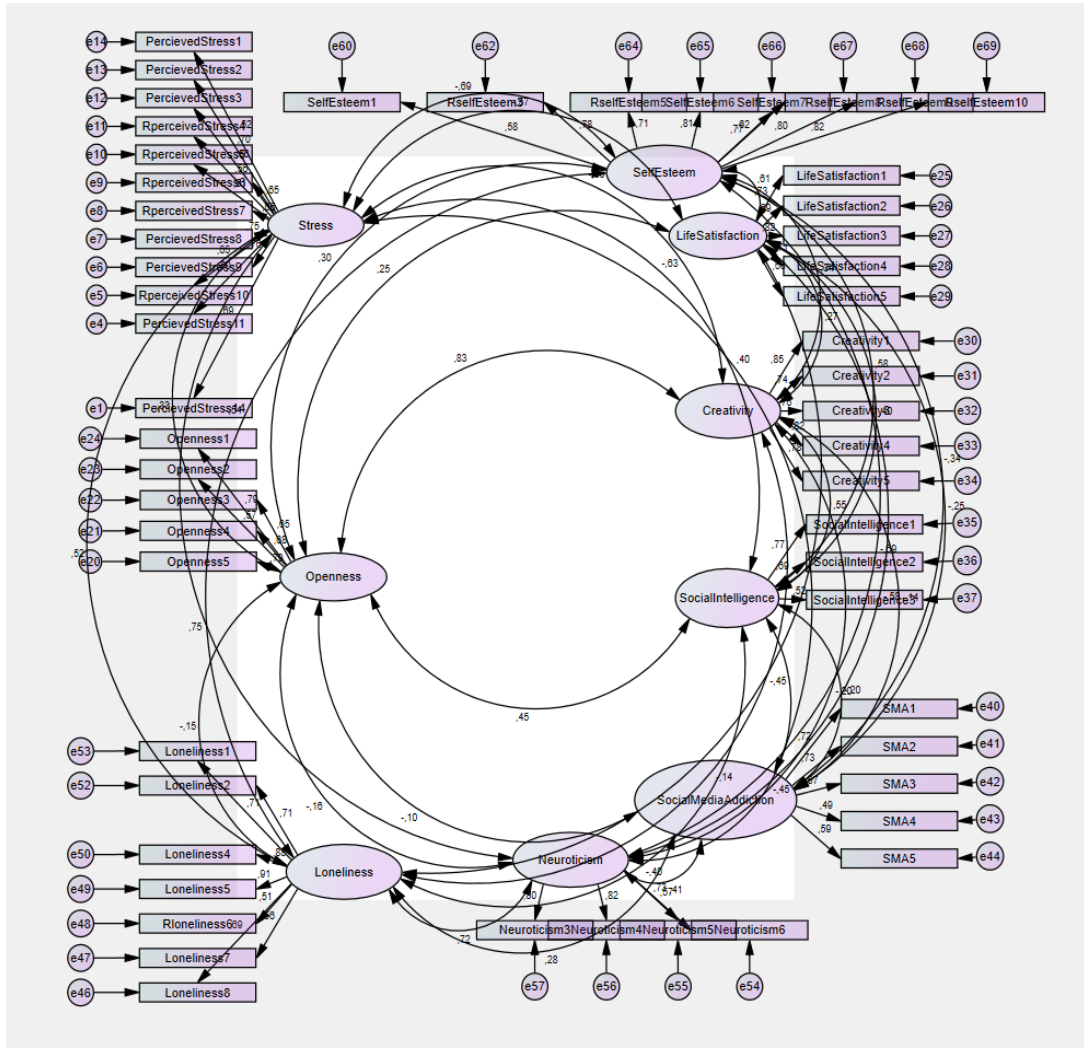


Figure 3 Measurement model second version

The values of factor loadings for each item in variables which are stress, openness, life satisfaction, creativity, social intelligence, loneliness, neuroticism and self-esteem are demonstrated in Table 64. According to Table 64 for the loading factors of behavioral variables, there is no item that have a value of smaller than .50. Therefore, it can be claimed that it is not needed to remove any item among these variables. As a result, these items are significant items in order to continue SEM analysis.

Table 64 . Loading Factors of Behavioral Variables

Latent Variables	Items	Loading Factors	
Stress	PercievedStress1	.525	
	PercievedStress2	.698	
	RperceivedStress3	.662	
	PercievedStress4	.555	
	PercievedStress5	.611	
	RperceivedStress6	.653	
	RperceivedStress7	.661	
	RperceivedStress8	.752	
	RperceivedStress9	.758	
	PercievedStress10	.648	
	PercievedStress11	.503	
	PercievedStress14	.691	
	Openness	Openness1	.786
		Openness2	.573
Openness3		.648	
Openness4		.680	
Openness5		.785	
Life Satisfaction	LifeSatisfaction1	.725	
	LifeSatisfaction2	.687	
	LifeSatisfaction3	.817	
	LifeSatisfaction4	.711	
	LifeSatisfaction5	.656	
Creativity	Creativity1	.849	
	Creativity2	.744	
	Creativity3	.757	
	Creativity4	.823	
	Creativity5	.781	
Social Intelligence	SocialIntelligence1	.770	
	SocialIntelligence2	.690	
	SocialIntelligence3	.522	
Loneliness	Loneliness1	.713	
	Loneliness2	.714	
	Loneliness4	.882	
	Loneliness5	.912	
	Rloneliness6	.507	
	Loneliness7	.562	
	Loneliness8	.692	
	Neuroticism	Neuroticism3	.801
Neuroticism4		.820	
Neuroticism5		.728	
Neuroticism6		.572	
Self-Esteem	SelfEsteem1	.580	
	RselfEsteem3	.780	
	RselfEsteem5	.708	
	SelfEsteem6	.811	
	SelfEsteem7	.775	
	RselfEsteem8	.624	
	RselfEsteem9	.805	
	RselfEsteem10	.817	

However, loading factors of items in social media addiction named SMA demonstrated in Table 65 illustrates that loading factor value of the item SMA4 is .491 which is smaller than .50. Therefore, this item was deleted from the model.

Table 65. Loading Factors of SMA

Latent Variable	Items	Loading Factors
Social Media Addiction	SMA1	.715
	SMA2	.725
	SMA3	.671
	SMA4	.491
	SMA5	.586

Chi-square (3429.592), degrees of freedom (1341), RMSEA (.056), normed chi-square (2.56) and CFI (.857) values of the second version of measurement model are indicated in Table 66. Besides, all variables are significant, since *p* value is .000.

Table 66. Second Version of Measurement Model Fit Summary

Goodness of Fit Indices		Absolute Fit Measures		Incremental Fit Indices
Chi-Square	Degrees of Freedom	RMSEA	Normed Chi-Square	CFI
3429.592	1341	.056	2.56	.857

### 5.6.1.3 Measurement model last version

SMA4 item was removed according to the results of the second version of the measurement model. Therefore, it is required to revise the measurement model of the present study one more time. This measurement model named measurement model last version was used as a main measurement model in SEM analysis. Measurement model shown in Figure 4 includes five life satisfaction, five openness, 12 stress, five creativity, three social intelligence, seven loneliness, four neuroticism, eight self-esteem and four SMA items.

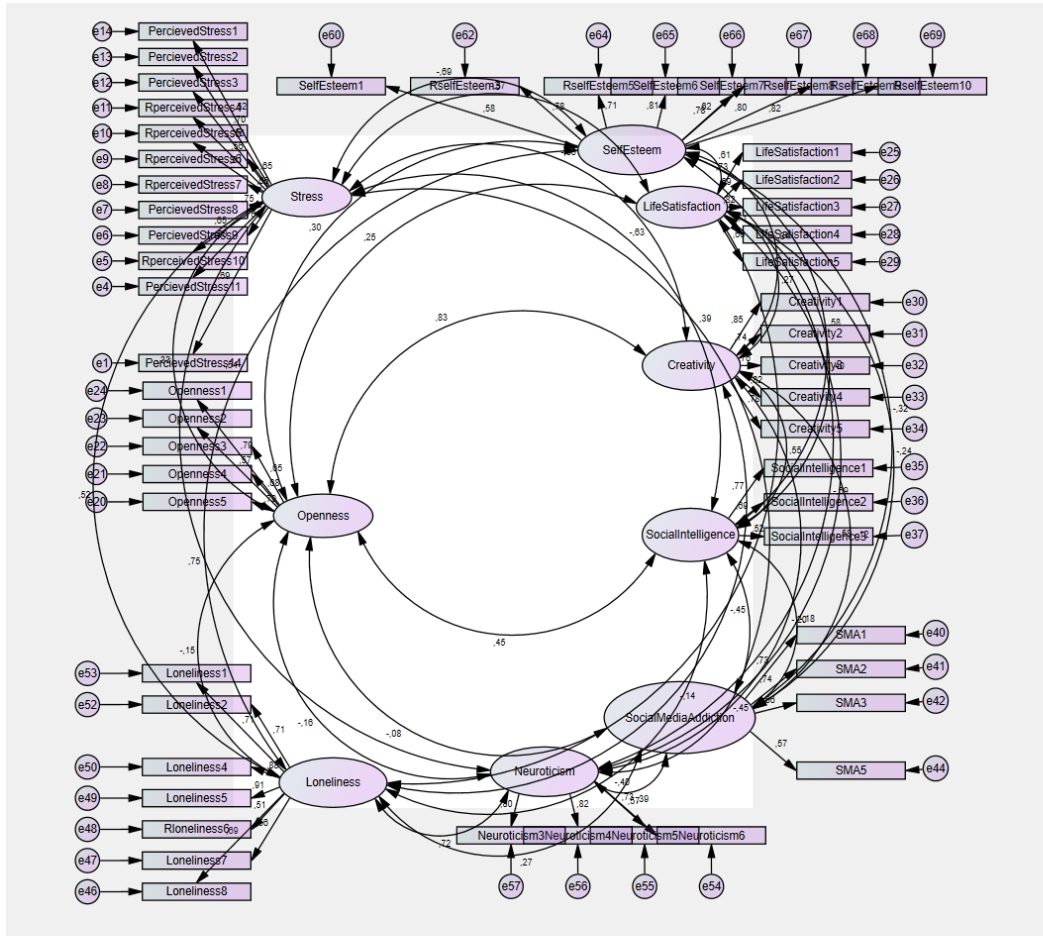


Figure 4 Measurement model last version

According to this measurement model, loading factors of all items have a value greater than .50. Therefore, this model was used as a measurement model of the SEM analysis. In this model, each variable is significant ( $p = .000$ ). Loading factors of each item in social media addiction variable are illustrated in Table 67 and loading factors of each item in the other variables are indicated in Table 68.

Table 67. Loading Factors of SMA

Latent Variable	Items	Loading Factors
Social Media Addiction	SMA1	.735
	SMA2	.740
	SMA3	.655
	SMA5	.569

Table 68. Loading Factors of Behavioral Variables

Latent Variables	Items	Loading Factors	
Stress	PercievedStress1	.525	
	PercievedStress2	.698	
	RperceivedStress3	.662	
	PercievedStress4	.555	
	PercievedStress5	.612	
	RperceivedStress6	.653	
	RperceivedStress7	.662	
	RperceivedStress8	.751	
	RperceivedStress9	.758	
	PercievedStress10	.648	
	PercievedStress11	.504	
	PercievedStress14	.691	
	Openness	Openness1	.786
		Openness2	.573
Openness3		.647	
Openness4		.680	
Openness5		.785	
Life Satisfaction	LifeSatisfaction1	.725	
	LifeSatisfaction2	.687	
	LifeSatisfaction3	.817	
	LifeSatisfaction4	.711	
	LifeSatisfaction5	.656	
Creativity	Creativity1	.849	
	Creativity2	.744	
	Creativity3	.757	
	Creativity4	.823	
	Creativity5	.781	
Social Intelligence	SocialIntelligence1	.770	
	SocialIntelligence2	.691	
	SocialIntelligence3	.522	
Loneliness	Loneliness1	.713	
	Loneliness2	.714	
	Loneliness4	.882	
	Loneliness5	.912	
	Rloneliness6	.507	
	Loneliness7	.562	
	Loneliness8	.692	
	Neuroticism	Neuroticism3	.800
Neuroticism4		.820	
Neuroticism5		.727	
Neuroticism6		.572	
Self-Esteem	SelfEsteem1	.580	
	RselfEsteem3	.780	
	RselfEsteem5	.708	
	SelfEsteem6	.811	
	SelfEsteem7	.775	
	RselfEsteem8	.624	
	RselfEsteem9	.804	
	RselfEsteem10	.817	

A fit summary of this measurement model is so important, since this model was used as a measurement model in the SEM analysis of present study. According to the fit summary of this measurement model indicated in Table 69, chi-square value of the model equals to 3359.417 and degrees of freedom is 1289. If chi-square value is divided by degrees of freedom, the result called normed chi-square will found as 2.60 which is smaller than 3.0. Therefore, normed chi-square value is an acceptable fit value. Besides, RMSEA value is .056 which is between .03 and .08, so it is also acceptable. For CFI value, accepted value is usually above .90. In this measurement model, CFI is .86 which is close to .90. Thus, it might be said that this measurement model ensures prevalent fit to the data.

Table 69. Last Version of Measurement Model Fit Summary

Goodness of Fit Indices		Absolute Fit Measures		Incremental Fit Indices
Chi-Square	Degrees of Freedom	RMSEA	Normed Chi-Square	CFI
3359.417	1289	.056	2.60	.858

### 5.6.2 Structural model

Structural model which is the second step of SEM analysis designates the relationships between the independent and dependent variables as a path model (Hair et al., 2014).

In this study, structural model was created to test hypotheses and measure the model validity by benefitting from measurement model last version mentioned in Heading 5.3.1.3. Relationships among the variables were added to the structural model according to the theoretical model of this study described in Chapter 3 except narcissism variable. Structural model with their variables and relationships among variables are seen in Figure 5.

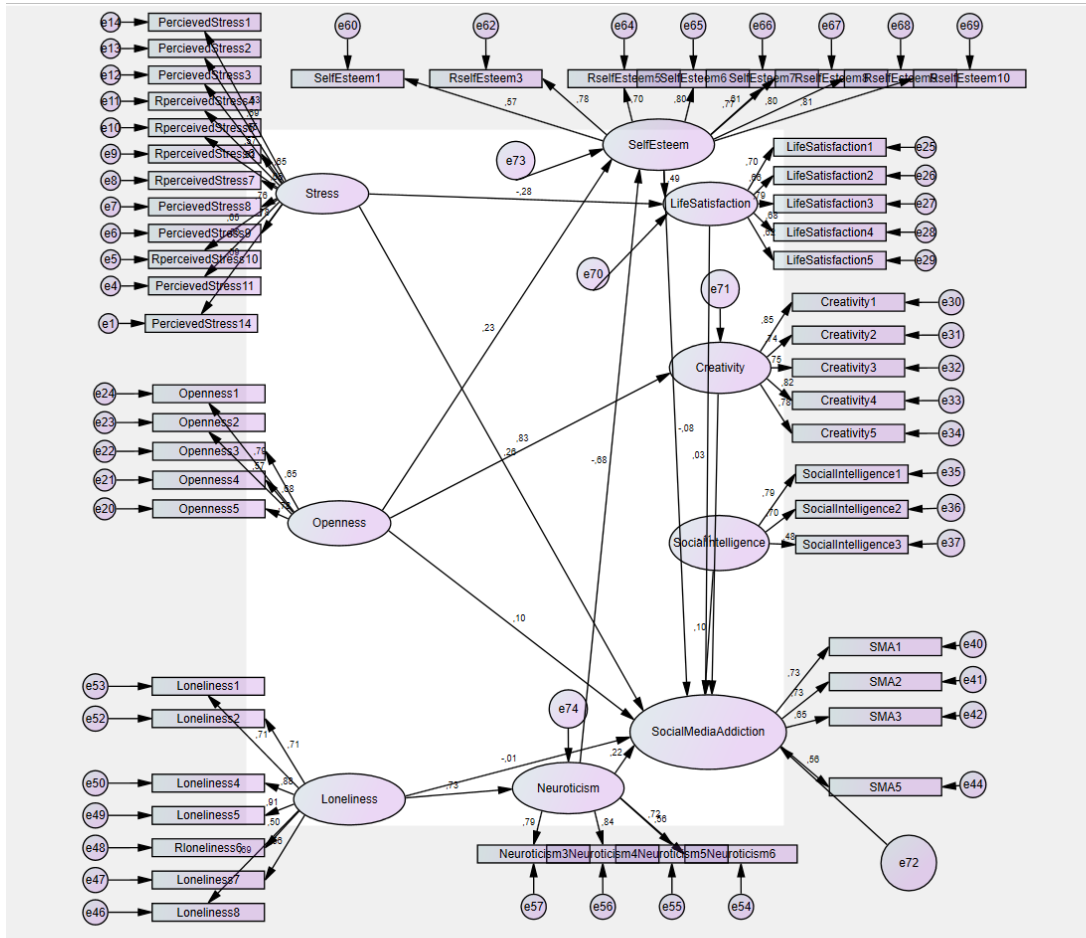


Figure 5 Structural model

Structural model validity was checked by evaluating a normed chi-square, RMSEA and CFI values of the model before to assess test results of the hypotheses. There are values of chi-square (4020.352), degrees of freedom (1311), RMSEA, normed chi-square and CFI in Table 70 as a structural model fit summary. RMSEA value (.064) is in acceptable fit range which is between .03 and .08. Normed chi-square value (3.07) can be also acceptable because it is almost 3.0. CFI value is equal to .814 which is a little bit smaller than commonly used acceptable range (.90). Overall, it might be said that structural model meets the requirements of model fit like measurement model last version.

Table 70. Structural Model Fit Summary

Goodness of Fit Indices		Absolute Fit Measures		Incremental Fit Indices
Chi-Square	Degrees of Freedom	RMSEA	Normed Chi-Square	CFI
4020.352	1311	.064	3.067	.814

After testing the structural model validity, regression weights and *p* values of variables and the hypotheses were evaluated. According to Table 71, among the independent variables of present study, openness has a significant positive impact on creativity and self-esteem, self-esteem has a significant positive impact on life satisfaction, loneliness has a significant positive impact on neuroticism, neuroticism has a significant negative impact on self-esteem and stress has a significant negative impact on life satisfaction. This means that Hypothesis 1, Hypothesis 2, Hypothesis 5, Hypothesis 7, Hypothesis 9 and Hypothesis 11 were accepted.

Table 71. Standardized Regression Weights of Variables and Hypotheses

H <sub>no</sub>	Relationships between Variables		Regression Weights	<i>p</i> Value	
H <sub>1</sub>		Creativity	.833	.000	
H <sub>2</sub>	Openness	--- >	Self-Esteem	.234	.000
H <sub>3</sub>		Social Media Addiction	.102	.405	
H <sub>4</sub>	Creativity	--- >	Social Media Addiction	-.106	.365
H <sub>5</sub>		Life Satisfaction	.491	.000	
H <sub>6</sub>	Self-Esteem	--- >	Social Media Addiction	-.079	.375
H <sub>7</sub>		Neuroticism	.734	.000	
H <sub>8</sub>	Loneliness	--- >	Social Media Addiction	-.010	.908
H <sub>9</sub>		Self-Esteem	-.676	.000	
H <sub>10</sub>	Neuroticism	--- >	Social Media Addiction	.220	.049
H <sub>11</sub>		Life Satisfaction	-.279	.000	
H <sub>12</sub>	Stress	--- >	Social Media Addiction	.260	.000
H <sub>13</sub>	Life Satisfaction	--- >	Social Media Addiction	.027	.692
H <sub>14</sub>	Social Intelligence	--- >	Social Media Addiction	.097	.083

The fundamental research question of this study is whether the specific behavioral factors have an impact on social media addiction or not. Therefore, dependent variable of this study is social media addiction. In Table 71, relationships between each independent variable and social media addiction variable are also demonstrated.

According to Table 71, stress and neuroticism have a significant positive impact on social media addiction degree of the participants at the .05 alpha level. Moreover, if the results are evaluated in 90% confidence interval, it can be deduced that social intelligence has also significant positive impact on social media addiction like stress and neuroticism. Therefore, Hypothesis 10, Hypothesis 12 and Hypothesis 14 were accepted. On the other hand, according to the results which are indicated in Table 65, openness, creativity, self-esteem, loneliness, and life satisfaction do not play a significant role on social media addiction level of the participants. Thus, Hypothesis 3, Hypothesis 4, Hypothesis 6, Hypothesis 8 and Hypothesis 13 were rejected.

Summary of the all hypotheses' results in the present study can be found in Table 72 which includes hypotheses' names, explanations of hypotheses and whether each hypothesis was accepted or not. In Table 72, it is seen that while Hypothesis 1, Hypothesis 2, Hypothesis 5, Hypothesis 7, Hypothesis 9, Hypothesis 10, Hypothesis 11, Hypothesis 12, Hypothesis 14, Hypothesis 16, Hypothesis 17, Hypothesis 18, Hypothesis 19, Hypothesis 22, and Hypothesis 23 were accepted, Hypothesis 3, Hypothesis 4, Hypothesis 6, Hypothesis 8, Hypothesis 13, Hypothesis 15, Hypothesis 20, and Hypothesis 21 were rejected.

Table 72. Summary of Hypotheses' Results

Name	Explanation of Hypothesis	Result
H <sub>1</sub>	Openness has a significant positive impact on creativity.	Accepted
H <sub>2</sub>	Openness has a significant positive impact on self-esteem.	Accepted
H <sub>3</sub>	Openness has a significant impact on social media addiction.	Rejected
H <sub>4</sub>	Creativity has a significant impact on social media addiction.	Rejected
H <sub>5</sub>	Self-esteem has a significant positive impact on life satisfaction.	Accepted
H <sub>6</sub>	Self-esteem has a significant negative impact on social media addiction.	Rejected
H <sub>7</sub>	Loneliness has a significant positive impact on neuroticism.	Accepted
H <sub>8</sub>	Loneliness has a significant positive impact on social media addiction.	Rejected
H <sub>9</sub>	Neuroticism has a significant negative impact on self-esteem.	Accepted
H <sub>10</sub>	Neuroticism has a significant positive impact on social media addiction.	Accepted
H <sub>11</sub>	Stress has a significant negative impact on life satisfaction.	Accepted
H <sub>12</sub>	Stress has a significant positive impact on social media addiction.	Accepted
H <sub>13</sub>	Life satisfaction has a significant negative impact on social media addiction.	Rejected
H <sub>14</sub>	Social intelligence has a significant impact on social media addiction.	Accepted
H <sub>15</sub>	Narcissism has a significant positive impact on social media addiction.	Rejected
H <sub>16</sub>	There is a significant difference between females and males in terms of social media addiction.	Accepted
H <sub>17</sub>	There is a significant difference between single and married participants in terms of social media addiction.	Accepted
H <sub>18</sub>	There is a significant difference among different age groups in terms of social media addiction.	Accepted
H <sub>19</sub>	There is a significant difference among different education levels in terms of social media addiction.	Accepted
H <sub>20</sub>	There is a significant difference among different income levels in terms of social media addiction.	Rejected
H <sub>21</sub>	There are significant differences among different occupational groups in terms of social media addiction.	Rejected
H <sub>22</sub>	There is a positive correlation between daily spending times on social networking sites and social media addiction level of the participants.	Accepted
H <sub>23</sub>	There is a positive correlation between how many times participants check their social media accounts and their social media addiction level.	Accepted

## CHAPTER 6

### DISCUSSION AND CONCLUSION

The fundamental aim of the present study is to investigate the impacts of specific behavioral factors which are openness, loneliness, life satisfaction, self-esteem, narcissism, neuroticism, creativity, social intelligence, and stress on social media addiction. In consideration of this purpose, based on a comprehensive literature review, a theoretical model and hypotheses were created, a questionnaire was prepared using the scales described in Chapter 4, and data collected from 506 participants was tested using descriptive statistics, independent sample t-tests, one-way ANOVA tests, correlation analyses, and structural equation modeling. In this chapter, results of this study will be discussed.

#### 6.1 Social media usage habits and their effects upon social media addiction

Preferred social networking sites and frequency of social media usage changes from participant to participant. However, almost all participants chose WhatsApp as one of their social media platforms. According to the respondents of the survey, not only WhatsApp but also respectively YouTube, Instagram and Facebook were chosen as widely used social media platforms. All of the participants selected at least one of the social networking sites verifying that everyone uses social media.

Although every participant uses a social media platform, surfing duration on the social media or times of entering social media accounts depends on the person. While some are really addicted to social media, others are using just to be informed about the current events of their family members or country. According to Kirik and colleagues (2015), daily spending time on social media and the number of social

media accounts checks are parallel to social media addiction. Also, in the present study, it was apparently observed that the more the participants use social media and check their accounts, the more they are relatively addicted to social media.

## 6.2 The impacts of demographical variables on social media addiction

Gender, age, marital status, education level, income status, and occupation variables were taken into consideration in this study.

In the present research, it was seen that social media addiction levels were relatively high for females, young people and singles.

Even though Jaradat and Atyeh (2017) claimed that gender and age differences were not effective upon problematic social media usage, it was revealed that female participants had relatively a higher social media addiction level than male participants in this study as well as the study of Andreassen and colleagues (2016). Females like to use technology as a socializing tool to sustain their relationships or to be part of a new community.

According to Pugh (2017), people who were born after the 1990's have the highest risk to be addicted to social media or any other technological improvement. Also, in this research, it was detected that social media addiction level of young participants was relatively higher than old participants. It means that age and social media addiction level have a negative linear relationship with each other, since young people adapt to technological developments more easily.

Social media platforms play an important role for single people to socialize and to get a chance to meet someone special (Andreassen et al., 2016). The finding of this study about the impact of marital status on social media addiction supports

this idea. Single participants showed relatively higher tendency to use social media than married participants.

In addition to gender, age, and marital status, education level of the participants also affected their social media addiction level. However, significant difference among all groups was not detected in terms of social media addiction. There is a difference between only two groups which are undergraduate students and participants who have Graduate or PhD degree. Therefore, it is difficult to say that education level is a crucial factor for social media addiction.

Income status and occupations were found as totally ineffective variables in this study. If expenditures were thought as having a similar impact on excessive social media usage with the income, Jaradat and Atyeh (2017) also stated that expenditures had no influence on social media addiction. In today's world, it is easy to reach any device which provides social media connection.

### 6.3 Relationships among behavioral variables except social media addiction

Theoretical model mentioned in Chapter 3 indicates that there are many correlations between not only social media addiction and other variables, but also between independent variables.

Openness is one of the independent variables of this study. It was seen that openness level of the participants played a significant role on their creativity level. When Jaradat and Atyeh (2017) were giving a definition of openness, they added to be creative by supporting the idea of King and colleagues (1996) that high openness level brought out high creativity level. Therefore, it is an undeniable fact that openness is one of the effective factors upon creativity. Besides, it was found that openness was positively associated with self-esteem level of the participants.

Amirazodi and Amirazodi (2011) also argued that openness was a trigger factor for self-esteem level.

Self-esteem is not only related with openness but also has a relationship with life satisfaction. According to Hawi and Samaha (2017), self-esteem level of people is a deterministic element for their life satisfaction level. This consideration was supported by the current study which illustrated that self-esteem was one of the variables that strongly increased life satisfaction levels of the participants. Another variable which affected life satisfaction significantly was stress. Longstreet and Brooks (2017) and finding of this research showed the great negative impact of stress on life satisfaction.

Loneliness is one of the other factors used in the present study. According to Mund and Neyer (2019), people who feel alone have higher level of neuroticism. As a supportive result, present study detected that loneliness caused neuroticism. Moreover, it was seen that neuroticism was one of the main reasons for low level of self-esteem. According to some research, increase in neuroticism level of people leads to decrease in their self-esteem level (Amirazodi & Amirazodi, 2011).

#### 6.4 The impacts of behavioral factors on social media addiction

The purpose of this research was to discover the effects of specific behavioral variables which were openness, creativity, self-esteem, loneliness, neuroticism, stress, life satisfaction, social intelligence and narcissism upon social media addiction. There were many factors which could alter the level of social media addiction. However, even if each factor had a correlation with social media addiction, when they were evaluated together their impacts could disappear. Therefore, in order to see which factors actually triggered social media addiction,

structural equation modeling was applied. Many findings were revealed by means of these analyses.

One of these findings was that openness did not have an impact on social media addiction when all behavioral factors mentioned above were taken into consideration as a model. Although some studies claimed that social media was an attractive environment for people who had a high openness level (Correa et al., 2010; Jaradat & Atyeh, 2017), a relationship between participants' openness level and their social media addiction degree was not found in the present study.

Creativity was another debating issue. In some research, high level of creativity contributed to social media addiction (Lee & Hong, 2016). However, Kircaburun and colleagues (2018) found that self/everyday creativity had a negative influence on problematic social media usage. According to the current research, creativity has neither a positive nor a negative significant impact on social media addiction.

In literature, there is a consensus that self-esteem is significantly negatively correlated with excessive social media usage. In other words, people who have low self-esteem level tend to be addicted to social media (Bozoglan et al., 2013; Hawi & Samaha, 2017; Kim & Davis, 2009; Niemz et al., 2005; Vogel et al., 2014). On the other hand, in the present study, even though according to results of correlation analysis, significant negative association between self-esteem and social media addiction was detected, SEM analysis showed that self-esteem level did not play a significant role on social media addiction when it was evaluated with the other factors. In literature, students were used as a sample, but in this research, participants were not only students but also from the other occupations. This difference might be the reason for changes in results.

Researchers have a common insight not only for the influence of self-esteem but also for the impact of loneliness on social media addiction. According to researchers, loneliness leads to spending over time on social media platforms which causes social media addiction (Bozoglan et al., 2013; Engelberg & Sjoberg, 2004; Hardie & Tee, 2007; Liu & Baumeister, 2016; Satıcı, 2019). However, as well as self-esteem, the results of SEM analysis indicated that loneliness did not have a significant impact on social media addiction.

Although Jaradat and Atyeh (2017) argued that neuroticism affected social media addiction negatively, Cao and Su (2007), Hardie and Tee (2007) and the results of this study illustrated that neuroticism had a significant positive impact on social media addiction.

According to the results of this study, one of the other factors which had a significant positive effect upon social media addiction was stress. People show a tendency to use social media when they are feeling uncomfortable and stressful (Longstreet & Brooks, 2017) to eliminate stress (Sriwilai & Charoensukmongkol, 2016) by giving an attention to notifications coming from social media platforms.

Social media environment provides users a chance to follow other peoples' lives and give a chance to learn detail information about many people all over the world. Therefore, people who are not satisfied with their life can use social media to compare their lives and others' lives or to increase their social acceptance of (Hawi & Samaha, 2017). Besides, Longstreet and Brooks (2017) claimed that one of the main reasons for social media addiction was low life satisfaction. On the other hand, interestingly Valenzuela and colleagues (2009) detected that people who had high level of life satisfaction used Facebook more than people who had low life satisfaction level. Nevertheless, Bozoglan et al. (2013), Hawi and Samaha (2017),

and the present study observed that there was no significant relationship directly between life satisfaction and social media addiction.

Social intelligence is the ability how people manage their relationships in any environment with any person (Baron-Cohen et al., 1999). By looking at this definition, it is clearly seen that social media, which is an environment that consists of several kinds of people, is substantially related to social intelligence. Therefore, social intelligence variable was involved in this research as a new issue, even though there was not so much knowledge about associations between social intelligence and social media addiction in literature. The results of this study showed that social intelligence was one of the fundamental factors of social media addiction. It was seen that people who had high social intelligence level were relatively more addicted to social media.

In literature, several studies claimed that narcissism was one of the most effective factors which triggered social media addiction (Andereassen et al., 2016; Casale & Fioravanti, 2018; Hawi & Samaha, 2017; Kuss & Griffiths, 2011; Liu & Baumeister, 2016). However, correlation results of this study indicated that there was no correlation between narcissism and social media addiction. Thus, narcissism was decided not to be included in SEM analysis, though it was a part of the theoretical model of this study.

## 6.5 Conclusion

In today's world, social media, which brings people together by altering communicating and socializing methods, has become an indispensable part of people's lives (Sriwilai & Charoensukmongkol, 2016).

From day to day, the rate of social media usage is rapidly increasing (Aljohani et al., 2016; Jaradat & Atyeh, 2017). This increase leads to social media addiction that shows any type of addiction symptoms such as withdrawal, emotional imbalance, and so on (Hawi & Samaha, 2017).

There are several factors for people to be addicted to social media. As well as demographical features, characteristics of people have a great importance on social media addiction (Bozoglan et al., 2013; Hamid et al., 2015; Hardie & Tee, 2007; Hawi & Samaha, 2017; Jaradat & Atyeh, 2017; Young & Rodgers, 1998). Therefore, in this research, the impacts of specific behavioral factors on social media addiction were focused on.

In the present study, as specific behavioral factors, openness, creativity, self-esteem, loneliness, life satisfaction, social intelligence, stress, neuroticism and narcissism were included. With these factors, a theoretical model was created based on literature. A questionnaire was conducted as a data collection tool and 506 people participated in the survey. In order to analyze the data and to test the theoretical model, descriptive statistics, independent sample t-tests, one-way ANOVA tests, correlation analyses and structural equation modeling were applied.

All these analyses provide insights for several findings. According to results of these analyses, the most used social media platforms are respectively WhatsApp, YouTube, Instagram and Facebook. Moreover, it was observed that increase in daily spending time on social media and the number of social media accounts' checks increased social media addiction level of the participants.

When demographic factors were taken into consideration, it was seen that females were relatively more addicted to social media than males, single participants had relatively higher social media addiction degree than married participants and

younger people showed relatively higher tendency to social media addiction than older participants. Education level differentiated only two groups from each other which were undergraduate students and participants who have Graduate or PhD degree in terms of social media addiction level. On the other hand, income status and occupations of the participants did not change social media addiction level of the respondents.

It was also discovered that openness level of the participants affected positively both their creativity and self-esteem levels which was also affected from their neuroticism level negatively. Besides, participants' self-esteem level had a positive impact on their life satisfaction degree that was influenced from the stress level negatively. Moreover, it was revealed that loneliness level of the participants had a favorable effect upon their neuroticism level.

The essential research question of the current study was for investigating the impacts of specific behavioral factors on social media addiction. As a result of the current study, it was found that high level of stress, neuroticism and social intelligence increased social media addiction level. However, results indicated that social media addiction levels of the participants were not affected from their openness, creativity, self-esteem, loneliness, life satisfaction and narcissism levels.

This study is not without limitations. The survey was applied through the social media friends of the author by using convenience sampling, a better sampling method can be used in future studies especially for the occupational groups. Also, structural equation modeling group analysis can be performed.

## APPENDIX A

### BERGEN'S SOCIAL MEDIA ADDICTION SCALE

1. I spend a lot of time thinking about social media or planning how to use it.
2. I feel an urge to use social media more and more.
3. I use social media in order to forget about personal problems.
4. I have tried to cut down on the use of social media without success.
5. I become restless or troubled if I am prohibited from using social media.
6. I use social media so much that it has had a negative impact on my job/studies.

## APPENDIX B

### BIG FIVE INVENTORY SCALE: OPENNESS ITEMS

I see myself as Someone who;

1. Is original comes up with new ideas.
2. Is curious about many different things.
3. Is ingenious, a deep thinker.
4. Has an active imagination.
5. Is inventive.
6. Values artistic, aesthetic experiences.
7. Prefers work that is routine. (Reverse Item)
8. Likes to reflect, play with ideas.
9. Has few artistic interests. (Reverse Item)
10. Is sophisticated in art, music, or literature.

## APPENDIX C

### SHORT VERSION OF VALUES IN ACTION INVENTORY OF STRENGTHS:

#### CREATIVITY ITEMS

1. Being able to come up with new and different ideas is one of my strong points.
2. I like to think of new ways to do things.
3. I am always coming up with new ways to do things.
4. My friends say that I have lots of new and different ideas
5. I am an original thinker.

## APPENDIX D

### SHORT VERSION OF VALUES IN ACTION INVENTORY OF STRENGTHS:

#### SOCIAL INTELLIGENCE ITEMS

1. I know how to handle myself in different social situations.
2. No matter what the situation, I am able to fit in.
3. I have the ability to make other people feel interesting.
4. I am good at sensing what other people are feeling.
5. I always know what to say to make people feel good.

APPENDIX E

EYSENCK PERSONALITY QUESTIONNAIRE

REVISED-ABBREVIATED FORM: NEUROTICISM ITEMS

1. I suffer from 'nerves'.
2. I would call myself as a nervous person.
3. I often feel 'fed-up'.
4. I often feel lonely.
5. My mood often goes up and down.
6. I am a worrier.

## APPENDIX F

### ROSENBERG'S SELF-ESTEEM SCALE

1. I feel that I am a person of worth, at least on an equal plane with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure. (Reverse Item)
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of. (Reverse Item)
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself. (Reverse Item)
9. I certainly feel useless at times. (Reverse Item)
10. At times I think I am no good at all. (Reverse Item)

## APPENDIX G

### SATISFACTION WITH LIFE SCALE

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far, I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

## APPENDIX H

### SHORT VERSION OF UCLA LONELINESS SCALE

1. I lack companionship.
2. There is no one I can turn to.
3. I am an outgoing person. (Reverse Item)
4. I feel left out.
5. I feel isolated from others.
6. I can find companionship when I want it. (Reverse Item)
7. I am unhappy being withdrawn.
8. People are around me but not with me.

APPENDIX I  
PERCEIVED STRESS SCALE

In the last month,

1. I have been upset frequently because of something that happened unexpectedly.
2. I frequently have felt that I was unable to control the important things in my life.
3. I frequently have felt nervous and "stressed".
4. I frequently have dealt successfully with irritating life hassles?(Reverse Item)
5. I frequently have felt that I was effectively coping with important changes that were occurring in my life. (Reverse Item)
6. I frequently have felt confident about my ability to handle my personal problems. (Reverse Item)
7. I frequently have felt that things were going my way? (Reverse Item)
8. I frequently have found that I could not cope with all the things I had to do.
9. I have been able to control irritations frequently in my life. (Reverse Item)
10. I frequently have felt that I was on top of things. (Reverse Item)
11. I have been angered frequently because of things that happened that were outside of my control.
12. I frequently have found myself thinking about things I have to accomplish.
13. I frequently have been able to control the way I spend my time. (Reverse Item)
14. I frequently have felt difficulties were piling up so high that I could not overcome them.

## APPENDIX J

### SHORT VERSION OF NARCISSISTIC PERSONALITY INVENTORY

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Non-Narcissistic Response	Narcissistic Response
When people compliment me I sometimes get embarrassed.	I know that I am good because everybody keeps telling me so.
I prefer to blend in with the crowd.	I like to be the center of attention.
I am no better nor worse than most people.	I think I am a special person.
I don't mind following orders.	I like having authority over people.
I don't like it when I find myself manipulating people.	I find it easy to manipulate people.
I usually get the respect that I deserve.	I insist upon getting the respect that is due me.
I try not to be a show off.	I am apt to show off if I get the chance.
Sometimes I am not sure of what I am doing.	I always know what I am doing.
Sometimes I tell good stories.	Everybody likes to hear my stories.
I like to do things for other people.	I expect a great deal from other people.
It makes me uncomfortable to be the center of attention.	I really like to be the center of attention.
Being an authority doesn't mean that much to me.	People always seem to recognize my authority
I hope I am going to be successful.	I am going to be a great person.
People sometimes believe what I tell them.	I can make anybody believe anything I want them to.
There is a lot that I can learn from other people.	I am more capable than other people.
I am much like everybody else.	I am an extraordinary person.

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## APPENDIX K

### ENGLISH VERSION OF THE QUESTIONNAIRE

Dear Participant,

This survey is prepared to analyze whether behavioral and demographic factors have an impact on social media usage and social media addiction level of people or not. This research is an academic research which involves master's thesis of Gönül Zeynep Savacı who is a graduate student in Management Information Systems Department at Boğaziçi University under the advisory of Prof. Dr. Birgül Kutlu Bayraktar.

In this survey, your identity information and your communication knowledge will not be asked, and your answers will be kept private. You cannot respond to survey more than once. It takes less than ten minutes to complete the survey.

Thank you for your precious time.

All rights of this survey are reserved. This cannot be fully or partially used without the consent of researchers.

1. Which of the below social networking sites do you use?

Facebook     WhatsApp     Twitter     Instagram  
 LinkedIn     Swarm     YouTube     Periscope  
 Snapchat     Skype     Tinder     Pinterest  
 Spotify     Tumblr     Reddit     Flickr  
Other \_\_\_\_\_

2. Please state the below at most five social networking sites which you use most frequently.

Facebook     WhatsApp     Twitter     Instagram  
 LinkedIn     Swarm     YouTube     Periscope  
 Snapchat     Skype     Tinder     Pinterest  
 Spotify     Tumblr     Reddit     Flickr  
Other \_\_\_\_\_

3. How many times do you spend on social networking sites daily?

0-1 hour     2-3 hours     4-5 hours     More than 5 hours

4. How many times do you check your social media accounts in a day?

Less than 6  
 6-10  
 11-20  
 21-30  
 More than 30

5. Do you agree with the below statements about your social media usage?

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I spend a lot of time thinking about social media or planning how to use it.	-----	-----	-----	-----	-----
I feel an urge to use social media more and more.	-----	-----	-----	-----	-----
I use social media in order to forget about personal problems.	-----	-----	-----	-----	-----
I have tried to cut down on the use of social media without success.	-----	-----	-----	-----	-----
I become restless or troubled if I am prohibited from using social media.	-----	-----	-----	-----	-----
I use social media so much that it has had a negative impact on my job/studies.	-----	-----	-----	-----	-----

6. Do you agree with the below statements about how you describe yourself?

I see myself as Someone who;	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Is original comes up with new ideas.	-----	-----	-----	-----	-----
Is curious about many different things.	-----	-----	-----	-----	-----
Is ingenious, a deep thinker.	-----	-----	-----	-----	-----
Has an active imagination.	-----	-----	-----	-----	-----
Is inventive.	-----	-----	-----	-----	-----
Values artistic, aesthetic experiences.	-----	-----	-----	-----	-----
Prefers work that is routine.	-----	-----	-----	-----	-----
Likes to reflect, play with ideas.	-----	-----	-----	-----	-----
Has few artistic interests.	-----	-----	-----	-----	-----
Is sophisticated in art, music, or literature.	-----	-----	-----	-----	-----

7. Do you agree with the below statements about yourself?

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I lack companionship.	-----	-----	-----	-----	-----
There is no one I can turn to.	-----	-----	-----	-----	-----
I am an outgoing person.	-----	-----	-----	-----	-----
I feel left out.	-----	-----	-----	-----	-----
I feel isolated from others.	-----	-----	-----	-----	-----
I can find companionship when I want it.	-----	-----	-----	-----	-----
I am unhappy being withdrawn.	-----	-----	-----	-----	-----
People are around me but not with me.	-----	-----	-----	-----	-----

8. Do you agree with the below statements about yourself?

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I suffer from 'nerves'.	-----	-----	-----	-----	-----
I would call myself as a nervous person.	-----	-----	-----	-----	-----
I often feel 'fed-up'.	-----	-----	-----	-----	-----
I often feel lonely.	-----	-----	-----	-----	-----
My mood often goes up and down.	-----	-----	-----	-----	-----
I am a worrier.	-----	-----	-----	-----	-----

9. Do you agree with the below statements about how you describe yourself?

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Being able to come up with new and different ideas is one of my strong points.	-----	-----	-----	-----	-----
I like to think of new ways to do things.	-----	-----	-----	-----	-----
I am always coming up with new ways to do things.	-----	-----	-----	-----	-----
My friends say that I have lots of new and different ideas	-----	-----	-----	-----	-----
I am an original thinker.	-----	-----	-----	-----	-----

10. Do you agree with the below statements about yourself?

In the last month,	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I have been upset frequently because of something that happened unexpectedly.	-----	-----	-----	-----	-----
I frequently have felt that I was unable to control the important things in my life.	-----	-----	-----	-----	-----
I frequently have felt nervous and "stressed".	-----	-----	-----	-----	-----
I frequently have dealt successfully with irritating life hassles?	-----	-----	-----	-----	-----
I frequently have felt that I was effectively coping with important changes that were occurring in my life.	-----	-----	-----	-----	-----
I frequently have felt confident about my ability to handle my personal problems.	-----	-----	-----	-----	-----
I frequently have felt that things were going my way?	-----	-----	-----	-----	-----
I frequently have found that I could not cope with all the things that I had to do.	-----	-----	-----	-----	-----
I have been able to control irritations frequently in my life.	-----	-----	-----	-----	-----
I frequently have felt that I was on top of things.	-----	-----	-----	-----	-----
I have been angered frequently because of things that happened that were outside of my control.	-----	-----	-----	-----	-----
I frequently have found myself thinking about things that I have to accomplish.	-----	-----	-----	-----	-----
I frequently have been able to control the way I spend my time.	-----	-----	-----	-----	-----
I frequently have felt difficulties were piling up so high that I could not overcome them.	-----	-----	-----	-----	-----

11. Do you agree with the below statements about yourself?

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I feel that I am a person of worth, at least on an equal plane with others.	-----	-----	-----	-----	-----
I feel that I have a number of good qualities.	-----	-----	-----	-----	-----
All in all, I am inclined to feel that I am a failure.	-----	-----	-----	-----	-----
I am able to do things as well as most other people.	-----	-----	-----	-----	-----
I feel I do not have much to be proud of.	-----	-----	-----	-----	-----
I take a positive attitude toward myself.	-----	-----	-----	-----	-----
On the whole, I am satisfied with myself.	-----	-----	-----	-----	-----
I wish I could have more respect for myself.	-----	-----	-----	-----	-----
I certainly feel useless at times.	-----	-----	-----	-----	-----
At times I think I am no good at all.	-----	-----	-----	-----	-----

12. Do you agree with the below statements about yourself?

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I know how to handle myself in different social situations.	-----	-----	-----	-----	-----
No matter what the situation, I am able to fit in.	-----	-----	-----	-----	-----
I have the ability to make other people feel interesting.	-----	-----	-----	-----	-----
I am good at sensing what other people are feeling.	-----	-----	-----	-----	-----
I always know what to say to make people feel good.	-----	-----	-----	-----	-----

13. Do you agree with the below statements about your life?

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
In most ways my life is close to my ideal.	-----	-----	-----	-----	-----
The conditions of my life are excellent.	-----	-----	-----	-----	-----
I am satisfied with my life.	-----	-----	-----	-----	-----
So far, I have gotten the important things I want in life.	-----	-----	-----	-----	-----
If I could live my life over, I would change almost nothing.	-----	-----	-----	-----	-----

14. Please choose A or B which one describes you better.

A/B	A	B
_____	When people compliment me I sometimes get embarrassed.	I know that I am good because everybody keeps telling me so.
_____	I prefer to blend in with the crowd.	I like to be the center of attention.
_____	I am no better nor worse than most people.	I think I am a special person.
_____	I like having authority over people.	I don't mind following orders.
_____	I find it easy to manipulate people.	I don't like it when I find myself manipulating people.
_____	I insist upon getting the respect that is due me.	I usually get the respect that I deserve.
_____	I try not to be a show off.	I am apt to show off if I get the chance.
_____	I always know what I am doing.	Sometimes I am not sure of what I am doing.
_____	Sometimes I tell good stories.	Everybody likes to hear my stories.
_____	I expect a great deal from other people.	I like to do things for other people.
_____	I really like to be the center of attention.	It makes me uncomfortable to be the center of attention.
_____	Being an authority doesn't mean that much to me.	People always seem to recognize my authority
_____	I am going to be a great person.	I hope I am going to be successful.
_____	People sometimes believe what I tell them.	I can make anybody believe anything I want them to
_____	I am more capable than other people.	There is a lot that I can learn from other people.
_____	I am much like everybody else.	I am an extraordinary person.

15. Your Gender:

Female       Male

16. Your Age:

<18       18-24       25-29  
 30-49       50-64       >64

17. Your Marital Status:

Married       Single

18. Your Education Level:

Primary School Graduate  
 High School Graduate  
 Undergraduate Student  
 Bachelor's Degree  
 Graduate / PhD Student  
 Graduate / PhD Degree

19. Your Occupation:

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20. Monthly Income of Your Family:

Less than 1600 TL       1600-3200 TL       3201-4800 TL  
 4801-6400 TL       More than 6400 TL

## APPENDIX L

### TURKISH VERSION OF THE QUESTIONNAIRE

Değerli Katılımcı,

Bu anket davranışsal ve demografik faktörlerin kişinin sosyal medya kullanımı ve sosyal medya bağımlılığı seviyesi üzerinde bir etkisi olup olmadığını araştırmak amacıyla hazırlanmıştır. Çalışma akademik bir araştırma olup Boğaziçi Üniversitesi Yönetim Bilişim Sistemleri Bölümü Yüksek Lisans Programı öğrencisi Gönül Zeynep Savacı'nın Prof. Dr. Birgül Kutlu Bayraktar danışmanlığında yürüttüğü tezi kapsamında gerçekleştirilmektedir.

Ankette kimlik ve iletişim bilgileriniz istenmeyecek ve yanıtlarınız gizli tutulacaktır. Anketi yalnızca bir defa yanıtlayabilirsiniz. Anketi tamamlamanız en fazla 10 dakikanızı alacaktır.

Vakit ayırdığınız için teşekkür ederiz.

Bu anketin her hakkı saklıdır. Araştırmacıların izni olmadan tamamı veya bir kısmı kullanılamaz.

1. Aşağıda yer alan sosyal medya platformlarından hangilerini kullanıyorsunuz?

Facebook     WhatsApp     Twitter     Instagram  
 LinkedIn     Swarm     YouTube     Periscope  
 Snapchat     Skype     Tinder     Pinterest  
 Spotify     Tumblr     Reddit     Flickr  
Diğer \_\_\_\_\_

2. Aşağıda yer alan sosyal medya platformlarından en çok kullandığınız 5 tanesini işaretleyiniz.

Facebook     WhatsApp     Twitter     Instagram  
 LinkedIn     Swarm     YouTube     Periscope  
 Snapchat     Skype     Tinder     Pinterest  
 Spotify     Tumblr     Reddit     Flickr  
Diğer \_\_\_\_\_

3. Sosyal medya platformlarında günde ne kadar vakit geçiriyorsunuz?

0-1 saat     2-3 saat     4-5 saat     5 saatten fazla

4. Günde kaç kere sosyal medya hesaplarınızı kontrol ediyorsunuz?

6'dan az  
 6-10  
 11-20  
 21-30  
 30'dan fazla

5. Sosyal medya kullanımınızla ilgili aşağıdaki ifadelere ne derece katıldığınızı belirtiniz.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Zamanımın büyük bir bölümünü sosyal medyayı düşünerek veya sosyal medyayı nasıl kullanacağımı planlayarak geçiriyorum.	-----	-----	-----	-----	-----
Sosyal medyayı giderek daha fazla kullanma arzusu duyuyorum.	-----	-----	-----	-----	-----
Kişisel sorunlarımı unutmak için sosyal medyayı kullanıyorum.	-----	-----	-----	-----	-----
Sosyal medya kullanımımı azaltmaya çalışıyorum ancak başarılı olamıyorum.	-----	-----	-----	-----	-----
Sosyal medya kullanmam engellendiğinde huzursuz veya tedirgin oluyorum.	-----	-----	-----	-----	-----
Sosyal medyayı aşırı kullanmamın iş/okul durumum üzerinde olumsuz etkisi oluyor.	-----	-----	-----	-----	-----

6. Kendinizi nasıl tanımladığınızla ilgili aşağıdaki ifadelere ne derece katıldığınızı belirtiniz.

Kendimi şöyle birisi olarak görüyorum;

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Yeni fikirler üreten, özgün	-----	-----	-----	-----	-----
Farklı birçok şey hakkında merak duyan	-----	-----	-----	-----	-----
Pratik zekalı, derin düşüncelere sahip	-----	-----	-----	-----	-----
İşleyen bir hayal gücüne sahip	-----	-----	-----	-----	-----
Yaratıcı, kaşif	-----	-----	-----	-----	-----
Sanatsal ve estetik değerlere önem veren	-----	-----	-----	-----	-----
Rutin işleri tercih eden	-----	-----	-----	-----	-----
Fikirlerini dile getirmeyi seven, düşünce cambazı	-----	-----	-----	-----	-----
Sanatla az ilgili	-----	-----	-----	-----	-----
Sanat, müzik ve edebiyatta bilgi sahibi	-----	-----	-----	-----	-----

7. Kendinizle ilgili aşağıdaki ifadelere ne derece katıldığınızı belirtiniz.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Arkadaş eksikliği çekiyorum.	-----	-----	-----	-----	-----
Yardımlarını isteyeceğim hiç kimse yok.	-----	-----	-----	-----	-----
Dışa dönük bir insanım.	-----	-----	-----	-----	-----
Dışlanmış hissediyorum.	-----	-----	-----	-----	-----
Diğerleri tarafından yalnız bırakılmış hissediyorum.	-----	-----	-----	-----	-----
İstedğim zaman arkadaşlık kurabiliyorum.	-----	-----	-----	-----	-----
Çekingen biri olduğum için mutsuzum.	-----	-----	-----	-----	-----
Çevremde olan insanlar aslında benimle değiller.	-----	-----	-----	-----	-----

8. Kendinizle ilgili aşağıdaki ifadelere ne derece katıldığınızı belirtiniz.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Sinirliliğimden şikâyetçiyim.	-----	-----	-----	-----	-----
Kendimi sinirli bir kişi olarak tanımlıyorum.	-----	-----	-----	-----	-----
Sıklıkla kendimi her şeyden bıkmış hissediyorum.	-----	-----	-----	-----	-----
Sık sık kendimi yalnız hissediyorum.	-----	-----	-----	-----	-----
Duygu durumum sıklıkla mutlulukla mutsuzluk arasında değişiyor.	-----	-----	-----	-----	-----
Kaygılı bir kişiyim.	-----	-----	-----	-----	-----

9. Kendinizi nasıl tanımladığınızla ilgili aşağıdaki ifadelere ne derece katıldığınızı belirtiniz.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Yeni ve farklı fikirler üretmek benim güçlü yanlarımdan birisidir.	-----	-----	-----	-----	-----
Bir şeyler yapmak için yeni yollar düşünmeyi severim.	-----	-----	-----	-----	-----
Bir şeyler yapmak için her zaman yeni yollar bulurum.	-----	-----	-----	-----	-----
Arkadaşlarım hep yeni ve farklı düşüncelere sahip olduğumu söyler.	-----	-----	-----	-----	-----
Özgün bir düşünürüm.	-----	-----	-----	-----	-----

10. Kendinizle ilgili aşağıdaki ifadelere ne derece katıldığınızı belirtiniz.

Geçen ay...	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Beklenmedik bir şeylerin olması nedeniyle çok sık rahatsızlık duydum.	-----	-----	-----	-----	-----
Sık sık hayatımdaki önemli şeyleri kontrol edemediğimi hissettim.	-----	-----	-----	-----	-----
Çoğunlukla kendimi sinirli ve stresli hissettim.	-----	-----	-----	-----	-----
Çoğunlukla gündelik zorlukların başarıyla üstesinden geldim.	-----	-----	-----	-----	-----
Hayatımda ortaya çıkan önemli değişikliklerle çoğunlukla etkili bir şekilde başa çıktığımı hissettim.	-----	-----	-----	-----	-----
Kişisel sorunlarımı ele alma yeteneğime çok sık güven duydum.	-----	-----	-----	-----	-----
Çoğunlukla her şeyin yolunda gittiğini hissettim.	-----	-----	-----	-----	-----
Yapmam gereken şeylerle çoğu zaman başa çıkamadığımı fark ettim.	-----	-----	-----	-----	-----
Hayatımdaki zorlukları çoğunlukla kontrol edemedim.	-----	-----	-----	-----	-----
Çoğu zaman her şeyin üstesinden geldiğimi hissettim.	-----	-----	-----	-----	-----
Kontrolüm dışında gelişen olaylar yüzünden çok sık öfkelen dim.	-----	-----	-----	-----	-----
Çoğu zaman kendimi başarmak zorunda olduğum şeyleri düşünürken buldum.	-----	-----	-----	-----	-----
Genellikle zamanımı nasıl kullanacağımı kontrol edebildim.	-----	-----	-----	-----	-----
Çoğu zaman problemlerin üstesinden gelemeyeceğim kadar biriktiğini hissettim.	-----	-----	-----	-----	-----

11. Kendinizle ilgili ařađıdaki ifadelere ne derece katıldığınızı belirtiniz.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Kendimi en az diđer insanlar kadar değerli buluyorum.	-----	-----	-----	-----	-----
Bazı olumlu özelliklerim olduğunu düşünüyorum.	-----	-----	-----	-----	-----
Genelde kendimi başarısız bir kiři olarak görme eğilimindeyim.	-----	-----	-----	-----	-----
Ben de diđer insanların birçoğunun yapabildiđi kadar bir şeyler yapabilirim.	-----	-----	-----	-----	-----
Kendimde gurur duyacak fazla bir şey bulamıyorum.	-----	-----	-----	-----	-----
Kendime karşı olumlu bir tutum içindeyim.	-----	-----	-----	-----	-----
Genel olarak kendimden memnunum.	-----	-----	-----	-----	-----
Kendime karşı daha fazla saygı duyabilmeyi isterdim.	-----	-----	-----	-----	-----
Bazen kesinlikle kendimin bir işe yaramadığımı düşünüyorum.	-----	-----	-----	-----	-----
Bazen kendimin hiç de yeterli bir insan olmadığımı düşünüyorum.	-----	-----	-----	-----	-----

12. Kendinizle ilgili aşağıdaki ifadelere ne derece katıldığınızı belirtiniz.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Farklı sosyal durumlara kendi kendime başa çıkabilirim.	-----	-----	-----	-----	-----
Durum ne olursa olsun uyum sağlayabilirim.	-----	-----	-----	-----	-----
Diğer insanların ilginç hissetmesini sağlayacak yeteneğe sahibim.	-----	-----	-----	-----	-----
Diğer insanların ne hissediyor olduğunu algılamada iyiyim.	-----	-----	-----	-----	-----
Her zaman diğer insanları mutlu etmek için neler söyleyeceğimi biliyorum.	-----	-----	-----	-----	-----

13. Hayatınızla ilgili aşağıdaki ifadelere ne derece katıldığınızı belirtiniz.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
İdeallerime yakın bir yaşantım vardır.	-----	-----	-----	-----	-----
Yaşam koşullarım mükemmeldir.	-----	-----	-----	-----	-----
Yaşamımdan memnunum.	-----	-----	-----	-----	-----
Şimdiye kadar yaşamdan istediğim önemli şeylere sahip oldum.	-----	-----	-----	-----	-----
Tekrar dünyaya gelsem hayatımdaki hemen hemen hiçbir şeyi değiştirmezdim.	-----	-----	-----	-----	-----

14. Aşağıdaki ikili ifadelerden hangisinin sizi yansıttığını düşünüyorsanız işaretleyiniz.

A/B	A	B
-----	İnsanlar bana iltifat ettiklerinde bazen utanırım.	İyi biri olduğumu biliyorum, çünkü herkes böyle söylüyor.
-----	Kalabalık içinde herhangi biri olmayı tercih ederim.	İlgi merkezi olmayı severim.
-----	Pek çok insandan ne daha iyi ne de daha kötüyüm.	Özel biri olduğumu düşünüyorum.
-----	İnsanlar üzerinde otorite sahibi olmayı seviyorum.	Emirleri takip etmenin benim için bir mahzuru yok.
-----	İnsanları yönlendirmenin kolay olduğunu düşünüyorum.	İnsanları yönlendirmekten hoşlanmıyorum.
-----	Görmem gereken saygıyı görmek konusunda ısrar ederim.	Genellikle hak ettiğim saygıyı görürüm.
-----	Gösteriş yapmaktan kaçınırım.	Genellikle fırsat bulduğumda gösteriş yaparım.
-----	Her zaman ne yaptığının bilincindeyimdir.	Bazen ne yaptığımdan emin olamıyorum.
-----	Bazen anlattıklarım ilgi çeker.	Herkes benim anlattıklarımı dinlemekten hoşlanır.
-----	İnsanlardan çok şey beklerim.	Başkaları için bir şeyler yapmaktan hoşlanırım.
-----	İlgi merkezi olmak çok hoşuma gider.	İlgi merkezi olmak beni rahatsız eder.
-----	Otorite olmak benim için pek anlam taşımaz.	Öyle görünüyor ki insanlar her zaman benim otoritemi kabul ederler.
-----	Büyük bir insan olacağım.	Başarılı olacağımı umut ediyorum.
-----	İnsanlar bazen onlara söylediğim şeylere inanırlar.	Herhangi bir kişiyi söylediğim herhangi bir şeye inandırabilirim.
-----	Diğer insanlardan çok daha fazla yetenekliyim.	Diğer insanlardan öğreneceğim çok şey var.
-----	Ben de diğer herkes gibiyim.	Ben sıra dışı bir insanım.

15. Cinsiyetiniz:

Kadın  Erkek

16. Yaşınız:

<18  18-24  25-29  
 30-49  50-64  >64

17. Medeni Durumunuz:

Evli  Bekar

18. Eğitim Durumunuz:

İlköğretim Mezunu  
 Lise Mezunu  
 Üniversite Öğrencisi  
 Üniversite Mezunu  
 Yüksek Lisans / Doktora Öğrencisi  
 Yüksek Lisans / Doktora Mezunu

19. Mesleğiniz:

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20. Ailenizin Aylık Gelir Düzeyi:

1600 TL'den az  1600-3200 TL  3201-4800 TL  
 4801-6400 TL  6400'den fazla TL

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