HÜSEYİN ARAS BABAYİĞİT

RELATIONSHIP OF SMARTPHONE AND SOCIAL MEDIA ADDICTION WITH GENERAL BELONGING, PERCEIVED STRESS AND METACOGNITION PROBLEMS IN UNIVERSITY STUDENTS

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Approval

We certify that we have read the thesis submitted by Hüseyin Aras BABAYİĞİT titled **"Relationship of Smartphone and Social Media Addiction with General Belonging, Perceived Stress and Metacognition Problems in University Students"** and that in our combined opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Educational Sciences.

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Declaration

I hereby declare that all information, documents, analysis and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

Hüseyin Aras BABAYİĞİT
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Hüseyin Aras Babayiğit

Abstract

Relationship of Smartphone and Social Media Addiction with General Belonging, Perceived Stress and Metacognition Problems in University Students

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The main aim of this research is to ascertain to investigate the mediating role of smartphone addiction in its association with general belonging, metacognitive problems, social media addiction and perceived stress. The study was conducted between October 2018 – March 2019 on a sample consisting of 294 higher education students with the stratified sampling technique among students in the 1st, 2nd, 3rd and 4th grades. Demographic Information Form, Smartphone Addiction Scale-Short Form, Social Media Addiction Scale, General Belongingness Scale, Perceived Stress Scale and Metacognition Scale were used. Positive significant correlation was found between Smartphone Addiction, Social Media Addiction and Metacognition Scale. In addition to this, positive correlation was also established between Smartphone and Social Media Addiction and Perceived Stress Scale. It is also found that as the general belongingness increases smartphone and social media addiction decreases. It was determined that the regression model established regarding the predictive ability of the students' scores for the General Belongingness Scale, Perceived Stress Scale and Metacognition Scale on their scores for the Smartphone Addiction Scale was at a statistically significant level. It is important to take into consideration perceived level of stress, metacognitive problems and sense of belongingness while understanding the formation of addictions such as smartphone and social media addictions.

Keywords: smartphone addiction, metacognitive problems, social media addiction, general belonging, perceived stress

Özet

Üniversite Öğrencilerinde Akıllı Telefon ve Sosyal Medya Bağımlılığının Genel Aidiyet, Algılanan Stres ve Üstbiliş Sorunları ile İlişkisi

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Doktora Tezi, İnovasyon ve Bilgi Yönetimi Bölümü

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Bu çalışmada, üniversite öğrencilerinde sosyal medya bağımlılığı ile genel aidiyet, üstbiliş sorunları ve algılanan stres arasındaki ilişkide akıllı telefon bağımlılığının oynadığı yordayıcı rolünü belirlemek ve akıllı telefon bağımlığının oluşumundaki olası risk faktörlerini saptamak amaçlanmıştır. Araştırma, Ekim 2018 – Mart 2019 tarihleri arasında, 1., 2., 3. ve 4. sınıf öğrencileri arasından tabakalı örnekleme tekniği kullanılarak seçilen 294 yükseköğretim öğrencisinden oluşan bir örneklem üzerinde gerçekleştirilmiştir. Demografik Bilgi Formu, Akıllı Telefon Bağımlılığı Ölçeği-Kısa Form, Sosyal Medya Bağımlılığı Ölçeği, Genel Aidiyet Ölçeği, Algılanan Stres Ölçeği ve Üstbiliş Ölçeği kullanılmıştır.Akıllı Telefon ve Sosyal Medya Bağımlılığı ile Üstbiliş Ölçeği arasında pozitif yönde anlamlı bir ilişki bulunmuştur. Ek olarak, Akıllı Telefon ve Sosyal Medya Bağımlılığı ile Algılanan Stres arasında pozitif bir ilişki kurulmuştur. Akıllı telefona ve sosyal medyaya bağımlılığının genel aidiyet arttıkça azaldığı da tespit edilmiştir. Öğrencilerin Genel Aidiyet Ölçeği, Algılanan Stres Ölçeği ve Üstbiliş Ölçeği puanlarının Akıllı Telefon Bağımlılığı Ölçeği ve Sosyal Medya Bağımlılığı Ölçeği puanlarını yordamalarına ilişkin yapılan regresyon analizi sonucunda istatistiksel olarak anlamlı düzeyde olduğu belirlenmiştir. Öğrencilerin çalışma durumu, aylık gelir ve kiminle yaşadığına göre Akıllı Telefon Bağımlılığı Ölçeği puanları arasındaki fark istatistiksel olarak anlamlı bulunmuştur. Bu bulgular ışığında, akıllı telefon ve sosyal medya bağımlılıkları gibi bağımlılıkların oluşumunu anlamaya çalışırken algılanan stres düzeyi, üstbilişsel sorunlar ve aidiyet duygusunun dikkate alınması önemlidir.

Keywords: akıllı telefon bağımlılığı, üstbilişsel problemler, sosyal medya bağımlılığı, genel aidiyet, algılanan stres

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List of Abbreviations

GBS:	General Belonging Scale
MCS:	Metacognition Scale
PSS:	Perceived Stress Scale
RMSEA:	Root Mean Square Error of Approximation
SMAS:	Social Media Addiction Scale
SPAS:	Smartphone Addiction Scale
TRNC:	Turkish Republic of North Cyprus
TR:	Turkish Republic

CHAPTER I

Introduction

This chapter contains the background about the research, problems, aims, importance, limitations, and related descriptions of the research.

1.1.Background of the study

The internet and smartphones have had a considerable role within the framework of human life because of the renewed progresses in communication technologies (Emanuel, 2015), which have brought about important changes. The prevalence of mobile phone use has substantially increased as a result of this technological advancement, particularly in the sector of communication (Ratan et al., 2021). Various ideas on the latent "addictive" effects of smartphone use were pushed to the forefront furthermore toward the issues created via disproportionate internet use, that first emerged roughly a decade ago smartphone use became more widespread (Alkhunzaim, 2019). Technology addictions now encompass a wide range of addictions, including those to social media, smartphones, and the internet (Bertholet & Cunningham, 2021). Since people constantly have smartphones together with themselves and they have social media features, this has had a big impact on how individuals animate their lives and how society functions entirely (Sanal & Özer, 2017). Smartphones are now seen by means of necessary parts of daily life, especially from the perspective of college students who may now study away from their families in a less confined atmosphere (Alkhunzain, 2019). Students use their smartphones to chat with friends, pass the time, occupy themselves, and get advice for academic tasks while living in a university setting. They also use their smartphones to pay bills and purchase online (Gezgin et al., 2020). There are a lot of benefits, but it is acknowledged that excessive use of social media and smartphones runs the risk of becoming addictive (Baz, 2018). Examining the research reveals that social media and smartphone addiction are associated to a number of detrimental factors, such as alterations in feelings of belonging in general, an increase in-perceived stress (Göldağ, 2019) and metacognition problems (Özteke-Kozan et al., 2019).

The Uses and Gratification Theory (Blumler, 1979), a well-known concept within the literature taking place the usage of digital technology, describes the (psychological) demands that media consumers seek to satisfy. People may choose to utilize a specific social media network towards a diversity of explanations, for example content, method, or social satisfaction. Compensatory Internet Use Theory (Kardefelt-Winther et al., 2017) claims that people frequently use technology to feel good, accepted, and relieve stress. People may

occasionally utilize technology in inappropriate ways and to problematic degrees. Internet and social media addiction studies can benefit greatly from the highly effective theoretical context established by Davis's (2001) Cognitive Behavioural Model of Pathological Internet Use. One of these answers may involve choosing a certain application (such as social media) or gadget that can result in a specific form of enjoyment or need fulfilment, depending on how conditions are interpreted (e.g., social connections). By the time, using such a tool or program excessively or in inappropriate ways might become a regular response to comparable events and stimuli, which may result in undesirable behaviour in some cases. There might remain a huge connexion amid smartphone and social media usage, in relation to recent studies (Montag et al., 2019).

One of these answers may involve choosing a certain application (such as social media) or gadget that can result in a particular form of enjoyment or need fulfilment, depending on how conditions are interpreted (e.g., social connections). Over time, using such a tool or program excessively or in inappropriate ways might become a regular response to comparable events and stimuli, which may result in undesirable behaviour in some cases. There might be a large intersection among smartphone and social media use, according to recent studies (Montag et al., 2019). People have an essential urge to build connections with others and have a sense of belonging in their social life. Additionally, it has been noted that people who feel rejected or excluded could turn to virtual resources to meet their psychological needs, which can result in social media addiction (Özteke-Kozan et al., 2019).

The degree to which a person perceives an outdoor occasion as stressful is known as perceived stress (Lazarus & Folkman, 1984). The possibility for perceived stress to place a person in a stressful position is considered a risky feature for the formation and maintenance of a number of dependencies, including problematic internet gambling, substance use, and internet addiction (Chiu, 2014). In instance, several investigators have offered proof that stress is a reliable predictor of smartphone addiction (Chiu, 2014). On the other hand, students' perception of stress may rise along with their smartphone addiction levels. Samaha and Hawi (2016) came to the conclusion that there is a relationship among dependency to smartphone and perceived stress levels.

Metacognition was defined by First & Flavell (1979) as the awareness of one's personal belief procedures and the use of that awareness to direct, assess, and keep track of one's own cognitive processes. According to Spada et al. (2017), there was a strong relationship between metacognitions and all aspects of problematic internet use. Positive metacognitions regarding internet usage are positively correlated with impaired online use

during the internet consumption phase. Negative ideas related to internet usage in addition the incapability to manage online-associated opinions develop in the long run as the intensity of problematic internet use rises. These ideas and assumptions encourage people to keep using the internet in problematic ways. Pre-participation, participation, and post-participation are the three temporal periods that the idea of metacognitions for addictive behaviours divides into (Spada et al., 2013). They can be separated into two distinct categories based on their content: positive and negative metacognitions. The former highlights the benefits of engaging in a certain behaviour as a method of cognitive and emotional self-regulation (example: "I can relax when I use my phone"). Such metacognitions have been found to be essential components of the pre-participation state because they motivate individuals to engage in addictive behaviours. Negative metacognitions become active during the engagement and post-participation stages and are related to the inability to control as well as the consequences related to the uncontrollability and dangers of the thoughts and consequences related to the addictive behaviour used (for example, "thinking about using my smartphone disrupts my functioning"). Such metacognitions are thought to be crucial in maintaining addictive behaviours because they govern such internal states since they start emotional states (Caselli et al., 2018).

1.2.Statement of the Problem

With the developing technology, many things can be done with mobile phones today; communication, getting news, accessing the internet, playing games, scanning documents, sending messages (Emanuel, 2015). These features of mobile phones make them indispensable and bring many problems with them. Due to the increasing prevalence of smartphone and social media addiction in recent years, studies on this subject are increasing rapidly all over the world. Studies show that smartphone and social media addiction, like other addictions, has become one of the most important biopsychosocial problems. In addition, it is reported that smartphone and social media addiction is prevalent especially among young people (Alkhunzain, 2019). The use of mobile phones and the Internet by university students for socialization, entertainment and learning is shown as a reason for this group to be a risk group for addictions (Gezgin et al., 2020). Considering this situation, it was thought that it would be useful to know what the related variables are in order to prevent smartphone and social media addictions in university students. Studies on smartphone addiction generally include behaviours towards mobile phone use, but few studies in the literature examine the association among psychosocial risks (belonging, stress, etc.) and smartphone. It is understandable that people with high perceived stress levels and

metacognitive problems, who meet their belonging needs with social media and therefore their smart phones, use phones and social media platforms more intensively due to the features of mobile phones as a coping strategy with these situations. The scarce number of researches revealing the association within these variables, which have a significant impact in the expansion of smartphone and social media addictions, in addition the increasing prevalence of these problems among university students has led to the need for such a study.

1.3.Purpose of the Study

This research aims to classify some possible risk aspects in terms of smartphone addiction as well as social media addiction within university students as well as to discover the predictive role of smartphone addiction in their relation through metacognition problems, social media addiction, and general belonging together with perceived stress.

1.4.Research Questions/ Hypotheses

The following research questions were created based on the purpose of the study:

1. Is there a difference between the scores of the Smartphone Addiction Scale (SPAS) consistent with the socio-demographic characteristics of the students?
2. Is there a difference between the SPAS scores in relation to the students' health, smoking and alcohol use?
3. Is there a difference between the SPAS according to the students' smartphone, internet and social media use?
4. Is there a difference between the Social Media Addiction Scale (SMAS) scores according to the socio-demographic characteristics of the students?
5. Is there a difference between the SMAS scores according to the students' health, smoking and alcohol use?
6. Is there a difference between the SMAS scores according to the students' smartphone, internet and social media use?
7. Is there a relationship between students' SPAS scores and General Belongingness Scale (GBS), Perceived Stress Scale (PSS) and Metacognition Scale (MCS) scores?
8. Do students' GBS, PSS and MCS scores predict their SPAS scores?
9. Is there a relationship between students' SMAS scores and GBS, PSS and MCS scores?
10. Do students' GBS, PSC and MCS Scale scores predict their SMAS scores?

According to the research questions the following hypotheses are proposed:

H1: There is a significant difference between the scores of the SPAS and the socio-demographic characteristics of the students.

H2: There a difference between the SPAS scores in relation to the students' health, smoking and alcohol use.

H3: There is a difference between the SPAS according to the students' smartphone, internet and social media use.

H4: There is a difference between the SMAS scores according to the socio-demographic characteristics of the students.

H5: There is a difference between the SMAS scores according to the students' health, smoking and alcohol use.

H6: There is a difference between the SMAS scores according to the students' smartphone, internet and social media use.

H7: There is a significant relationship between students' SPAS scores and GBS, PSS and MCS scores.

H8: Students' GBS, PSS and MCS scores predict their SPAS scores.

H9: There is a significant relationship between students' SMAS scores and GBS, PSS and MCS scores.

H10: Students' GBS, PSC and MCS Scale scores predict their SMAS scores.

1.5.Significance of the Study

Social networks, which have become a popular platform, have a large number of users. These networks, which have a high number of young users in particular, include users of all ages due to the opportunities they provide to individuals. Today, it is known that a large number of populations are social media users. These users spend greatest of their time on social networks in their daily lives (Ulusoy, 2017). However, users are not aware of the time consumed on social media. In this environment, the instantaneous production of a large number of contents in interaction attracts the attention of the user. Today, smartphones have become an integral part of everyone due to their many advanced features. Therefore, the user who is connected to the phone for a long time cannot leave this environment over time and develops addiction (Bertholet & Cunningham, 2021). It has become very important to understand the factors underlying these addictions, which have become one of the most important problems of our age and negatively affect one's life in many ways.

As the conceptual context stands studied, it is visible that aspects for example perceived stress, metacognition and belongingness might similarly have a predictive role within the progress of smartphone and social media addiction (Özteke-Kozan et al., 2019).The necessity for belongingness, which remains one of people's distinctive predispositions as well as the progress of addictions as a handling strategy with stress accompanied by adverse metacognitions stand both recommended when smartphone addiction as well as increasing social media practise stand considered as difficulties that stand deteriorating, particularly amongst younger generations (Göldağ, 2019). When the related academic works stands assessed, it stands visible that any other research has examined this issue by benefiting from the similar dimensions.

Another aspect of the issue that draws attention is the fact that the addictions in question should be considered and treated as a disease. The most emphasized risk for social media and smartphone uses in recent times is addiction (Alkhunzaim, 2019). Due to the quick growth in the use of smart phones and social media both in our country and in the world, it is necessary to prevent users from becoming addicted by taking them under control. It is very important sociologically and individually to regulate the association among social media and smartphone addiction, which carries a great risk on individuals due to the intense use of social media and smartphones, with the perceived stress, metacognition problems and general belonging, which have been very limitedly researched before.

1.6.Limitations

There are some limitations of this study.

1. First, the sample of the study consists of only university students in the psychology department.
2. Secondly, the fact that data from different age groups could not be collected and group comparisons could not be made is another limitation.
3. Whole research measurements are based on self-testified statistics. Another limitation is that due to the nature of self-report scales, students can hide their true answers and give answers that reflect social values or professional expectations.
4. Lastly, it stays too hard to found an underlying connection within the associated features together with cross-sectional research arrangement. Presently, there remain solely minor quantity of researches that put forward powerful causal consequences whether smartphone addiction grounds on some X-factor or else any X-factor results in smartphone addiction.

1.7.Definitions of the Terms

Smartphone Addiction: Smartphone addiction is a sort of addiction that doesn't include a pharmacological drug but causes discomfort when it's not utilized, which meaningfully influences the person's capability to function in their daily routines (Chiu, 2014).

Social Media Addiction: Similar to drug addiction, social media addiction is a biopsychosocial disorder that grows with symptoms that touch on all facets of people's lives. It creates issues with cognition, conduct, and communication (Baz, 2018).

Perceived Stress: The degree to which a person perceives an external event to be stressful is known as perceived stress (Lazarus & Folkman, 1984).

General Belongingness: The concept of belonging, which means that the individual sees herself/himself as a meaningful and valuable part of the environment, is related to the self and is the main component of interpersonal relations (Duru, 2015)

Metacognition: Metacognition is the awareness of one's own thought processes and the use of that awareness to direct, assess, and keep track of one's own cognitive processes (First & Flavell, 1979).

CHAPTER II

2. Literature Review

Study associated theoretical explanations, descriptions as well as knowledge associated with the matter that previously present in the academic research area are set forth within the context of this chapter.

2.1.Theoretical Framework

2.1.1. Smartphone

Based on the technological developments brought by the developing and changing world, personal and easy-to-carry smart phones have emerged, where mobile phones and computer technologies meet in a single device (Bozkurt & Minaz, 2017). Smartphone is known as a useful communication device that contains the features of many technological devices in daily life (Karaaziz & Keskindağ, 2015). It is possible to say that the smartphone has been used only as a means of communication between people from the past to the present. Smartphones contain features that facilitate the current situation in more than one part of human life (Bulduklu & Özer, 2016). Smartphones enable individuals to quickly access the information they want in their education, business and social life. From this point of view, smart phones are needed to reach the desired information in many areas of life (Durak & Seferoğlu, 2018). The difference of smart phones from mobile phones is that smart phones have access to the internet. This feature has made smart phones available for many different purposes, and smart phones have become miniature computers carried in the pocket (Büyükgebiz, 2019). In addition to phone calls, smart phones can use text messages, e-mail, video calls There are features such as taking and sharing photos, videos, opening many applications at the same time, navigation, listening to music, and games. There are also opportunities to shop and pay from smart phones. These features, which make life easier, have made smart phones a main communication tool in daily life and have increased the curiosity towards smart phones (Cheng et al., 2017).

Smartphones enable individuals to access a lot of information in the internet world, such as what they do, what they are dealing with, and their educational status (Savcı & Aysan, 2017). Today, there are multiple factors that increase the use of smartphones. One of the significant aspects that increase the use of smartphones is known as social media (Özteke-Kozan et al., 2019). Social media is known as the internet environment where individuals are in constant interaction with each other in daily life. It is a media system that enables

individuals to circulate in the internet world from where they are without time and space (Sarıgül, 2019). It is known that excessive use of social media results in jealousy, violence and introverted moods in individuals and students (Işık & Kaptangil, 2018). In addition to the negative aspects of the use of social media, there are also beneficial and practical aspects of life. Based on this, social media includes positive aspects of individuals in daily life such as making money on smartphones, sharing their social life with their friends, participating in fun activities and having a pleasant time (Göymen & Ayas, 2019). In recent years, more equipped and functional smart phones have been produced within the scope of smart phones. The rapid technological development of smart phones leads to more demand (Durak & Seferoğlu, 2018). Individuals are in a difficult situation as the material value of smart phones increases with the developing technology (Kuyucu, 2017). With the increasing number of users of smartphones, share prices of phone companies are increasing rapidly (Özteke-Kozan et al., 2019).

2.1.2. Addiction

Addiction is defined as the continuous use of substances that affect mental health, such as alcohol and drugs, despite negative consequences. Genetic, psychosocial and environmental factors affect the development and symptoms of the disease (Volkow et al., 2016). Despite experiencing negative consequences many times, the addicted person can continue to use the substance or behaviour they are addicted to as a persistent and obsessive behaviour pattern (Degenhardt et al., 2008). For many years, researchers have investigated seemingly irrational behaviours that exhibit patterns of self-harm similar to substance abuse (Blum & Braverman, 2003; Berridge, 2007). After this review, they came up with a more detailed biopsychosocial model common to various behaviours, with the view that it is not sufficient to refer only to the physiological processes related to substance abuse (pharmacodynamic tolerance and withdrawal) under the concept of "addiction". It has been understood that the concept of addiction also includes the obligatory fulfilment of many behavioural patterns such as constantly taking drugs, overeating, gambling, using technology or smartphones (Blum et al., 2011; Gardner, 2011).

The word addiction is known as being constantly subject to any living or non-living being in human life (Şata & Karip, 2017). Although addiction is generally known as a physical or biological concept, there are also social, psychological and spiritual aspects of addiction. In addition to the definitions of addiction such as drug use, tobacco use and alcohol use that cause drowsiness, definitions such as spending too much time on the Internet, eating excessive junk food, connecting to games, spending a long time with smart phones, indulging

in gambling and insatiable shopping are also encountered (Özteke- Kozan et al., 2019). It is seen that individuals reach the level of addiction with the effect of factors such as unnecessary pleasures, entertainments, technological tools and luxury life that are not needed to be used together with the developing world and technology (Erdem et al., 2016). Today, family discussions, friend environments, use of social media, desire to live a luxurious life, desire to earn money, substance use to relax and excessive use of smartphones are shown as factors that cause addiction in individuals (Erdoğanoğlu & Arslan, 2019). It is predicted that addiction increases the likelihood of many people encountering bad and negative results in human life day by day, increasing the possibility of encountering serious problems in the future for individuals (Özen & Topçu, 2017). It is known that more than one serious problem has been encountered under the name of addiction in recent years. From this point of view, deaths after excessive alcohol use, many health problems after substance use, various health problems, mental problems and social problems in individuals after excessive smartphone use show that addiction has become a serious problem in recent years (Altundağ et al., 2019).

Addiction is known as a concept that has recently become a disease in social life. It is known that many scientists and educators have conducted many researches on addiction until today (Özteke-Kozan et al., 2019). Addiction, known as a disease, has many treatments today. These include treatments such as using medication, doing sports, going to therapists, consulting doctors and going to psychologists through guidance people (Noyan et al., 2015). Today, addiction is tried to be reduced with the help of psychologists, therapists and counselors before it goes too far (Gökler & Bulut, 2019).

2.1.2.1.Addiction among Students

Addiction is known as the excessive attachment of individuals to any tool or substance (Erdem, Türen, & Kalkın, 2017). It is seen that the probability of being addicted is high for students who cannot stand out in their social life, feel alone in their place and are asocial (Durak & Seferoğlu, 2018). The use of smartphones increases rapidly when the student is alone during the day, in his spare time or in normal life, away from his friends. This rapid increase increases the dependency of the student on the smartphone due to the situation he is in (Erdoğanoğlu & Arslan, 2019). The addicted student spends a long time with the smartphone without being aware of his dependence on the smartphone. The addicted student encounters many bad results as a result of the long time they spend without realizing it (Kuyucu, 2017). As a result of this involuntary commitment, students may encounter problems such as pain in their hands and wrists, contractions in the neck region, disturbances in sleeping hours, eye disorders and eye fatigue (Gökler and Bulut, 2019). Experiencing

internet problems while using a smart phone reveals situations such as depression, depressive feelings, fear and anxiety in the student, and this is shown as a sign that the student is addicted to the smart phone (Savcı, 2019). Dependent students resort to the use of smartphones in the face of any problem or emergency (Bulduklu & Özer, 2016).

Although commitment has negative biological and psychological consequences, there are also social consequences. Inability to express oneself well in human relations, interruptions in the ties with family members in the family, failures in education life and the feeling of constantly feeling lonely are known as the effects of addiction on student life (Traş & Öztemel, 2019). When the studies on students with smartphone dependency are observed, it is understood that the family structure of the students, their friends and friendships are major and important factors in the addiction of the students (Keskin et al., 2018).

2.1.3. Smartphone Addiction

With the developing technology, the world is globalizing, borders are disappearing and the speed of access to all kinds of information is increasing. The development of technology and smart phones have entered our lives with positive aspects such as acceleration of work flow, easy communication and new business areas in the lives of individuals. From these perspectives, and with the changing living standards, smartphones have become a necessity in the lives of individuals (Yıldırım & Kişioğlu, 2018).

Despite their positive aspects, smartphones bring with them negative variables such as spending excessive time, being deprived of one-on-one communication, increasing acceptance attitudes, comparing their own life with other individuals' lives, questioning their self-esteem (Vardar, 2012). It is seen that the concept of "mobile phone phobia)" is used. This concept describes the uneasiness of individuals due to the absence of smartphones, the feeling of lack and the need for the presence of smartphones (Dikeç & Kebapçı, 2018).

The use of smartphones is increasing rapidly in the developing world. It is seen that smartphones are affecting a serious mass of the human race every day (Bal & Balcı, 2020). The increase in the duration of use of smartphones and the progression to the level of addiction show that smartphone addiction is accompanied by it (Göymen & Ayas, 2019). Smartphone addiction is known as the inability to prevent or stop the individual's smartphone use, social media use, as well as the time consumed on the internet (Kuyucu, 2017). Smartphone addiction is known as a concept known as a disease involving individuals of all ages. There are factors that cause smartphones to reach the level of addiction. Serious studies have been carried out in recent years within the scope of compliance with the diagnostic

criteria of smartphone addiction (Özen & Topçu, 2017). Factors such as isolation from the outside world, few friends, emotional states and loneliness are among the factors that cause smartphone addiction (Karaaziz & Keskindağ, 2015). Smartphone addiction, which has become a serious disease, causes serious problems in daily life for students, young individuals and young children (Sırakaya, 2018). The problems caused by smartphone addiction are that individuals who move away from their smartphones exhibit aggressive attitudes, individuals have problems with their families, the performance of individuals is interrupted after excessive use, interruptions in the development of personal activities, and financial problems after smartphone upgrades (Türen et al., 2017).

Every day, young individuals, students and children are tried to be taken to hospitals, psychiatrists and guides by their families. It is known that smartphones, which affect individuals rapidly with each passing time, cause results such as lack of emotion, eating disorder, family problems, headaches, failure in business life, failure in education and many health problems (Sarıgül, 2019). The serious consequences of smartphone addiction are a matter of debate in many areas in the world of health and education. Many studies and scales are being developed to reduce the negative consequences of smartphone addiction around the world (Noyan et al., 2015). Currently, studies on smartphone addiction are carried out in most countries of the world and in Turkey through scales (Şata & Karip, 2017). Studies on the uncontrolled and excessive use of smartphones are increasing day by day (Sagiroglu & Akkanat, 2019). In studies conducted within the scope of smartphones, smartphone addiction has serious consequences such as headaches, joint pains, eye disorders, disturbances in the brain exposed to radiation, sleep disorders, nutritional problems, exclusion from the social environment, family problems, and individuals being unaware of the outside world while using smartphones. are known to cause dangerous accidents (Bal & Balcı, 2020). In the researches, it is predicted that the individual will experience serious disability and death after an accident that he or she has unconsciously made during the use of a smart phone (Bulduklu & Özer, 2016). As a result of studies and studies conducted around the world, smartphone addiction is mostly seen in age groups ranging from adolescence to adulthood (Yalçın et al., 2018). It is seen that the problem of smartphone addiction is mostly seen in male individuals as a result of researches (Bulduklu & Özer, 2016).

Smartphone addiction manifests itself by the signs like; being unable to be far away from the phone, checking the phone constantly, and having sleep problems due to intense use of the phone. The fact that smart phones provide easy access to the Internet from any environment is a factor that increases addiction (Karaaziz & Keskindağ, 2015). According to

Meral, the concept of smartphone addiction is kind of behavioural addiction that damages the mental health of the individual and harms his/her social relationships, with the use of smartphones more intensely than necessary and consequently causing the person to experience loss of control (Meral, 2017). Some psychiatrists, who stated that they are no different from other types of addiction, stated that smartphone addiction is the most common type of addiction among drug-free addictions (Bragazzi & Puente, 2014). Ross states that there are three main determinants of smartphone addiction. The first of these is that all individuals with smartphone addiction are in an effort to keep their smartphones constantly on. Secondly, individuals with smartphone addiction tend to use smartphones all the time, even though they have other means of communication. The third is that people do not give up using smartphones even if they experience financial and social problems due to excessive smartphone use (Ross, 2001).

The concept of "nomophobia" is related to smartphone addiction and has a rapidly increasing spread in the world. It is stated that this concept explains one of the main causes of addiction. Nomophobia is defined as the senseless and involuntary panic experienced when an individual cannot reach or communicate with their mobile device (Babayiğit et al., 2019). Behaviours such as checking the phone frequently for messages and calls, feeling nervous, stressed and worried in environments where phone use is limited, wanting to keep their phones open 24 hours a day, going to bed with their phone and checking their phones as soon as they wake up are among the behaviours of nomophobic individuals (Bragazzi & Puente, 2014).

2.1.3.1.Smartphone Addiction in Students

Smartphone addiction, which affects individuals of all ages, mostly shows its effect in student life. Smartphone addiction seems to have become an important part of the school environment and students' lives (Yalçın et al., 2018). It is known that students are addicted to smartphones in more than one area of their lives (Altundağ et al., 2019). Online games on smart phones, access to internet sites wherever they are and easy access are known as important factors in the increase of smartphone addiction in the student world (Noyan et al., 2017). Individuals who are students do not want to get away from their phones, want to carry it with them all the time, and the desire to be liked in the circle of friends are some of the effects of smartphone addiction (Durak & Seferoğlu, 2018). The presence of smartphone addiction in the school environment also brings negative consequences. It is seen that smartphone addiction in the school environment is effective in the failure of students, the presence of non-social students and the occurrence of involuntary behaviours in students

(Keskin et al., 2018). With the developing technology, the use of smartphones in students is increasing (Durak & Seferoğlu, 2018). It is known that smartphone addiction in students brings many health problems. It is known that excessive use of smartphones causes headaches, insomnia, fatigue and abnormal behaviours in students. The problem of smartphone addiction reveals situations such as stress, anxiety, restlessness and fear in students during the time they are deprived of the phone (Erdoğanoğlu & Arslan, 2019). It has been examined as a topic in more than one research and theses that the student's failure in education life and encountering negativities are related to smartphone addiction (Şata and Karip, 2017). In the past, while students were busy with activities such as trying to socialize in their spare time, renewing their knowledge, resting their minds, relaxing and having fun, in the present time, it is seen that students succumb to smartphone addiction (Yalçın et al., 2017). In recent years, students' smartphone addiction has been tried to be reduced in educational institutions, rehabilitation centers, and psychological clinics (Bulduklu & Özer, 2016).

As a result of the researches, the rate of smartphone addiction among students is increasing day by day. As a result of this increase, it is predicted that students cause continuous failures in their education life (Karaca & Tamer, 2017). Smartphone addiction, which causes depression, negatively affects students in their education life (Özen & Topçu, 2017). Every day, government policies try to reduce and prevent smartphone addiction, which is common among students around the world (Sağıroğlu & Akkanat, 2019).

Nowadays, by the fast advances of technology, the introduction of smartphones, which contain a small world, brings some problems with it (Kuyucu, 2017). It is seen that the rapid and excessive increase in the use of smartphones causes life to become dangerous (Şata & Karip, 2017). It is known that smartphones can perform many transactions such as social media use, online applications, playing games, taking photos, banking transactions, commercial transactions, in addition to the need for communication (Göymen & Ayas, 2019). For students, smartphones also offer benefits such as improving bilateral relations, meeting new friends and increasing social communication (Burucuoğlu, 2017). In addition to many features of smart phones that make human life practical, it is known that individuals can cause serious problems as a result of incorrect and problematic use. Smart phones, which affect individuals of all ages in the society, show more effect especially on students. It is seen that students play an important role in coordinating their lives and regulating their social lives (Şata & Karip, 2017). It is known as a rise within the period spent using smartphones and excessive use of smartphone applications cause physical and mental problems such as sleep

disorders, muscle aches, eye disorders, fatigue and feeling of burnout (Yalçın et al., 2017). Based on this, it is observed that the use of smartphones in students has increased rapidly and dangerously. It is seen that the rapid increase in the use of smartphones in students negatively affects the educational life of students (Özteke-Kozan et al., 2019). One of the worrying negative consequences of smartphone use among students today is the possibility that students will escalate to the degree of addiction. Addiction is known as a disease that is not under the control of the brain and causes many negative consequences in social life, along with more than one health problem. It is observed that the emotional states of the students whose smartphones are lost or not with them show an angry, anxious and restless mood. In more than one research, it is mentioned that emotions such as loneliness, jealousy, envy and socialization in students cause smartphone addiction (Bal & Balcı, 2020). It is known that addiction to smart phones brings with it material and moral damages every day. Smartphone addiction in students, the desire to buy a new and more functional smartphone financially; spiritually, it is known as the negative effect of success in education life (Noyan, et al., 2015). In recent years, many researches and experiments have been carried out within the scope of smartphone addiction. There are solutions that reduce smartphone addiction (Altundağ et al., 2019). Smartphone addiction, which continues rapidly today, is tried to be controlled by psychologists, counsellors and family members as a result of communication with students (Sağıroğlu & Akkanat, 2019). It is known that it aims to make students more conscious individuals in their social and educational life by reducing or controlling smartphone addiction (Keskin et al., 2018).

When the international literature is also examined there are valuable researchers based on smartphone addiction among university students. A study found that students spend more than 8 hours in a day with their smartphones (Alkhunzain, 2019). Gender, bachelor degree and marital status found to be significant variables in the formation of smartphone addiction in Saudi Arabia (Aljomaa et al., 2016).

2.1.3.2.Findings Regarding the Effect of Smartphone Addiction on Students

Smart phones, which developed as a part of our lives and have become a part of our lives since the day they were introduced to the market due to the convenience they bring, cause some positive effects and smartphone addiction causes some negative effects. The positive effects of smartphones include establishing and maintaining social relationships. The positive effects of smart phones can be counted as providing interaction with other people, providing entertainment activities, and providing useful information and opportunities about health-related functions. In addition, it facilitates the activities to be carried out via the

internet and allows the dissemination of voluntary aid activities more quickly. It also makes it possible for people who cannot have appropriate social relations in their lives to meet their interaction needs (Waytz & Gray, 2018).

It is observed that there is a negative association among the increase in the effect of each of the negative consequences of smartphone addiction and the educational life of the student (Türen et al., 2017). As a result of numerous studies, it is known that students and the next generation are likely to face the threat of smartphone addiction (Işık & Kaptangil, 2018). As a result of the negative situations created by smartphone addiction, it is predicted that the health of the society and the right upbringing of the next generation will be the best (Bal and Balcı, 2020). It is seen that the addiction to smartphones decreases with the increasing age of young, student and young individuals (Durak & Seferoğlu, 2018). It is seen that smartphone addiction increases and decreases in a direct proportion in case the student's family income decreases and increases (Chen et al., 2017). Students see smartphones as a symbol of status in their social and educational life (Yalçın et al., 2017). As a result of studies conducted in line with students' smartphone addictions and usage, it is seen that smartphone addiction does not vary conferring to gender, age in addition usage patterns (Chiu, 2014). It is seen that student individuals who are uncontrollably injured by the opportunities offered by smart phones and also become addicted may encounter many negativities in their education life (Keskin et al., 2018). It is seen that the reactions of the body in substance addiction and alcohol addiction in students are similar to the reactions of the students while they are away from their smartphones and being removed (Nikmat et al., 2018). As a result of research on smartphone addiction among students, it is seen that students prefer to spend time with their virtual friends on their smartphones than with their real-life friends and family members (Ghosh et al., 2016). An association within smartphone addiction and emotions such as happiness, depression and belonging has been found (Özteke-Kozan et al., 2019). Social media and internet use significantly affect related and personal smartphone addiction (Işık & Kaptangil, 2018). It is also found that there is a negative correlation among smartphone addiction and academic achievement (Kaya & Kaya, 2020).

2.1.3.3.Risk Factors of Smartphone Addiction

Although anyone of any age can be a smart phone user, those who are most adaptable to smart phone use are individuals in the Y and Z generation. While those born between 1977-1994 are called Generation Y, the individuals in this generation are highly intellectual and technologically prone. Generation Z, which consists of those born after 1995, was brought up in a very complicated media and computer environment, understood and

internalized the internet more, and is more expert than the Y generation. These two generations stand out in the use of smart phones (Choudhary, 2014). Although the X generation has remained more traditional, the use of smart phones has started to increase in that generation and smart phones have become the favourite tool of almost all generations.

In Doğan and Tosun's (2016) study on high school students' problematic smartphone use, social anxiety and social network use, high school student girls use more problematic smartphones and experience more social anxiety than boys. It has been revealed in the research that as the social anxiety levels of high school students increase, their use of social networks and problematic smartphone use increase. In another study on smartphone addiction, it was observed that individuals with extrovert personality traits carry a higher risk of smartphone addiction than individuals with introverted personality traits. It has also been observed that people with neurotic personality traits are also at risk of smartphone addiction. In the study, conducted by Şar, it was revealed that the feeling of loneliness pushes people to use problematic mobile phones, and the feeling of loneliness decreases with the use of mobile phones. On the other hand, he stated that adolescents who feel lonely use their mobile phones more frequently and experience mobile phone addiction (Şar, 2015).

It was also revealed in the study that there is a association among people who frequently use social media sites and narcissistic personality in relation to smartphone addiction. In addition, it has been observed that depression, stress and anxiety increase with the rise in the rate of smartphone use (Karaaziz & Keskindağ, 2015). Moreover another studies show that shyness and loneliness are also important predictor for smartphone addiction (Aydemir, 2018; Esen, 2010).

Kim, Cho, and Kim (2017) focused to examine the connection within smartphones and anxiety, loneliness as well as depression in their study with 200 university students in South Korea. As an outcome of the study, no connection was found within anxiety and smartphone addiction scores, but a positive association was found among loneliness, depression and smartphone addiction scores. Deursen et al. (2015) aimed to observe the relationship among smartphone addiction and various variables within the scope of their study with 386 participants. When the role of emotional intelligence on addiction was examined, no significant result could be reached, and it was determined that smartphone addiction was positively related to stress. It has been found that women show more smartphone addiction than men. It has been determined that the age of the individuals has a negative effect on addiction.

Perceived level of stress, negative emotions, rumination and locus of control are found to be effective variables in relation with smartphone addiction. As the level of stress and negative emotions increase risk for all type of addictions also increase. Ruminative thoughts can act as factor that links with increased stress level. In other words, we can say that psychosocial factors play an important role in the formation of smartphone addiction especially as an effort to meet the unmet psychological needs (Liu et al., 2018).

2.1.4. Social media

According to the historical development of social media sites, the social media site "sixdegrees.com" was first launched in 1997. The site, which allows users to create profiles and friend lists, was closed in 2000 after attracting millions of users (Alican & Saban, 2013). Founded in 2001, "Ryze.com" is the second social media site that helps people expand their business networks (Boyd & Ellison, 2008). With the spread of high-speed internet connection, the popularity of social media sites has rose and started to serve internet users (Göksu, 2019). It is said that social media is the product of web 2.0 technology. Sites such as Youtube, Twitter, Flickr, Facebook are among the oldest Web 2.0 applications that can be used as examples (Toprak & Uça-Güneş, 2015).

Today, the most used communication medium is social media sites. Users use social media to express their feelings and thoughts (Tutgun-Ünal & Deniz, 2016). Individuals can develop personal profiles in which they explain their positions, ideas, feelings and activities on social networking sites and express themselves there (Balcı & Gölcü, 2013). They can communicate and follow each other by sharing photos and videos (Kietzmann et al., 2011). Social networks are one of the most important emblems of an individual's existence on the Internet. Individuals have the opportunity to publish what they actually do, their perspectives and ideas through social media (Çiftçi, 2018).

When it comes to the evolution of the internet and new media, the Web 1.0 era refers to the time when the internet initially became popular and users were mostly passive and consumer. At that time, only content publisher and reader functions were available (Yeşim, 2017), all authority was in the founder of the site and users were only allowed to read (Ergenç, 2011). While Web 1.0 was not as colourful as today's internet, users could not write comments on websites, publish their thoughts or exchange information (Horzum, 2010).

Individuals have begun to produce, distribute and interpret materials as part of the Web 2.0 era. In this way, individuals have taken an active role not only as consumers but also as producers. During this period, many programs such as social media tools (Facebook, Twitter, Google, Instagram, Skype, Wikipedia) were put into use (Yeşim, 2017). Societal

interacting sites have become one of the most vital mechanisms of Web 2.0 technology (Karal & Kokoç, 2010). Web 2.0 technology has been used in many internet platforms by prioritizing social interaction, sharing and cooperation, and social networking sites have converted into the most important components of Web 2.0 technology. With the increasing use of the Internet and Web 2.0, social media has become the focus of public attention. Social media platforms have become an integral part of today's existence by attracting the attention of individuals from all walks of life, non-governmental organizations, activists, communication groups and government institutions (Shirky, 2011). These two concepts can be used interchangeably because social media, which plays an important role in social life, started with the growth of Web 2.0 expertise. However, Web 2.0 is considered suitable for online technologies and social media is suitable for the social aspects of these technologies (Constantinides & Fountain, 2008).

As technology progresses, social media applications have become the focal point of people's daily lives (Kocadere & Aşkar, 2013). Socialization is an important part of our lives and social media allows us to communicate with large groups of people at any time. Unlike traditional media (television, radio, newspaper), news and events in social media can be followed at any time and from anywhere. This diversity has broadened people's horizons in terms of ideas and cognition (Çalışır, 2015). In this way, users can present and follow their views on social, political and societal issues. These forums, which are predominantly composed of young people, now also help in job search and job creation (Öztürk et al., 2016). It is also doubtful that people are aware of how much time they spend on social media. Because there is so much engaging material on social media, people have been reliant on electronic devices such as phones and computers for a long time. As a result, people who get excited with every new material become addicted to social media (Parveen et al., 2015).

Five characteristic features of social media are emphasized. It is possible to list these features as follows;

• Participation: Providing feedback to the social media user facilitates and encourages people to contribute. Thus, it removes the clarity between the media and the user (Sobacı et al., 2015).

• Openness: Social media apps get the most feedback and platforms that enable participation. Social media, which is extremely clear and easy to use, allows its users to vote, present criticism and share information (Çakmak, 2018). It restricts or completely removes the access of unidentified persons.

• Conversation: While traditional media provides one-way communication flow. New media offers multidimensional and fast communication. The broadcast-basedness of traditional media and the fact that social media is based on dialogue show the difference between them (Güneş, 2016).

• Community: social media prepares a quick interaction ground for communities. Thus, there is a sharing of interests, political issues, photography and a popular television program within the communities (Vural & Bat, 2010).

• Connectedness: social media has the feature of being connected between texts and this feature is constantly developing. Social media is often built around connected businesses and relationships. It establishes links between sites with the authority to give links to individuals according to their areas of interest, thus increasing its area of influence and reaching large masses (Dondurucu & Uluçay, 2015).

2.1.4.1.Social Media Impact on Social Movements

The new communication environments developed with the effect of globalization and the increase in communication opportunities bring a new dimension to the concept of social media by removing the limitations with its easy accessibility. With the development of technology, forms of communication have also entered into a structural transformation. It is seen that social media platforms are actively used in many social and mass movements and their impact is great (Gordon, 2015).

The effect and dimensions of the new media on the Arab Spring, as a means of revolt against social movements, has been a matter of debate for many years. In the process of the Arab Spring, which started in the last days of 2010 and continued in 2011, which is also called the social media revolution, and the public movements in North Africa and the Middle East, due to the state monopoly, the flow of information to the public was prevented from traditional mass media and private broadcasting organizations due to censorship and pressure. In this process, social media, which is a communication tool, contributed to the opposition of the movement in unity and solidarity by enabling the people to communicate with each other quickly (Pollock, 2011). This movement, which has made its voice heard through the internet and social media, has started to be supported by all segments. Communication via human Facebook and Twitter. They organized activities such as meetings and street demonstrations by establishing a network. In this process, the only medium that allows dissidents to express themselves due to oppression and censorship is social media (Shirazi, 2013).

The 15-M Movement, which took place in Spain in February 2011, started when a large segment of the country in crisis protested by rejecting the political structures. The

mobilized citizens initially established the "Pro-Citizen Mobilization Groups Coordination Platform" and later changed this platform to "Real Democracy Now" and organized discussion and actions on Facebook with groups they formed from groups, blogs and forums (Borge-Holthoefer et al., 2011). In the Egyptian Revolution, the protesters took advantage of social media networks by videotaping the events with their mobile phones and sharing them with the whole world via Youtube and Facebook. It is seen that social media played an active role in the Gezi Park Resistance in Turkey. With the decision to demolish Gezi Park, the activists quickly organized and started solidarity by sharing instant information through social networks in the movement against urban transformation and environmental destruction. The fact that social media, which emerged for purposes such as entertainment and socialization, is an important communication tool in social movements, emphasizes the importance of this environment once again (Babacan, 2014).

2.1.5. Social Media Addiction

In the dictionary of the Turkish Language Association, addiction is described as "subordination, the state of being dependent". This situation, known as addiction, is characterized as excessive attachment to someone or something financially or spiritually, as well as being over-indulged and dependent on dangerous substances such as cigarettes, alcohol, drugs (Estevez et al., 2017).

According to the previous academic articles, social media addiction, like other types of addiction, is considered as a psychological condition (Tutgun-Ünal, 2020). When we look at the history of social media addiction, it is clear that it is caused by internet addiction. Dr. Ivan Goldberg was the first to use the term "internet addiction" in 1996. Later, in the 2000s, the situation worsened and pathological studies diagnosed it as a mental illness. Researchers doing virtual world research and studies have used DSM (Diagnostic and Statistical Manual of Mental Disorders) standards to define internet addiction, which is the categorization criterion used by the American Psychiatric Association. In order to define internet addiction, they expanded their research areas by examining gambling, sexual and alcohol addictions (Czincz & Hechanova, 2009). Internet addiction can be defined as the desire to be active on the Internet and to spend time in front of the Internet in a way that has lost control. As a result, spending most of the time online is both a sign and a cause of internet addiction (Tutgun-Ünal, 2019).

By definition, social media is online tools and websites that enable users to interact with each other by providing the opportunity to share thoughts, interests and information (Baz, 2018). On the other hand, Boyd and Ellison (2008) use social media, where users can

create personal profiles, interests, hobbies, etc. where they can share personal information, make new friends, and share photos, messages and videos. It is defined as web platforms where they can interact socially by uploading, liking and commenting content such as Today, social networks provide users with opportunities such as creating a profile, uploading content, communicating with other people and maintaining existing relationships in the social network. According to each user's interest and purpose; can communicate through blogs, instant messaging programs, forums and chat sites, and share files, photos and videos (Lam, 2014).

The main focus of social media or new media is face-to-face communication. Social media is the place where individuals share their ideas, feelings and thoughts as well as their ideas and experiences through various messaging and verbal communication. Kaplan and Haenlein (2010), describe social media by way of "all internet-based applications that enable user-centered production and growth of ideological and technological content and structures on Web 2.0". The term "new media", according to Borges (2009), refers to the internet region where people connect with each other. In another study conducted by Küçükali (2016) with 215 university students, it was concluded that a large part of the participants used social media to have fun and relax. On the other hand, in the research conducted by Aydın (2016) 65 percent of the participants stated that they use social media to connect through their networks, and those who use the order to obtain new information and research were followed. In the study conducted by Başoğlu and Yanar (2017) with 423 university students, it was established that the applicants used social media aimed at purposes such as research, maintaining communication, entertainment, planning social events and starting communication.

Within the progress of technology, social media addiction has developed more and more controversial. Since there are many types and there is no definite diagnosis, it has been tried to find answers to the questions of what are the different forms of social media addiction, are they problematic and can they be treated (Sanlav, 2014). People can introduce themselves as they wish in the virtual environment, act as if they have features and abilities that they do not have in real life, hide their identities, and turn into someone they are not in actual life. As a consequence of people using social media for these reasons, their psychological states may differ (Sriwilai & Charoensukmongkol, 2015). Disproportionate use of social media, such as internet addiction, can cause worsening in psychosocial work, such as some emotional diseases. Since the pathological use of social media is also investigated as a psychiatric condition, individuals may be exposed to this problem with excessive use and

may develop addiction (Ehlers, 2015). In addition, social media likes and alerts can promote the release of dopamine (pleasure hormone), making users feel happy (Macit et al., 2018).

Social media addiction is defined as a behavioural addiction as one of the many types of addictions such as gaming addiction, shopping addiction, substance addiction, and internet addiction (Griffiths, 2005). Social media addiction, which is a psychological disorder like other types of addiction, negatively affects people's lives. Social media addicts, like other substance addicts, have symptoms of addiction. Therefore, it is considered as a disease that needs to be treated (Akar, 2013). Social media addiction, which is expressed as a psychological problem, can be defined as the excessive and uncontrolled use of any of the social networks.

The fact that social media is cheap and easy (Sepetci, 2017) is considered as a reason for the habit of using it. As a result, a strong addiction emerges in users (Limayem & Cheung, 2011). When the results of the 2019 Social Media Statistics prepared by Hootsuit are analyzed, it is revealed that 52 million individual actively use social media and 44 million people are active mobile internet users. According to Przybylski, Murayama, DeHaan, and Gladwell (2013), free social media applications and ease of access to the internet have an impact on the increase in social media addiction. Networks, a social media tool, serve as a socialization tool and provide an environment for users to establish addiction-based relationships in new and fast communication platforms (Ulusoy, 2017).

The internet environment, which is actively used social media, has an important place in communication. However, institutions show that they are moving towards a “virtual world environment”, where they spend more than normal time on the internet and deal with their daily lives on the internet and social media environments (Cevherli & Şentepe, 2016). Today, research has been conducted on whether technological addictions for instance internet, social media, digital gaming in addition smartphone addiction are behavioural dependences. As a finding of the researches, it has been determined that people who are described as "internet addicts, social media addicts, digital game addicts and smart phone addicts" show similar symptoms to people with other behavioural or chemical addictions (Savcı & Aysan, 2017). In the light of this information, social media addiction might trigger problems for instance mood control and conflict, which negatively affect social relationships, disrupt work and/or academic life, cause personal tasks to be ignored or postponed (Turel et al., 2018).

2.1.5.1.Risk Factors of Social Media Addiction

There are some theoretical explanations which can give us an idea of risk factors for developing social media addiction. The learning theory explains the reason for social media

addiction with the positive experience of the person from the event. If the outcome of the person's experience is positive, the behaviour is reinforced and the person begins to do the activity more often to get the same satisfaction. According to the Cognitive-Behavioral theory, social media addiction occurs as a result of maladaptive perceptions (Andreassen, 2015; Kuss & Griffits, 2017). On the other hand, according to attachment theory, individuals with anxious attachment style spend more time on social media, think more and worry more about how they are perceived by others. In addition, according to the conceptual internet addiction model, the individual's internal needs (motivating factors such as hiding identity, getting away from troubles, meeting social needs) affect excessive use of the internet (Bozkurt et al., 2016).

Being female found as a risk factor in some studies. In a study conducted by İnce and Koçak (2017), it was established that social media addiction levels differed significantly in relation to sex, moreover female's social media addiction points were found to be higher than men. Çömlekçi and Başol (2019) found that women spend 40 minutes more time per day on social media compared to men. Ganjayeva (2019) stated that social media addiction may be more common in women due to usage motivations. Ekşi et al. (2019) found that women are more engaged in social media.

Another risk factor is age. Social media addiction can be seen more common in individuals in adolescence and young adulthood. Social existence, which is an important need of young adulthood; It is defined as the degree of standing out or showing oneself in one's social relationships. Studies have shown that Facebook allows people to be "us" rather than "me". In other words, people use Facebook to be 'us'. According to them, what they do, what they are, what they reflect on their profiles is of great importance. They can exhibit their posts to a community and receive feedback. In relation to these, he can stay as an individual in the group (Cheung et al., 2011). It is seen that the need to belong to the community and to be approved is also met in this environment.

2.1.6. Metacognition

Many different terms are used in the literature for the concept of metacognition. These are 'reflective cognition', 'executive cognition', 'executive cognition', 'metacognitive' and similar terms. Therefore, it is useful to deal with the definitions related to cognition at first. Cognition is expressed as the state of being conscious and aware of an object, situation, event (Rivas et al., 2022). Cognition; includes mental activities such as perceiving, remembering, and grasping. Therefore, considering the activities in cognition, the cognitive process is considered as a dynamic phenomenon. Cognitive processes are a complex and

multidimensional construct. This structure includes verbal communication, verbal comprehension, attention, memory, perception, problem solving, reading comprehension and many mental activities (Drigas & Mitsea, 2021).

There are many definitions of metacognition in the literature. When the concept of metacognition was examined historically, it was seen that it was first used by Flavell in 1979. According to Flavell, metacognition is the individual's knowledge of his own mental processes and the ability to manage these processes. According to Reeve and Brown (1985), the capacity of the individual to manage and direct his own mental processes is called metacognition. Sternberg (1998) defines it as the ability of an individual to manage processes such as planning and evaluation in the face of a problem. According to Shanahan (1992), it is understanding and controlling mental activity. According to Butterfield et al. (1995), it is defined as understanding the factors affecting cognitive activity and controlling and monitoring the mental process.

The concept of metacognition is generally defined as the knowledge that the individual has about his/her own cognition and the mental processes such as understanding, learning, grasping and remembering in line with the person's aims. It is a mental process that enables a person to control his own thoughts, to be supervised and briefly to be aware of himself. According to Schraw, cognition is the people's awareness of their own knowledge and what they do not know, and the ability to control cognitive processes. Therefore, cognition refers to intellectual activities such as perception, attention, reasoning, decision making, and problem solving. Metacognition, on the other hand, is expressed as the awareness of one's own thoughts and their control over them (Smortchkova & Shea, 2020).

There are various classifications to better explain the concept of metacognition and different definitions of the dimensions of metacognition. According to Flavell, metacognition has four components. These are metacognitive strategies, metacognitive knowledge, experiences, and goals. (Uygur, 2020). It is suggested that metacognitive knowledge generally consists of three components: situational knowledge, explanatory knowledge and procedural knowledge (Özsoy, 2018). Explanatory knowledge is the individual's knowing that his or her cognitive awareness is sufficient for him. With another explanation, it is the person's awareness of the effects of his cognitive responses on his performance. Situational knowledge, on the other hand, is the individual's awareness of when and under what conditions the information will be useful. Operational knowledge, on the other hand, is knowing how a method and strategy should be applied for the goals one wants to achieve and how it will be useful. (Hıdıroğlu, 2018).

Metacognitive activities play an important role in the functional and harmonious functioning of cognitive activities. Any deterioration that may occur here causes a psychological disorder in individuals. A deviation in metacognitive functions leads to thought disorders and wrong coping strategies (Wells & Cartwright-Hatton, 2004).

With respect to Cartwright-Hatton and Wells (1997), who developed the metacognition scale, five different but intertwined factors affect the expression of metacognition. The five dimensions of metacognition are as follows:

1. Positive Beliefs: The items are about the individual's positive thinking about the anxiety he feels, finding this thought useful and functional, and aiming to measure this situation. In other words, it measures the positive belief on the worry itself.
2. Uncontrollability and Danger: The items are related to the individual's negative thoughts about the anxiety he feels and to find this thought uncontrollable and dangerous. In other words, it measures the negative belief of the worry on itself.
3. Cognitive Confidence: The items measure an individual's confidence in his own memory and attention.
4. Need for Control: The items measure the individual's fear of negative consequences due to some of the thoughts he has, and his excessive assumption of even a possible negative outcome.
5. Cognitive Awareness: The items are designed to measure the state of thinking about the individual's thought. These items include both positive and negative metacognitive beliefs and metacognitive processes.

2.1.7. Perceived Stress

2.1.7.1.The Concept of Perceived Stress

In the APA Dictionary of Psychology (2020), stress is definite by means of a bodily or mental reaction toward interior or else exterior stressors. Stress is a process that affects almost every system of the body, including changes that affect how people feel and behave (APA Dictionary of Psychology, 2020).

Stress; It is a state of strain, tension and pressure that distances people from close emotional relationships, reduces their productivity, and most importantly, reduces their enjoyment of life (Baltaş & Baltaş, 2013). Perceived stress, on the other hand, is a person's physical, mental, and cognitive responses to real or perceived stimuli that tend to disrupt current balance or emotional, cognitive, and social functioning. These reactions force the individual to maintain the balance or to restore the disturbed balance (Budak, 2001).

Events that cause stress are evaluated differently by each individual. Despite the fact that the event is the same, some get through it without any problems and even consider the event as interesting and motivating, while others may experience emotional and physical problems. How stress is perceived is individual, and this has revealed the concept of perceived stress (Smith et al., 2015). According to Lazarus & Folkman (1984), people differ in evaluating the controllability, predictability of the same event, and the extent to which they challenge their ability and self-concept, and this assessment is usually effective in whether an event is perceived as stressful or not.

Perceived stress stands person's emotional state otherwise opinions based on how stressed he is at a certain period of time. It comprises the uncontrollability and unpredictability of one's life, how often one has to deal with distressing problems, at which degree of modification has arisen in one's lifetime, as well as self-assurance in one's capability to manage with problems or worries. People might agonise as of alike contrary life trials; though, aspects for example temperament, coping strategies and support cause stress to be perceived in different dimensions. Therefore, perceived stress reflects the collaboration within the person and his/her current situation (Phillips, 2013).

Stress is defined as the reaction that occurs when an action or situation causes physical and psychological strain on the person. In a different definition, stress is defined as the effort that an individual spends beyond his physical and psychological limits due to maladaptive conditions from the physical and social environment (Cüceleoğlu, 1993). Therefore, stress has compelling effects that jeopardize the person's well-being, reduce his capacity and compel him (Ünal & Ümmet, 2005). In this context, it is known that university students face many problems that go beyond their physical and psychological limits and thus challenge their capacity (Çakmak & Hevedanlı, 2005). Accommodation conditions, adolescence problems, economic problems, interpersonal problems, adjustment problems, separation from the family, assignment concerns, problems related to the department of education and security problems are the main sources of stress for university students. According to these circumstances, students practise some efficient or non-efficient tactics. This condition similarly exposes the way they deal with with stress. Coping is focused at justifying the perceived danger as well as subsequent devastation (Lazarus 1966).

2.1.7.2.Negative Effects of Stress on Human Health

Stress is recognized as a process that affects almost every system of the body, involving changes that affect how people feel and behave. For example, stress itself; tremors, sweating, dry mouth, shortness of breath, restlessness, rapid speech, increased negative

emotions, and longer stress fatigue. An excessively high level of stress reveals general adjustment problems (general adjustment syndrome). Stress as a result of these mind-body changes can directly lead to psychological and physiological impairment and/or illness. It can also reduce the quality of life by affecting mental and physical health (APA, 2020).

Today, stress and tension have become an important part of modern life. Stress, which has become a term used in daily life without questioning its meaning in our language, is a factor that can affect all aspects of human life. Since stress negatively affects the normal functions of the person, being exposed to stress for a long time causes various health problems in humans and even negatively affects human functioning and quality of life (Eskin, 2013).

Scientific research shows that stress has negative effects on human health (Schneiderman et al., 2005). These effects occur with the neurobiopsychological reactions they create and these reactions are determined according to the neuropsychosocial characteristics of the individual (Gunnar & Quevedo, 2007). Scientific research shows that stress has a causal role in the development of cardiovascular diseases, which are among the main causes of death today (Eskin, 2013).

Studies show that stress has a strong relationship with mental health. It is known that there is a strong relationship between exposure to stressful events and major depression. Post-traumatic stress disorder assumes that the individual is under the influence of stressful events. Being under the influence of stress or life events has a causal role in the emergence of fatal behaviors such as suicide. Being under the influence of stressful events and perception of stress; cigarette/tobacco can increase the risk of alcohol and substance abuse (Keane et al., 2006; Charuvastra & Cloitre, 2008; Pilowsky et al., 2008).

Stress not only affects physical and mental health, but also affects people's daily behaviors (Eskin, 2013). Stress increases the risk of traffic accidents (Taylor & Dorn, 2006). Stress affects people's learning and memory, and it is known that being under the influence of stressful events negatively affects the storage and recall of learned information (Shors, 2006). On the other hand, there are also some factors that effect the perception of stress. In today's world, individuals encounter various sources of stress. Reactions and perspectives towards events vary from person to person. So that; Individuals may react differently to the same event at different times. This change depends on many factors such as the cognitive state of the individual and the social environment in his life (Tavlı & Ünsal, 2016). In this context, the factors affecting the individual's perception of stress can be considered as environmental, social and psychological factors. Some stressors are inherently more stressful than others.

However, cognitive perception plays a role in adapting to the stress factor and serves to increase or decrease stress (Everly & Lating, 2019). It has been suggested that people who develop adjustment disorder after a stressful life event have a sensitivity to the said stressors, while many people who encounter a similar situation do not develop the disorder, while sensitive people develop the disorder.

2.1.8. General Belonging

If the organism is deprived of the conditions necessary for the continuation of life, this state of the organism is called the state of need (Cüceloğlu, 2017). We can group the needs of individuals as physical, psychological and social needs. Considering the psychological needs among them, it is seen that such needs are not considered independently of the person's social environment and relationships. The need for relatedness, autonomy and competence, which is brought from birth by almost every human being, which is fed in different ways in every culture that we can evaluate as universal, and which differs according to the perception levels of each individual, can be defined as basic psychological needs (Ryan & Deci, 2000). The urge to form social relationships, such as forming and maintaining social ties, is innate. It has an adjustable feature and is important for survival. Belonging plays an important role in meeting individual autonomy, competence and relationship. Consistent with the sense of acceptance and approval of belonging, individuals may be more prominent in developing, maintaining, and reorganizing new behaviours. A sense of belonging and setting a life purpose enable individuals to have a positive perspective in their lives. Thinking that relationships are valuable causes individuals to feel that they belong, and this sense of belonging contributes to finding their life very meaningful (Baumeister et al., 2013).

The phenomenon of belonging, which has survived until today, is considered by many researchers as one of the basic and universal needs of people (Shoib et al., 2022). Satisfying the need for belonging, which indicates the individual's harmony with the world and life satisfaction as one of his basic needs, provides the individual with the opportunity to shape and evaluate his/her expectations about his/her own future in interaction with the environment, and supports a harmonious personality development and effective solution of problems (Trommsdorff, 1983). In their daily lives, people experience many social interactions. When looking at individuals who experience these social interactions, it is stated as a basic and strong need to belong and to be accepted by family members, relatives, friends, colleagues and other important people in their life (Baumeister & Leary, 1995). is becoming. Because lately, it has become important for people not only to exist, but also to increase the quality of life. When the physiological needs and safety needs of the individual are met, the

individual now wants to establish close relationships with other people and to take a place in a group (Vansteenkiste, 2020). Meeting the need for belonging in healthy ways is important for the continuation of the individual's well-being. With the intention of regulating the level of belonging, it is very important to meet the need for belonging and to support the use of an effective method. From birth onwards, the need for care, commitment with family members and continuity in family unity are very important. The ability to struggle against difficult experiences creates a secure attachment and sense of belonging in the family. An increase sense of belongingness, that rises the capability of the human being, stands related through in cooperation mental and social functionality (Hagerty et al., 1996). Desires for love, admiration, attachment and standing put forward by the sense of belonging institute a significant position in terms of the mental health of a person. The absence of feeling of belongingness is able to harmfully impact on the spiritual comfort of a person. Circumstances which result in the emotion of the non-existence of belongingness; feeling excluded, remote and estranged, etc. is able to be determined as. Those conditions might correspondingly result in the person to practise few alteration complications (Baumeister & Leary, 1995). As a basic need, belonging is very important for the individual, family and society, and the sense of belonging can be stated as an element of relatedness and social/emotional commitment Belonging is a broad concept defined in various ways, some of which are; commitment, sense of school or class membership, support, sense of community and acceptance (Hill, 2009). If we evaluate the concept of belonging in an objective way, with another definition,

1. Individuals, assemblies, substances, administrations, settings, or psychic extents that are important to him and to others value the individual,
2. It is the person's living in harmony by means of other individuals, groups, substances, administrations, settings, or psychic extents (Hagerty et al., 1992).

Belonging as a basic need;

- It shows itself even in all challenging conditions
- It has an emotional effect • It also creates problems in areas such as harmony and health when it is not met
- Communicative mechanisms focused on satisfaction come into play
- It is seen in all people.
- It is a cognitive process
- It does not derive from other needs
- It significantly affects manners
- It has more impact than sudden psychological processes (Baumister and Leary, 1995).

The sense of belonging as an essential factor in interpersonal relations is called the individual's perception of himself as a part of the environmental factor he is in, and the knowledge of participating in a scheme or setting (Duru, 2015).

2.1.9. Relationship between Innovation and Knowledge Management with Smartphone and Social Media Addiction, Metacognition, Belongingness and Perceived Stress

Knowledge management refers to the process of creating, sharing, using and managing the knowledge and information of an organization. Smartphones and social media have greatly impacted knowledge management as they offer new channels for creating, sharing, and accessing information and knowledge (Gikas & Grant, 2013). Smartphones allow individuals to access information and collaborate with others on-the-go, while social media platforms provide a means of quickly disseminating information to a large audience. However, they also present challenges such as information overload and the need for curation and verification of information. At this point, it should be very well known that the difference between information and knowledge according to knowledge hierarchy (Laal, 2011).

The practice of managing an organization's innovation process, from its earliest stage of ideation to its effective execution, is known as innovation management. It includes all of the choices, actions, and procedures involved in creating and putting into operation an innovation strategy. The goal of the business discipline of innovation management is to foster a culture or process of sustained innovation within an organization (Hislop et al., 2018).

Smartphones can both positively and negatively impact knowledge management. On the one hand, smartphones offer a multitude of tools and applications that can support knowledge acquisition and sharing, such as access to online databases and social media platforms. On the other hand, excessive smartphone usage can lead to information overload and decreased attention span, making it harder for individuals to focus on and retain relevant information (Gikas & Grant, 2013; Berge & Muilenburg, 2013).

Using social media can have both positive and negative impacts on knowledge management. On the one hand, social media platforms offer opportunities for information sharing and collaboration, providing access to a wide range of knowledge and expertise. On the other hand, social media can also be a source of information overload, misinformation, and decreased attention span, making it harder for individuals to focus on and retain relevant information. In this context, there are both negative and positive impact of using social media from the information management and knowledge management perspectives (Kasemsap, 2014; Donate & Pablo, 2015).

Social media and mobile phone addiction are prevalent in today's society, and the impact on knowledge and innovation management is significant. On one hand, social media platforms offer a vast amount of information and knowledge, which can be easily accessed through mobile phones. This can greatly enhance the knowledge and innovation management process as it allows individuals to connect and share information with others. Additionally, using smartphones and social media are entirely evaluated as innovation attributes. Therefore, process types of innovation could be considered in this context for the users (Bharati et al., 2015).

To effectively utilize social media for knowledge management, it is important to strike a balance between the benefits and drawbacks. This may involve setting guidelines for information consumption, utilizing tools to manage the flow of information, and encouraging critical thinking and evaluation of sources. Additionally, organizations can provide training and resources to support employees in using social media effectively for knowledge management. From the social media addiction perspective, if tacit capacity of knowledge can be managed affectively for the social media user, the addiction can be under controlled because tacit knowledge could be evaluated under the control circumstances cognitively (Von Krogh, 2012).

Social media and mobile phone addiction can negatively impact on knowledge and in several ways:

1. Decreased productivity: excessive use of social media and mobile phones can lead to decreased focus and productivity, reducing the time available for learning and innovation.
2. Decreased creativity: Addiction to social media and mobile phones can lead to decreased face-to-face communication, reducing opportunities for creativity-stimulating collaboration and idea generation. The reliance on digital communication through smartphones and social media can decrease face-to-face communication, leading to a loss of nonverbal cues and valuable interpersonal skills.
3. Information overload: The constant stream of information from social media and mobile phones can lead to information overload, reducing the ability to process and retain new information necessary for innovation and problem-solving.
4. Reduced critical thinking: Overreliance on instant gratification from social media and mobile phones can reduce the development of critical thinking skills, essential for knowledge and innovation management.

5. Distraction: Excessive smartphone and social media usage can lead to distractions and reduce productivity, reducing the amount of time individuals have for acquiring and sharing knowledge.
6. Decreased Attention Span: Excessive smartphone and social media usage can lead to a decrease in attention span, making it harder for individuals to focus on and comprehend information.
7. Spread of Misinformation: Social media can be a platform for the spread of misinformation, leading to confusion and a decrease in trust in information.
Overall, social media and mobile phone addiction can have a negative impact on knowledge and innovation management, reducing productivity, creativity, critical thinking, and the ability to process information. The main reason of this negative effect is about the addiction context which is required to take psychological treatments (Priyadarshini et al., 2020; Ifeanyi & Chukwuere, 2015).

The impacts of smartphone and social media addiction on innovation management are:
1. Reduced Creativity: Excessive smartphone and social media usage can lead to a decrease in free time for individuals to think and reflect, reducing opportunities for creativity and innovative thinking.
2. Decreased Collaboration: The reliance on digital communication through smartphones and social media can lead to a decrease in face-to-face communication, reducing opportunities for collaboration and teamwork.
3. Information Overload: The constant flow of information and notifications can lead to information overload, making it difficult for individuals to focus on and retain information relevant to innovation management.
4. Decreased Productivity: Distractions caused by smartphone and social media usage can lead to decreased productivity, reducing the time and resources available for innovation management.
5. Spread of Misinformation: Social media can be a platform for the spread of misinformation, leading to confusion and a decrease in trust in information, which can negatively impact innovation management decisions.
6. Reduced Physical Interaction: Excessive smartphone and social media usage can lead to a reduction in physical interaction, reducing opportunities for brainstorming and other forms of collaborative problem-solving (Sunday et al., 2021; Kasemsap, 2014; Armbrecht et al., 2001).

In addition, general feelings of belonging, stress, and metacognition problems can impact innovation and knowledge management. Whereas the theoretical background of innovation management stimulates to using smartphones and social media effectively, addiction of those two platforms have a negative impact of innovative attributes in organizations. The users of smartphones and social media must be educated under a certain plan in this context by managing their tacit knowledge capacity to get rid of addiction.

1. Belonging: A sense of belonging in an organization is important for employee motivation and engagement. A lack of belonging can lead to decreased morale, reduced motivation, and decreased collaboration, all of which can negatively impact innovation and knowledge management (Lazaroiu, 2015; Belle et al., 2014).
2. Stress: High levels of stress can negatively impact an individual's ability to think creatively and find innovative solutions, as well as reducing their ability to focus and retain information, which are important for knowledge management (George & Jones, 2012).
3. Metacognition: Metacognition refers to an individual's awareness and understanding of their own thinking processes. Problems with metacognition can lead to a lack of self-awareness and reduced ability to reflect on and improve one's thinking processes. This can negatively impact the ability to generate innovative ideas and effectively manage knowledge (Cartwright-Hatton & Wells, 1997).

Therefore, promoting a positive work environment, reducing stress, and supporting metacognition can positively impact on innovation and knowledge management. The lack of innovation and knowledge management application in organizations give rise to decreasing creativity, knowledge sharing, structuring and using knowledge as well as applying process-based innovation within the organizational hierarchies (Laal, 2011; Hislop et al., 2018).

Perceived stress refers to an individual's subjective assessment of the degree to which situations in their life are appraised as stressful. There is some evidence that effective knowledge management can lead to lower levels of perceived stress, as individuals have access to relevant information and resources that can help them effectively manage their workload and responsibilities (Huh et al., 2021). Conversely, a lack of effective knowledge management can contribute to higher levels of perceived stress, as individuals may feel overwhelmed or unsure of how to proceed in their work.

Effective knowledge management can help reduce perceived stress by providing employees with access to relevant information and resources that can aid in their decision-making and problem-solving. This can lead to a greater sense of control and autonomy in the

workplace, as well as an increased ability to manage workload and meet deadlines. Additionally, effective knowledge management can foster a sense of community and collaboration within an organization, which can help alleviate stress by providing support and resources from colleagues (Abubakar et al., 2019).

Conversely, a lack of effective knowledge management can lead to perceived stress by creating confusion and uncertainty. For example, employees may struggle to find the information they need to complete tasks, or may receive conflicting information from different sources. This can lead to decreased efficiency and productivity, as well as increased frustration and burnout. Additionally, a lack of knowledge management can result in a sense of isolation in the workplace, which can exacerbate stress levels (Sommerville et al., 2004). Therefore, it can be said that there is a relationship between knowledge management and perceived stress, as effective knowledge management can serve as a protective factor against stress, while a lack of effective knowledge management can contribute to increased levels of stress.

Metacognitive problems refer to difficulties in regulating and monitoring one's own thinking processes, such as memory, attention, and problem-solving. There is a relationship between knowledge management and metacognitive problems, as effective knowledge management can support individuals in developing metacognitive skills (Chater & Oaksford, 1999). For example:

Access to relevant information: Effective knowledge management provides individuals with access to the information they need to perform their tasks, reducing the cognitive load and freeing up mental resources for metacognitive processes.

Encouragement of reflection: Effective knowledge management can foster a culture of reflection and learning, encouraging individuals to regularly reflect on their own thinking processes and improve their metacognitive skills.

Development of transferable skills: Effective knowledge management can provide opportunities for individuals to apply and transfer their skills and knowledge across different contexts, further developing their metacognitive abilities (Sen & Yılmaz, 2016; Wolters et al., 2017).

On the other hand, a lack of effective knowledge management can lead to metacognitive problems by creating confusion and uncertainty. For example, employees may struggle to find the information they need to complete tasks, leading to decreased efficiency and increased frustration. This can interfere with the development of metacognitive skills, as individuals may become less reflective and less able to regulate their thinking processes

(Larmar & Lorge, 2014). Therefore, it can be said that there is a relationship between knowledge management and metacognitive problems, as effective knowledge management can support the development of metacognitive skills, while a lack of effective knowledge management can contribute to difficulties in regulating and monitoring one's own thinking processes.

General belonging refers to the extent to which individuals feel they are part of a community or group. There is a relationship between general belonging and knowledge management, as effective knowledge management can support the development of a sense of belonging within an organization (Baumister and Leary, 1995). For example:

Encouragement of collaboration: Effective knowledge management can foster a culture of collaboration and sharing, encouraging individuals to work together and build relationships. This can enhance the sense of belonging within an organization.

Development of shared goals: Effective knowledge management can support the development of shared goals and a common understanding of the organization's purpose, further enhancing the sense of belonging among employees.

Promotion of inclusiveness: Effective knowledge management can help promote inclusiveness by providing access to information and resources for all employees, regardless of role or seniority. This can foster a sense of belonging and a shared identity among employees (Belle et al., 2014; Morgeson et al., 2013; Song et al., 2012).

On the other hand, a lack of effective knowledge management can lead to a decrease in general belonging by creating confusion and division within an organization. For example, employees may struggle to access the information they need to perform their tasks, leading to decreased efficiency and increased frustration. This can interfere with the development of relationships and a sense of belonging among employees. Therefore, it can be said that there is a relationship between general belonging and knowledge management, as effective knowledge management can support the development of a sense of belonging within an organization, while a lack of effective knowledge management can contribute to a decrease in general belonging (Filstad et al., 2019; Lee & Rasche, 2016).

2.2.Related Research

When the relevant literature is examined, current sources have been encountered, since the concepts in question are new popular concepts. In addition, there is no other study that deals with all concepts together.

2.2.1. Smartphone Addiction, Social Media Addiction and General Belongingness

Researches investigating the association among smartphone addiction and general belonging have reached the appropriate conclusions. They sought to find belonging needs predicted Facebook use in their study by Knowles et al. (2015). Bian and Leung (2015) found that loneliness is positively and significantly correlated with smartphone usage patterns and smartphone addiction severity. In a recent study, Enez-Darcin et al. (2016) found that individuals with loneliness experiences overuse cyber-technological devices. One of the former researches has put forward that the persons who practise a feeling of societal exclusion prone to have increased needs towards attention. Consequently, they will turn out to be more dependent on social media (David & Roberts, 2017). Some study results show that social media usage may increase the sense of belonging and self-esteem which might have a positive effect on general well-being (Xiao et al., 2022). It has been also found that basic needs such as belongingness might have a direct effect in the formation of social media addiction (Sun & Zhang, 2021).

Smartphone addiction was found to be positively related to the rejection dimension of general belonging, but no significant relationship was found to the acceptance dimension. Path analysis results showed that acceptance and rejection dimensions of general belonging positively predicted smartphone addiction. (Özteke-Kozan et al., 2019). Also, academics have realized that social exclusion might underwrite to Facebook addiction (Lim, 2019). According to them, being excluded by social environment directs individuals to practise improved undesirable sentiments, lessened self-regulation, and also decreased self-control, which might underwrite to internet addiction (Arslan & Coşkun, 2021). The outcomes have set forth that (1) social exclusion stood a constructive predictor of smartphone addiction; (2) feeling isolated and self-control distinctly facilitated the connotation amid social exclusion and smartphone addiction (Yue et al., 2022).

2.2.2. Smartphone Addiction, Social Media Addiction and Perceived Stress

When the studies dealing with the relationship between smartphone and social media addiction and perceived stress were examined, similar results were obtained. Lepp et al. (2014) concluded that students with high smartphone addiction levels had higher anxiety levels. As stated by Samaha and Hawi (2016) there stands a not powerful affirmative association within the stage of smartphone dependence and the degree of perceived stress. Another study found a weakly positive and significant relationship between students' total scores on smartphone addiction and their perceived stress total scores. The relationship among smart phone addiction as well as the perceived stress within students remained positive and noteworthy (Somani et al., 2018). As students' smartphone addiction levels rise, their perceived stress level also increases (Göldağ, 2019). According to another very recent research result, important straight positive impact of mobile phone dependence over perceived stress stayed existing within Chinese students (Liu et al., 2022). The contemporary study outcomes recommended that smartphone dependence remained definitely interrelated with stress. Smartphone dependence scores and stress remained impacted by factors concerning population. The outcomes of numerous studies specified that stress meaningfully described 57% of the alteration of smartphone dependency ($P<0.001$). (Eisanazar, 2022). Another study result illustrates that perceived stress was related with lower self-control, that one after the other was connected by an advanced risk for mobile phone addiction. (Zhang et al., 2022). Taş (2022) established a positive connection among perceived stress and social media dependence. Deursen et al. (2015) aimed to observe the association amid smartphone addiction and various variables within the scope of their study with 386 participants. When the role of emotional intelligence on addiction was examined, no significant result could be reached, and it was determined that smartphone addiction was positively related to stress.

Chiu (2014), with 387 university students in Taiwan, examined the association within perceived stress, self-efficacy as well as smartphone addiction. Consequently, as the analyses completed, academic stress is the negative predictor of social and learning self-efficacy, and social self-efficacy is the negative predictor of smartphone addiction. Family and emotional stress are found to be strong predictors of smartphone addiction. It has been determined that life stress has a significant effect on smartphone addiction. According to the study of Yan et al. (2003), according to the results of his study with 1065 students; stressful life events have a statistically significant positive relationship with internet addiction. Kavaklı and Yalçın (2019) stated in their study with 346 university students that perceived stress positively predicted internet addiction.

2.2.3. Smartphone Addiction, Social Media Addiction and Metacognition Problems

When the studies investigating the relationship between smartphone and social media addiction and perceived stress were examined, similar results were obtained. Lepp et al. (2014) concluded that students with high smartphone addiction levels had higher anxiety levels. Samaha and Hawi (2016) concluded as there is a weak positive correlation among the level of smartphone addiction and the level of perceived stress. When the other studies dealing with the association among smartphone and social media addiction and metacognition problems were examined, similar results were obtained. According to Spada et al. (2013), the connection amongst problematic internet use and negative emotions can be better understood thanks to the metacognition hypothesis, which demonstrates how metacognition functions as a mediator. Sevim (2017) found that problematic internet use is favourably and significantly influenced by metacognitions. It is also well established that people are more prone to involve in Internet, social media, and smartphone use when their beliefs about these behaviours' beneficial impacts on emotions and cognitions are stronger (Casale et al., 2021). A study found that uncontrollability and risk, cognitive attention, difficulty in detecting emotions, and positive beliefs all have a favourable impact on problematic internet use. The same study also demonstrated that metacognition has a favourable and significant impact on problematic internet use (Böckün, 2021). According to Böçkün's study from 2021, there is a substantial correlation between participants' degrees of cognitive awareness, need to manage thoughts, cognitive confidence, and positive views as well as problematic internet use and its sub-dimensions.

There are very recent studies in the worldwide literature related with metacognition and smartphone addiction. Chen et al. (2022) found that negative metacognitions show a significant effect in the formation of smartphone addiction besides positively mediates the relationship of anxiety and smartphone addiction. Moreover, Casale et al. (2021) illustrate that as the positive metacognitions about smartphone use increase the ability to control the use of smartphone decrease. Some important studies also reveal that positive metacognitions about smartphone usage positively predicts the smartphone addiction (Elhai et al., 2020; Shi et al., 2021).

CHAPTER III

3. Methodology

This chapter of the research will be regarding the research design, population/sample, data collection and analysis procedures and also how the findings have been analysed.

3.1.Research Design

Quantitative data were collected from the study participants. In this research, the cross-sectional-relational survey method, one of the quantitative research methods, was used as a research method. In cross-sectional studies, people or events are studied at a particular point in time (Büyüköztürk et al., 2018). In the relational screening model, it is tried to specify the presence of covariance flanked by two or more variables (Çaparlar & Dönmez, 2016). In this study, the dependent variables were smartphone addiction and social media addiction, while the independent variables were general belonging, perceived stress and metacognition. Other independent variables in the research are sociodemographic variables such as gender, class level and place of birth of the individuals participating in the research.

3.2.Participants/Population and Sample

This research was conducted with 294 students who were chosen with the stratified sampling technique from students in the four-year B.A Programme on Psychology Department at Near East University in North Cyprus during the 2018-2019 academic year (including students educated from first year class to the fourth year). From the Psychology Department, where the population with a confidence interval of 95% stayed 439, 140 first-year students, 87 second-year students, and 34 third and fourth-year students remained counted in the sample. While determining the sample size, the values of “Sample Sizes for “x=0.05” determined by Yazıcıoğlu and Erdoğan (2004) were taken as reference.

3.3.Data Collection Tools/Materials

The Sociodemographic information form, Smartphone Addiction Scale-Short Form, Social Media Addiction Scale, General Belongingness Scale, Perceived Stress Scale and Metacognition Scale were used in the research.

3.3.1. Sociodemographic Information Form

Information about gender, age, education level, duration of mobile phone usage etc. were asked to the participants. The researchers developed the sociodemographic information form that includes 12 questions.

3.3.2. Smartphone Addiction Scale-Short Form

SPAS was established by Kwon et al. (2013) so as to examine the risk of dependence to smartphones among younger generations. The validity and reliability study of the measure concerning university students discovered that the Cronbach's alpha coefficient remained 0.867. The test/retest reliability coefficient stood designed as 0.926. It remains a six-point Likert-type scale composed of 10 items where probable records differ amid 10 and 60. Augmented test points designate that there stays an advanced risk of addiction. It remains a sole feature measure with no subscales (Noyan et al., 2015). The Cronbach's alpha coefficient for the existing research remained instituted as 0.896. SPAS encompasses substances for example "Missing planned work due to smartphone use, "Having a hard time concentrating in class" and "Feeling pain in the wrists or at the back of the neck while using a smartphone".

3.3.3. Social Media Addiction Scale

This scale was employed by Şahin and Yağcı (2017) to show the degree that individuals remain dependent on social media. The measure comprises a five-point Likert type 20 items. It includes two sub-dimensions (virtual tolerance and virtual communication). Few precise substances of the measure shown as "I see social media as an escape from the real world" and "I stay on social media longer than I planned". The Cronbach's alpha internal consistency coefficient for the total measure calculated as 0.94, whereas values of 0.92 and 0.91 remained instituted for the virtual tolerance and virtual communication sub-dimensions, correspondingly (Şahin & Yağcı, 2017). The Cronbach's alpha coefficient for the present research stood discovered as 0.889.

3.3.4. General Belongingness Scale (GBS)

GBS was put forward by Malone et al. (2012), and Duru (2015) has been used for the validity and reliability study of the Turkish version in 2015. The internal and test-retest reliability of the measure stands high as well as its

subscales are able to be benefited for estimating the rank of belongingness of university students. Exploratory factor analysis in terms of the scale's construction discovered that the measure is comprised of two negatively connected sub-dimensions: Acceptance/Inclusion and Rejection/Exclusion. The Cronbach's alpha coefficient for the existing research was established as 0.859. The measure covers 12 objects specifically "I have close/intimate ties with my family and friends" and "I have a sense of belonging".

3.3.5. Perceived Stress Scale

The scale, which was developed by Cohen et al. (1983) as a 5-point Likert scale to illustrate subjective stress, is comprised of 10 items such as "In the past month, how often have you been disturbed by something unexpected happening?" and "In the past month, how often have you felt irritable and stressed?". Increased scale scores suggest that the individual has a high level of perceived stress. Adaptation of the scale into Turkish was made by Eskin et al. (2013), who found that that the scale, which is used with only one factor, also has a two-factor structure, namely the perception of inadequate self-efficacy and the perception of stress/discomfort. In the adaptation study, the internal consistency coefficient of the entire scale was determined to be 0.82 and the test-retest reliability coefficient was calculated as 0.80. The Cronbach's alpha coefficient for the present study was found as 0.823.

3.3.6. Metacognition Scale-30

The Metacognition Scale-30 has been designed by Cartwright-Hatton and Wells (Cartwright-Hatton and Wells, 1997). Tosun and Irak have made the validity and reliability study of the Turkish version of the scale (Tosun & Irak, 2008). The MCS-30 is a 4-point Likert scale and consists of 30 items. Some specific objects of the scale are "It's dangerous for me to worry", "I must always keep my thoughts under control" as well as "When worrying thoughts come to my mind, I can't ignore them". The point that an individual can get form the scales vary between 30 and 120, and increased scores are related with heightened pathological meta cognitive action. The measure has five factors listed as cognitive confidence, positive beliefs about worry, cognitive self-consciousness, negative beliefs about uncontrollability of thoughts and danger, and beliefs about need to control thoughts. In relation with the results of the Turkish validity and reliability study, the Cronbach's

alpha reliability coefficient was calculated to be 0.86, whereas values of 0.72 for the first half of the scale and 0.79 for the second half have been calculated. The Cronbach's alpha coefficient of the present research was calculated as 0.915.

3.4.Data Analysis Procedures

SPSS 26.0 software and Amos 21 were used for the purpose of analysing the research data, the dispersal of the participants grounded within their socio-demographic features was examined by frequency analysis and descriptive statistics stand accessible conferring with the scores attained within the scales. The Kolmogorov-Smirnov test has been done in order to assess the normal distribution of the scores that the students received from the scales and it was determined that it not conformed to normal distribution. The Mann-Whitney U test and Kruskal-Wallis H test, stood used to make comparisons amid the Smartphone Addiction and Social Media Addiction Scale scores rendering to socio-demographic characteristics. The correlations among the participants' scale scores were investigated by the Spearman test, as well as the predictive role of the participants' General Belongingness Scale, Perceived Stress Scale and Metacognition Scale, Social Media Addiction and Smartphone Scale scores was studied by means of multivariate linear regression and Structural Equation Modeling.

3.5.Study Plan

In the first stage of the study, permissions were obtained from the researchers who developed or adapted the scales used in the study. Secondly, the necessary consent had been gained from the Near East University Ethics Committee for the research. A research battery was created by bringing together the scales used in the research. At first, an Informed Consent Form was given about the research and written consent was obtained from the students. The scales were applied with the verbal approval from the course teachers before applying the scales. Collection of the lasted six months (October 2019- March 2020).

CHAPTER IV

4. Findings and Discussion

This chapter presents the findings based on the collected data.

4.1.Descriptive features

Table 1.

Normality tests of students' General Belonging Scale (GBS), Perceived Stress Scale (PSC), Metacognition Scale (MCS), Smartphone Addiction (SPAS) and Social Media Addiction Scale (SMAS) scores

	Kolmogorov-Smirnov		
	Statistic	**Sd**	**p**
Smartphone Addiction Scale	0,087	294	0,000
Virtual tolerance	0,073	294	0,001
Virtual communication	0,081	294	0,000
Social Media Addiction Scale	0,052	294	0,053
To be accepted	0,132	294	0,000
Exclusion	0,202	294	0,000
General Belonging	0,121	294	0,000
Insufficient Perception of Self-efficacy	0,131	294	0,000
Perception of stress/discomfort	0,084	294	0,000
Perceived Stress Scale	0,077	294	0,000
Positive beliefs	0,080	294	0,000
Uncontrollability and danger	0,084	294	0,000
Cognitive confidence	0,139	294	0,000
The need to control thoughts	0,080	294	0,000
Cognitive awareness	0,101	294	0,000

In Table 1. Kolmogorov-Smirnov test results, in which the GBS, PSS, MCS, SPAS and SMAS scores of the students contributing in the research were examined, stand specified the normal distribution, and it was determined that the data did not show a normal distribution.

Table 2.

Socio-demographic characteristics of students (N=294)

	Number (N)	Percentage (%)
Gender		
Female	198	67,35
Male	96	32,65
Age group		
18-20	120	40,82
21-23	113	38,44
24 and over	61	20,75
Birth place		
TRNC	29	9,86
TR	265	90,14
Marital status		
Single	282	95,92
Married	12	4,08
Longest place of residence		
Village	29	9,86
City	265	90,14
Grade		
First grade	80	27,21
Second grade	53	18,03
Third grade	70	23,81
Fourth grade	91	30,95
Working status		
Working	49	16,67
Not working	245	83,33
Monthly income		
3000 TL and below	84	28,57
3001-5000 TL	98	33,33
5001-7000 TL	57	19,39
7001 TL and above	55	18,71
With whom they live		
Family	225	76,53
Friend	33	11,22
Partner/lover	15	5,10
Alone	21	7,14

The socio-demographic features of the participants are given in Table 2.

When Table 2 is observed, 67.35% of the participants participating in the study are female, 32.65% are male, 40.82% are in the 18-20 age group, 38.44% are in the 21-23 age group. , 20.75% were from the age group of 24 and above, 9.86% were born in TRNC, 90.14% were

born in TR, 95.92% were single, marital status was single, 4.08% The marital status of ' is married, 9.86% of the settlement place where they reside for the longest time is village, 90.14% of them is the city where they reside the longest, 27.21% is first grade, 18.03% of them are in the second grade, 23.81% are in the third grade, 30.95% are in the fourth grade, 16.67% are working, 83.33% are not working students, 28.57% have monthly income. 3000 TL and below, 33.33% of them have monthly income between 3001-5000 TL, 19.39% have monthly income between 5001-7000 TL and 18.71% have a monthly income of 7001 TL or more, 76.53% ' of them live with their family, 11.22% live with their friends, 5.10% of them live with partner/love and it is seen that 7.14% of them live alone.

Table 3.
Students' health, smoking and alcohol use (N=294)

	Number (N)	**Frequency (%)**
Chronic disease diagnosed by Dr.		
No	269	91,50
Yes	25	8,50
Psychiatric disease diagnosed by Dr.		
No	277	94,22
Yes	17	5,78
Alcohol use status		
Who do not use	64	21,77
Who use	230	78,23
Smoking status		
Who do not use	80	27,21
Who use	214	72,79
Trying of any drug		
Who tried	16	5,44
Who not tried	278	94,56

In Table 3, students' health, smoking and alcohol use statuses are given.

According to Table 3, 91.50% of the participants comprised within the study do not have a chronic illness diagnosed by a doctor, 8.50% have a chronic disease diagnosed by a doctor, 94.22% have a psychiatric diagnosis diagnosed by a doctor. It was determined that 5.78% of them had a psychiatric disorder diagnosed by a doctor. 21.77% of the participants did not use alcohol, 78.23% used alcohol, 27.21% did not smoke, 72.79% smoked, 5.44% tried drugs, 94,56% of them had not tried drugs.

Table 4.

Students' use of smartphones, internet and social media (N=294)

	Number (N)	**Frequency (%)**
Smartphone usage time		
1-2 hour	30	10,20
3-5 hour	153	52,04
6 hour and more	111	37,76
Way of connecting to the internet		
Computer/laptop	31	10,54
Smart phone	263	89,46
Social media usage purpose		
Information exchange	48	16,33
Entertainment	136	46,26
Communication	110	37,41

Table 4 shows the participants' use of smart phones, internet and social media.
When Table 4 is viewed, it is observed that 10.20% of the participants involved in the study used smartphones for 1-2 hours, 52.04% between 3-5 hours, 37.76% of them for 6 hours or more, 10,54% of them are connected to the internet with a computer/laptop, 89.46% are connected to the internet with a smart phone, 16.33% of them are using social media for information exchange, 46.26% of them are using social media for entertainment and at last it has been determined that 37,41% of them use social media for communication.

4.2.Findings on Social Media Addiction

Table 5.

Students' Smartphone Addiction Scale scores (N=294)

	n	$\bar{x}$	s	Min	Max
Smart phone Addiction Scale	294	25,85	10,74	10	55

When Table 5 is examined, it stood indicated that the participants of the research got an average of 25.85±10.74 points, a minimum of 10, and a maximum of 55 points on the Smartphone Addiction Scale.

Table 6.

Comparison of the Smartphone Addiction Scale scores according to the socio-demographic characteristics of the students (N=294)

	n	$\bar{x}$	s	M	SO	Z / X^2	p	Difference
Gender								
Female	198	26,43	10,81	25,00	151,92	-1,281	0,200	
Male	96	24,64	10,55	24,00	138,39			
Age group								
18-20	120	27,00	11,19	25,00	155,39	2,953	0,228	
21-23	113	25,48	9,83	25,00	147,25			
24 and over	61	24,26	11,36	23,00	132,44			
Birth place								
TRNC	29	29,66	13,64	29,00	170,98	-1,568	0,117	
TR	265	25,43	10,32	25,00	144,93			
Marital status								
Single	282	25,97	10,67	25,00	148,79	-1,258	0,209	
Married	12	23,00	12,44	19,00	117,29			
Longest place of residence								
Village	29	26,03	11,27	26,00	149,62	-0,142	0,887	
City	265	25,83	10,70	25,00	147,27			
Grade								
First grade	80	26,71	11,45	25,00	152,43	3,492	0,322	
Second grade	53	25,96	10,15	25,00	150,25			
Third grade	70	27,04	10,98	26,00	157,18			
Fourth grade	91	24,10	10,19	23,00	134,12			
Working status								

Working	49	22,61	10,14	20,00	119,87	-2,494	0,013*	
Not working	245	26,49	10,76	25,00	153,03			
Monthly income								
3000 TL and below[1]	84	24,42	9,69	23,00	136,93	8,712	0,033*	1-3
3001-5000 TL[2]	98	25,85	10,66	26,00	148,78			3-4
5001-7000 TL[3]	57	29,42	11,14	27,00	174,68			
7001 TL and above[4]	55	24,33	11,39	23,00	133,20			
With whom they live								
Family[1]	225	26,50	10,64	25,00	153,25	9,965	0,019*	1-3
Friend[2]	33	26,88	11,67	26,00	153,73			2-3
Partner/lover[3]	15	20,20	8,41	18,00	100,47			1-4
Alone[4]	21	21,24	10,11	23,00	109,69			2-4

**p<0,05 (Z:Mann-Whitney U testi, X^2:Kruskal-Wallis H test)*

In Table 6, comparisons of the SPAS scores of the participants according to their socio-demographic characteristics were made by the Mann-Whitney U test as well as the Kruskal-Wallis test, and the results are given below.

When Table 6 is examined, there is no statistically substantial difference among the SPAS scores conferring to the gender of the participants participating to the research (p>0.05). SPAS scores of female and male students are similar.

There was no statistically significant difference between the SPAS scores in relation to the age groups of the participants (p>0.05). Nonetheless of age groups, participants' SPAS scores are similar.

No statistically significant difference was found between the SPAS scores of the participants included in the research rendering to their place of birth (p>0.05). Although the SPAS scores of the students whose birthplace is TRNC are calculated higher than the SPAS scores of the students whose birthplace is Turkey, the difference in scores between them is not statistically significant.

There was no statistically significant difference between the SPAS scores according to the marital status of the students (p>0.05). Regardless of their marital status, it is seen that students get similar scores from the SPAS.

There is no statistically significant difference between the SPAS scores conferring to the place of residence of the participants in the research (p>0.05). The SPAS scores of the participants residing in the village for the longest and the students residing in the city the longest are similar.

There is no statistically significant difference between the SPAS scores of the students included in the study according to the class they attend (p>0.05). Although the SPAS scores

of the students attending the third year were higher than the scores of the students attending the other classes, the difference in scores between the classes was not at a statistically significant level.

A statistically significant difference was instituted between the SPAS scores conferring to the working position of the participants ($p<0.05$). The SPAS scores of the non-working students are higher than the SPAS scores of the working students, and the difference in scores between them is at a statistically significant level.

There is a statistically significant difference between the SPAS scores in relation to the monthly income of the participants involved in the research ($p<0.05$). The SPAS scores among the participants whose monthly income is between 5001-7000 TL were seen to be statistically significantly more than the SPAS scores of the participants whose once-a-month revenue is 3000 TL and below and 7001 TL and above.

A statistically important alteration was found between the SPAS scores among the participants conferring to the people they live with ($p<0.05$). The SPAS scores of the participants living with a partner/lover were statistically significantly lower than the scores of the participants living with their family or friends, as well as the SPAS scores of the participants who live alone were statistically significantly less than the scores of the participants who live with their family and friends.

Table 7.

Comparison of Smart Phone Addiction Scale scores according to students' health, smoking and alcohol use (N=294)

	n	$\bar{x}$	**S**	**M**	**SO**	**Z**	**p**
Chronic disease diagnosed by Dr.							
No	269	25,94	10,80	25,00	148,17	-0,445	0,656
Yes	25	24,84	10,22	23,00	140,26		
Psychiatric disease diagnosed by Dr.							
No	277	25,73	10,65	25,00	146,84	-0,537	0,591
Yes	17	27,71	12,26	24,00	158,24		
Alcohol use status							
Who do not use	64	24,38	10,13	24,00	137,09	-1,108	0,268

Who use	230	26,26	10,89	25,00	150,40		
Smoking status							
Who do not use	80	25,91	10,90	25,00	147,76	-0,032	0,974
Who use	214	25,82	10,71	25,00	147,40		
Trying of any drug							
Who tried	16	27,00	11,11	27,50	159,75	-0,593	0,553
Who not tried	278	25,78	10,74	25,00	146,79		

(Z:Mann-Whitney U test)

In Table 7, the evaluation of the SPAS scores according to the health, smoking and alcohol use status of the students is given by using the Mann-Whitney U test.

When Table 7 is examined, no statistically significant difference has been established between the SPAS scores of the students with and without a chronic disease diagnosed by a doctor ($p>0.05$). The SPAS scores of participants with and without a chronic disease diagnosed by a doctor are similar.

No statistically significant difference was stated between the SPAS scores of the students with and without a psychiatric disease diagnosed by the doctor ($p>0.05$). The Smartphone Addiction Scale scores of students with and without a psychiatric disease diagnosed by a doctor are similar.

There was no statistically significant difference between the SPAS scores according to the students' smoking and alcohol use ($p>0.05$). Regardless of their smoking and alcohol use, students' scores on the SPAS are similar.

There is no statistically significant difference between the SPAS scores according to the drug trying status of the participant students ($p>0.05$). Although the SPAS scores of the students who tried drugs were calculated higher than the SPAS scores of the students who did not try drugs, the difference in scores between them was not statistically significant.

Table 8.

Comparison of Smartphone Addiction Scale scores according to students' smartphone, internet and social media usage (N=294)

	n	$\bar{x}$	S	M	SO	Z / X^2	p	Difference
Smartphone usage time								
1-2 hour[1]	30	16,23	6,29	15,00	65,78	50,257	0,000**	1-2
3-5 hour[2]	153	24,29	9,30	24,00	137,20			1-3
6 hour and more[3]	111	30,59	11,22	29,00	183,79			2-3
Way of connecting to the internet								
Computer/laptop	31	20,16	7,98	21,00	101,89	-3,161	0,002**	
Smartphone	263	26,52	10,84	26,00	152,88			
Social media usage purpose								
Information exchange[1]	48	23,33	9,24	22,00	128,78	9,213	0,010*	1-2
Entertainment[2]	136	27,99	11,47	27,00	163,50			2-3
Communication[3]	110	24,30	9,97	23,00	135,88			

**p<0,05, **p<0,01 (Z:Mann-Whitney U testi, X^2:Kruskal-Wallis H test)*

In Table 8, the SPAS scores of the participants related to their smartphone, internet and social media usage status were investigated using the Mann-Whitney U test and the Kruskal-Wallis test.

It is seen that there is a statistically significant difference between the SPAS scores according to the duration of smart phone use of the students included within the research ($p<0.05$). The SPAS scores of the participants that practise the smart phone for 3-5 hours are higher than the scores of the students who use the smart phone for 1-2 hours, and the SPAS scores of the students who use the smart phone for 6 hours or more are statistically different from the scores of the students who use the smart phone for 3-5 hours. was calculated as significantly high.

It was determined that there was a statistically significant difference amid the SPAS scores according to the way the students who participated in the study connected to the Internet ($p<0.05$). The SPAS scores of the participants who connect to the internet via their smart

phones are statistically meaningly more than the scores of the students who connect to the internet via a computer/laptop.

There is a statistically significant difference between the SPAS scores according to the social media usage purposes of the participants ($p<0.05$). The SPAS scores of the participants that engage in social media related to entertainment purposes are statistically significantly higher than the scores of the participants who use social media for information exchange and who use social media for communication.

4.3.Findings on Social Media Addiction

Table 9.

Students' Social Media Addiction Scale scores (N=294)

	n	**x**	**s**	**Min**	**Max**
Virtual tolerance	294	26,05	7,42	11	55
Virtual communication	294	20,03	7,03	9	45
Social media Addiction Scale	294	46,08	13,50	20	100

In Table 9, the SMAS scores of the students are given.

According to Table 9, it is seen that the students consisted among the study average 26.05±7.42 points, minimum 11, maximum 55 points from the Social Media Addiction Scale sub-dimension, a minimum of 11, a maximum of 55 points, an average of 20.03±7.03 points from virtual communication, minimum 9, maximum 45 points and SMAS average 46.08±13.50 points, minimum 20, maximum 100 points.

Table 10.

Comparison of Social Media Addiction Scale scores according to socio-demographic characteristics of students (N=294)

	n	$\bar{x}$	**S**	**M**	**SO**	**Z / X^2**	**p**	**Difference**
Gender								
Female	198	46,34	13,33	46,00	149,05	-0,448	0,654	
Male	96	45,53	13,91	45,00	144,31			
Age group								
18-20	120	46,93	13,29	47,00	152,72	0,764	0,682	
21-23	113	45,45	13,06	44,00	143,80			
24 and over	61	45,56	14,81	45,00	144,09			

Birth place							
TRNC	29	52,41	14,32	52,00	188,12	-2,711	0,007**
TR	265	45,38	13,26	44,00	143,05		
Marital status							
Single	282	46,12	13,33	46,00	147,96	-0,453	0,651
Married	12	45,17	17,84	43,00	136,63		
Longest place of residence							
Village	29	45,62	12,08	43,00	149,47	-0,131	0,896
City	265	46,13	13,67	46,00	147,28		
Grade							
First grade	80	46,65	14,54	46,00	149,06	2,253	0,522
Second grade	53	44,77	12,36	44,00	138,02		
Third grade	70	48,01	13,93	48,00	159,02		
Fourth grade	91	44,85	12,85	44,00	142,79		
Working status							
Working	49	46,98	14,54	48,00	151,94	-0,400	0,689
Not working	245	45,90	13,31	46,00	146,61		
Monthly income							
3000 TL and below	84	44,80	11,76	43,50	141,76	4,742	0,192
3001-5000 TL	98	47,22	14,64	48,00	152,73		
5001-7000 TL	57	48,54	13,67	49,00	162,98		
7001 TL and above	55	43,44	13,41	43,00	130,91		
With whom they live							
Family	225	46,21	13,14	46,00	148,96	6,284	0,099
Friend	33	49,00	14,43	49,00	162,62		
Partner/lover	15	38,27	11,50	36,00	97,80		
Alone	21	45,67	15,86	46,00	143,64		

***p<0,01 (Z:Mann-Whitney U testi, X^2:Kruskal-Wallis H test)*

In Table 10, SMAS scores according to the socio-demographic features of the participants was compared using the Mann-Whitney U test and the Kruskal-Wallis test, and the findings were given.

When Table 10 is evaluated, there is no statistically significant difference within the SMAS scores related to the gender of the participants participating in the research (p>0.05). The scores of female and male students from the SMAS are similar.

There is no statistically significant difference between the SMAS scores conferring to the age groups of the students (p>0.05). Nonetheless of age groups, the SMAS scores of the students are similar.

There is a statistically significant difference among the SMAS scores of the students participating in the study referring to their place of birth (p<0.05). The SMAS scores of the

students whose birthplace is TRNC are higher than the SMAS scores of the students whose birthplace is TR, and the score difference between them is statistically significant.

There was no statistically significant difference between the SMAS scores rendering to the marital status of the participants (p>0.05). Regardless of their marital status, it is seen that students get similar scores from the SMAS

There is no statistically significant difference amid the SMAS scores according to the place of residence of the participants in the research (p>0.05). The SMAS scores of the students residing in the village for the longest time and the students residing in the city for the longest time are similar.

There is no statistically significant difference among the SMAS scores of those included in the study giving to the grade they attend (p>0.05). Although the SMAS scores of the students attending the third grade were higher than the scores of the students attending the 1st, 2nd and 4th grades, the difference in scores between the grades was not statistically significant.

No statistically significant difference was originated within the SMAS scores in relation to the working status of the participant students (p>0.05). SMAS scores of working and non-working students are similar.

There was no statistically significant difference between the SMAS scores of the students included in the research related to their monthly income (p>0.05). Regardless of their monthly income, the participants got similar scores on the SMAS.

There is no statistically significant difference amid the SMAS scores of the students based on the people they live with (p>0.05). There is no statistically significant effect on the SMAS scores of the people with whom the participants live.

Table 11.

Comparison of Social Media Addiction Scale scores according to students' health, smoking and alcohol use (N=294)

	n	$\bar{x}$	**s**	**M**	**SO**	**Z**	**p**
Chronic disease diagnosed by Dr.							
No	269	46,26	13,48	46,00	148,70	-0,793	0,428
Yes	25	44,12	13,85	42,00	134,60		
Psychiatric disease diagnosed by Dr.							
No	277	46,16	13,48	46,00	147,86	-0,291	0,771

Yes	17	44,82	14,24	45,00	141,68		
Alcohol use status							
Who do not use	64	42,88	12,97	42,50	126,70	-2,213	0,027*
Who use	230	46,97	13,54	47,00	153,29		
Smoking status							
Who do not use	80	47,43	14,49	46,00	152,95	-0,672	0,501
Who use	214	45,57	13,12	46,00	145,46		
Trying of any drug							
Who tried	16	51,38	14,72	51,50	178,34	-1,493	0,135
Who not tried	278	45,77	13,39	45,50	145,72		

**p<0,05 (Z:Mann-Whitney U test)*

In Table 11, the comparison of the SMAS scores rendering to the health, smoking and alcohol use status of the students is given using the Mann-Whitney U test.

When Table 11 is examined, there is no statistically significant difference between the SMAS scores of the students with and without a chronic illness diagnosed by a doctor ($p>0.05$). SMAS scores of participants with and without a chronic disease diagnosed by a doctor are similar.

There was no statistically significant difference between the SMAS scores of students with and without a psychiatric disease diagnosed by a doctor ($p>0.05$). SMAS scores of participants with and without a psychiatric disease diagnosed by a doctor are similar.

There was no statistically significant difference between the SMAS scores according to the smoking and alcohol use status of the participants ($p>0.05$). Regardless of their smoking and alcohol use, the scores of the students on the SMAS are similar.

There is no statistically significant difference between the SMAS scores according to the drug use status of the students ($p>0.05$). The SMAS scores of the students who tried drugs are higher than the SMAS scores of the students who did not try drugs, but the difference between the scores is not statistically significant.

Table 12.

Comparison of Social Media Addiction Scale scores according to students' smartphone, internet and social media usage (N=294)

	n	$\bar{x}$	s	M	SO	Z / X^2	P	Difference
Smartphone usage time								
1-2 hour[1]	30	37,40	9,28	36,00	90,43	21,956	0,000**	1-2
3-5 hour[2]	153	45,24	13,06	44,00	142,29			1-3
6 hour and more[3]	111	49,59	13,91	50,00	170,11			2-3
Way of connecting to the internet								
Computer/laptop	31	40,03	12,16	39,00	110,60	-2,556	0,011*	
Smartphone	263	46,79	13,50	46,00	151,85			
Social media usage purpose								
Information exchange [1]	48	44,23	12,63	42,50	136,00	5,285	0,071	
Entertainment[2]	136	48,19	14,38	48,50	159,77			
Communication[3]	110	44,27	12,44	44,00	137,35			

**p<0,05, **p<0,01 (Z:Mann-Whitney U testi, X^2:Kruskal-Wallis H test)*

In Table 12, the SMAS scores of the participants according to their smartphone, internet and social media usage status were analysed using the Mann-Whitney U test and the Kruskal-Wallis test.

It was stated as there remained a statistically significant difference between the SMAS scores according to the duration of smartphone use of the participant students ($p<0.05$). The SMAS scores of the students who use the smart phone for 3-5 hours are higher than the scores of the students who use the smart phone for 1-2 hours, and the SMAS scores of the students who use the smart phone for 6 hours or more are statistically significantly higher than the scores of the students who use the smart phone for 3-5 hours.

There is a statistically significant difference between the SMAS scores rendering to the way the students involved in the research connect to the Internet ($p<0.05$). The SMAS scores of the participants who connect to the Internet via their smartphones were found to be statistically significantly higher than the SMAS scores of the participants who connect to the Internet via a computer/laptop.

There was no statistically significant difference between the SMAS scores according to the social media usage purposes of the students (p>0.05). It is seen that the students whose purpose of using social media is information exchange, entertainment and communication got similar scores from the SMAS.

4.3. Findings Regarding General Belonging, Stress and Metacognition

Table 13.

Students' General Belonging Scale, Perceived Stress Scale and Metacognition Scale scores (N=294)

	n	$\bar{x}$	**s**	**Min**	**Max**
To be accepted	294	33,49	7,62	6	42
Exclusion	294	26,10	4,96	11	42
General Belonging	294	59,58	10,62	30	84
Insufficient perception of self-efficacy	294	13,24	6,29	2	34
Perception of stress/discomfort	294	19,98	5,19	7	35
Perceived Stress Scale	294	33,23	9,58	10	62
Positive beliefs	294	12,23	4,35	6	24
Uncontrollability and danger	294	13,75	4,06	6	24
Cognitive confidence	294	11,27	4,39	6	24
The need to control thoughts	294	14,70	4,91	6	24
Cognitive awareness	294	17,04	3,39	7	24

In Table 13, students' GBS, PSS and MCS scores are given.

When Table 13 is examined, the GBS sub-dimensions of the participants comprised within the research are 33.49±7.62 points, minimum 6, maximum 42 points, 26.10±4.96 points, minimum 11, maximum points from exclusion. It is seen that they got 42 points, an average of 59.58±10.62 points from GBS, a minimum of 30, and a maximum of 84 points. Participants' PSS sub-dimension average 13.24±6.29 points, minimum 2, maximum 34 points, average 19.98±5.19 points from stress discomfort perception sub-dimension, minimum 7, maximum 35 points, average overall PSS. It was determined that they got 33.23±9.58 points, a minimum of 10 and a maximum of 62 points.

The sub-dimensions of the MCS of the students participated in the research were positive beliefs with an average of 12.23±4.35 points, a minimum of 6, a maximum of 24 points, an average of 13.75±4.06 points from uncontrollability and danger, a minimum of 6 points, a maximum of 24 points, cognitive confidence. mean 11.27±4.39 points, minimum 6, maximum 24 points, need to control thoughts mean 14.70±4.91 points, minimum 6, maximum 24 points and cognitive awareness mean 17.04±3.39 points, minimum It was determined that they got 7 points and a maximum of 24 points.

4.4. Relationships between Smartphone Addiction and General Belonging, Stress and Metacognition

Table 14.

Correlations between students' Smartphone Addiction Scale scores and General Belonging Scale, Perceived Stress Scale and Metacognition Scale scores (N=294)

		Smart phone Addiction Scale
To be accepted	rho	-0,093
	p	0,111
Exclusion	rho	-0,237
	p	0,000**
General Belonging	rho	-0,170
	p	0,003**
Insufficient perception of self-efficacy	rho	-0,032
	p	0,583
Perception of stress/discomfort	rho	0,226
	p	0,000**
Perceived Stress Scale	rho	0,092
	p	0,116
Positive beliefs	rho	0,254
	p	0,000**
Uncontrollability and danger	rho	0,276
	p	0,000**
Cognitive confidence	rho	0,218

	p	0,000**
The need to control thoughts	rho	0,342
	p	0,000**
Cognitive awareness	rho	0,144
	p	0,014*

**p<0,05, **p<0,01 (rho:Spearman test)*

Table 14 illustrates the correlations between students' SPAS scores and GBS, PSS and MCS scores.

When Table 14 is examined, a negative and statistically significant correlation was established within the exclusion, which is the GBS sub-dimension of the participants, and the scores gotten from the SPAS ($p<0.05$). As the exclusion scores of the participants increased, the scores they got from the SPAS decreased. There was a negative and statistically significant correlation amid the participants' GBS scores and their SPAS scores ($p<0.05$). There was a positive and statistically significant correlation among the PSC sub-dimension, the perception of stress/discomfort, and the SPAS scores ($p<0.05$). As the stress/discomfort perception scores of the participants rise, the scores obtained from the SPAS also rise. There is situated positive and statistically significant relationship among the participants' MCS sub-dimensions of Positive beliefs, Uncontrollability and danger, Cognitive confidence, Need to control thoughts and cognitive awareness scores and SPAS scores ($p<0.05$). By means of the scores of positive beliefs, Uncontrollability and danger, Cognitive confidence, Need to control thoughts and cognitive awareness increase, the scores gained from the SPAS also increase.

Table 15.

The predictive status of the students' General Belonging Scale, Perceived Stress Scale and Metacognition Scale scores on their Smartphone Addiction Scale scores (N=294)

	Nonstand. Coefficients		Standardized Coefficients	T	p	F	R^2
	B	S.H.	Beta			P	AdjR^2
(Constant)	18.81	5.42		3.467	0.001**		
To be accepted	0.08	0.09	0.06	0.906	0.366		
Exclusion	-0.33	0.13	-0.15	-2.446	0.015*		
Insufficient perception of self-efficacy	-0.20	0.10	-0.12	-1.965	0.050		

Perception of stress/discomfort	0.32	0.14	0.15	2.291	0.023*	6.460	0.170
Positive beliefs	0.16	0.17	0.06	0.935	0.350	0.000**	0.144
Uncontrollability and danger	0.25	0.21	0.09	1.212	0.226		
Cognitive confidence	0.10	0.16	0.04	0.655	0.513		
Need to control thoughts	0.38	0.17	0.17	2.154	0.032*		
Cognitive awareness	-0.17	0.22	-0.05	-0.761	0.447		

**p<0,05, **p<0,01*

Table 15. illustrates the findings of the multivariate linear regression analysis in which the GBS, PSS, and MCS scores of the students included in the study predicted their SPAS scores. In relation to Table 15, it was determined that the regression model established for the determination of the GBS, PSS and MCS scores of the students on the SPAS was at a statistically significant level and the variance clarified in the model was 14.4% ($p<0.05$).

It was determined that the scores of the students in the Exclusion sub-dimension in the GBS predicted the SPAS scores in a statistically significant and negative way ($\beta=-0.15$; $p<0.05$). Accordingly, as the scores of the students in the Exclusion sub-dimension in the GBS increase, their SPAS scores decrease.

It was determined that the scores of the participants included within the research from the Stress/discomfort perception sub-dimension in the PSS positively and statistically significantly predict the SPAS scores ($\beta=0.15$; $p<0.05$). The rise among the scores of the participants in the Stress/discomfort perception sub-dimension in the PSS increases the SPAS scores.

It was determined that the scores of the students who participated in the research from the need to control thoughts sub-dimension in the MCS positively and statistically significantly predicted the SPAS scores ($\beta=0.17$; $p<0.05$). According to this result, the increase in the scores of the students in the need to control their thoughts sub-dimension increases the scores of the SPAS.

4.5.Relationships between Social Media Addiction and General Belonging, Stress and Metacognition

Table 16.

Correlations between students' Social Media Addiction Scale scores and General Belonging Scale, Perceived Stress Scale and Metacognition Scale scores (N=294)

		Virtual tolerence	Virtual Comunication	Social Media Addiction
To be accepted	rho	-0,078	-0,124	-0,107
	p	0,184	0,033*	0,068
Exclusion	rho	-0,267	-0,291	-0,297
	p	0,000**	0,000**	0,000***
General Belonging	rho	-0,161	-0,207	-0,194
	p	0,006**	0,000**	0,001**
Insufficient perception of self-efficacy	rho	0,055	0,009	0,042
	p	0,343	0,877	0,476
Perception of stress/discomfort	rho	0,146	0,161	0,168
	p	0,012*	0,006**	0,004**
Perceived Stress Scale	rho	0,093	0,062	0,090
	p	0,113	0,290	0,122
Positive beliefs	rho	0,326	0,303	0,329
	p	0,000**	0,000**	0,000**
Uncontrollability and danger	rho	0,260	0,246	0,268
	p	0,000**	0,000**	0,000**
Cognitive confidence	rho	0,266	0,230	0,261
	p	0,000**	0,000**	0,000**
The need to control thoughts	rho	0,314	0,251	0,305
	p	0,000**	0,000**	0,000**
Cognitive awareness	rho	0,137	0,155	0,159
	p	0,019**	0,008**	0,006**

**p<0,05, **p<0,01 (rho:Spearman test)*

Table 16 shows the correlations between the SMAS scores of the students and the GBS, PSS and MCS scores.

When Table 16 is examined, it is seen that there is a negative and statistically significant difference between the scores of Acceptance, which is the GBS sub-dimension of the

individuals included in the study, and Virtual communication, which is the sub-dimension of the SMAS. There was a negative and statistically significant correlation between their general scores ($p<0.05$). The increase in the acceptance scores of the participants causes a decrease in the virtual communication scores, the increase in the exclusion scores, the decrease in the virtual tolerance, virtual communication and social media addiction scale scores, the increase in the general belonging scores, the decrease in the virtual tolerance, virtual communication and SMAS general scores.

There was a positive and statistically significant correlation between the participants' perception of stress/discomfort, which is the sub-dimension of the PSS, and the scores of the SMAS ($p<0.05$). As the stress/discomfort perception scores of the participants increase, there is an increase in the scores of virtual tolerance and virtual communication, which are the sub-dimensions of the scale and the SMAS.

Positive beliefs, Uncontrollability and danger, Cognitive trust, Need to control thoughts, and cognitive awareness scores, which are the sub-dimensions of the Metacognition scale of the participants, and the SMAS general scores and the scale's sub-dimensions, virtual tolerance and virtual communication scores, were positively and statistically significant. level of correlation ($p<0.05$). As the scores of positive beliefs, Uncontrollability and danger, Cognitive confidence, Need to control thoughts and cognitive awareness increase, it is seen that the SMAS general scores and the sub-dimensions of the scale, virtual tolerance and virtual communication scores also increase.

Table 17.

The predictive status of students' General Belonging Scale, Perceived Stress Scale and Metacognition Scale scores on Social Media Addiction Scale scores (N=294)

	Nonstand. Coefficients		Standardized Coefficients	T	p	F	R^2
	B	S.H.	Beta			P	B
(Constant)	42,86	6,81		6,298	0,000**		
To be accepted	0,13	0,11	0,07	1,214	0,226		
Exclusion	-0,63	0,17	-0,23	-3,772	0,000**		
Insufficient perception of self-efficacy	-0,08	0,13	-0,04	-0,666	0,506		
Perception of stress/discomfort	0,18	0,18	0,07	1,015	0,311	6,615	0,173

Positive beliefs	0,59	0,21	0,19	2,753	0,006**	0,000**	0,147
Uncontrollability and danger	0,06	0,26	0,02	0,234	0,815		
Cognitive confidence	0,13	0,20	0,04	0,637	0,524		
Need to control thoughts	0,26	0,22	0,09	1,173	0,242		
Cognitive awareness	-0,02	0,28	0,00	-0,069	0,945		

**p<0,05, **p<0,01*

In Table 17, the results of multivariate linear regression analysis examining the predictive status of students' GBS, PSS and MCS scores on SMAS scores are given.

When the regression model shown in Table 17 was examined, it was found that the model was statistically significant and explained 14.7% of the variance in the SMAS of the estimators.

It was determined that the scores of the students participating in the study from the Exclusion sub-dimension in the GBS predicted the SMAS scores in a statistically significant and negative way (β=-0.23; p<0.05). In line with these results, as the scores of the students in the Exclusion sub-dimension in the GBS increase, the SMAS scores decrease.

It was observed that the scores of the students included in the study in the Perception of Insufficient Self-efficacy and Perception of Stress/discomfort sub-dimensions in the PSS did not predict the SMAS scores at a statistically significant level (p>0.05).

It was determined that the scores of the students in the Positive Beliefs sub-dimension in the MCS positively and statistically predicted the SMAS scores. p<0.05).

4.6.Relationships between Smartphone Addiction and Social Media Addiction and General Belonging, Stress and Metacognition

Table 18.

The predictive status of students' General Affiliation Scale, Perceived Stress Scale and Metacognition Scale scores on Smartphone Addiction and Social Media Addiction Scale scores (N=294)

Predicted	Predictor	β	S.H.	Stdβ	p
Smart Phone Addiction	General belonging	-9,019	3,636	-1,19	0,013*
	Metacognition	-2,957	1,597	-0,70	0,064
	Perceived Stress	0,706	0,827	0,14	0,393
Social Media Addiction	General belonging	-7,414	8,838	-1,83	0,049*
	Metacognition	-6,716	4,087	-1,27	0,100
	Perceived Stress	0,721	1,569	0,11	0,646

**p<0,05*

Table 18. shows the results of structural equation modeling in which students' GBS, PSS and MCS scores predict their SPAS and SMAS scores.

When Table 18. is examined, the scores of the students included in the study from the GBS are statistically significant on SPAS (β=-1.19; p<0.05) and SMAS (β=-1.83; p<0.05). It was determined that it predicted significantly and negatively.

It was determined that the scores of the students from the MCS did not predict SPAS (β=-0.70; p<0.05) and SMAS (β=-1.27; p<0.05) at a statistically significant level.

It was determined that the scores of the students participating in the study from the PSS did not predict SPAS (β=0.14; p<0.05) and SMAS (β= 0.11; p<0.05) at a statistically significant level.

Table 19.

Goodness of Fit Indices for the Model (N=294)

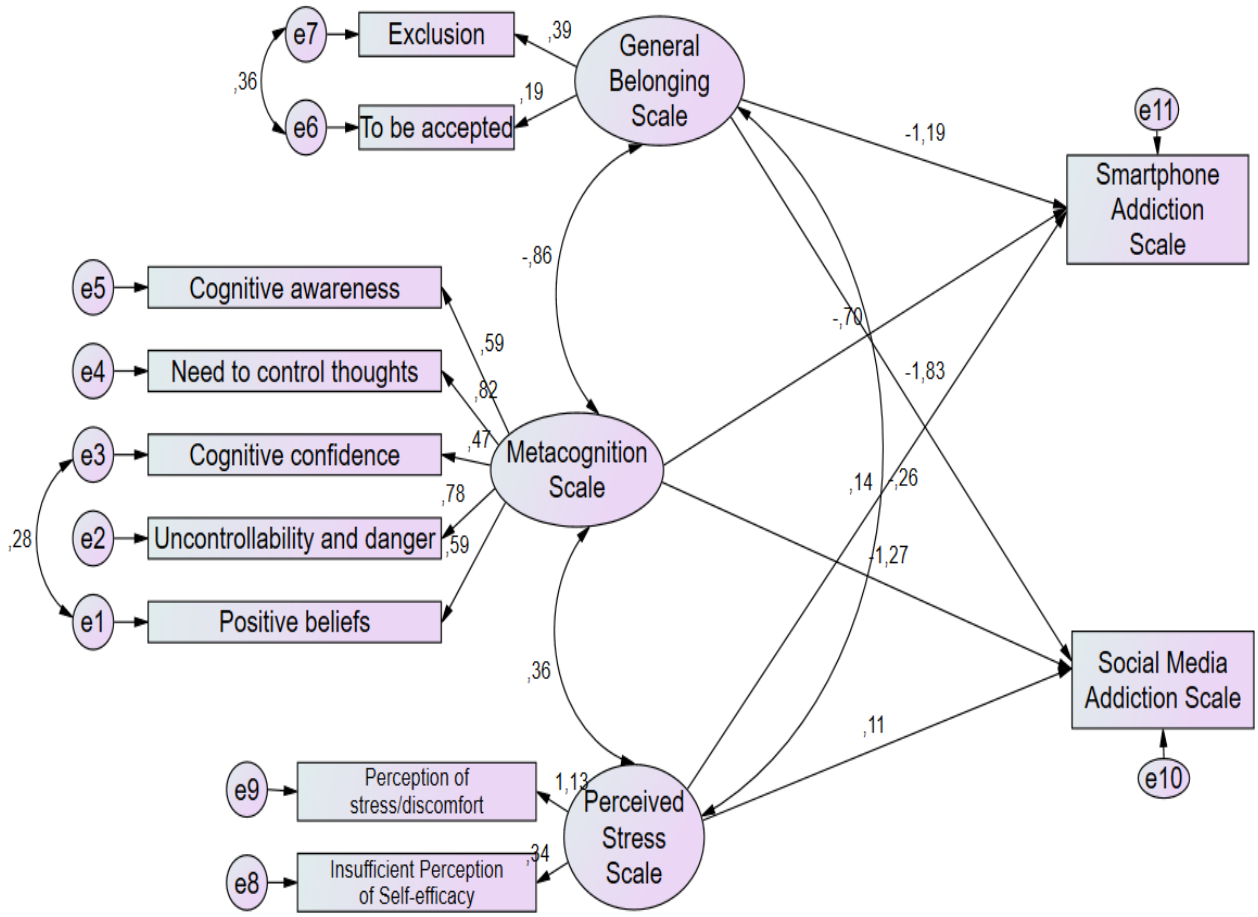
İndex	Value	Limit Value	Conformity
χ^2/sd	3.607	3-5	Acceptable
GFI	0.957	0.90-0.95	Excellent
NFI	0.927	0.90-0.95	Acceptable
CFI	0.967	0.90-0.95	Excellent
RMSEA	0.074	0.5-0.8	Acceptable

In Table 19, the goodness-of-fit indices of the structural equation model in which the GBS, PSS and MCS scores of the students participating in the research were examined in terms of predicting the SPAS and SMAS scores are shown.

When Table 19. is examined, it has been determined that the recognised model has an acceptable fit in terms of χ^2/sd. Kline (2005) mentioned adequate fit if χ^2/sd is ranging from 3 to 5.

Tabachnick and Fidell (2001) specified that within structural equation models, GFI, NFI and CFI standards remain adequate unless they vary within 0.90-0.95, as well as values more than 0.95 represent a perfect fit. Therefore, although the model has a first-rate fit by respect to the GFI and CFI, it consumes a satisfactory fit in terms of the NFI. Lastly, the root mean square error of approximation (RMSEA) was observed, representing that the model had an acceptable fit, as Brown (2006) specified that acceptable RMSEA values range from 0.5-0.8.

Fig. 1 *Path Diagram of Students' General Belongingness Scale, Perceived Stress Scale and Metacognition Scale Scores Predicting Their Smartphone Addiction and Social Media Addiction Scale Scores*



According to Figure 1, the participants' scores on the GBS were statistically significantly besides negatively predictive of SPAS (β=-1.19; p<0.05) and SMAS (β=-1.83; p<0.05). In relation to Figure 1, participant' scores on the MCS did not predict SPAS (β=-0.70; p<0.05) or SMAS (β=-1.27; p<0.05) at a statistically significant level. In addition, it has been also established that the participants' scores on the PSS did not predict SPAS (β=0.14; p<0.05) or SMAS (β= 0.11; p<0.05) at a statistically significant level.

CHAPTER V

Discussion

This chapter presents the discussion of these findings in comparison to the studies in the literature.

Present research intended to determine the conceivable risk aspects of smartphone addiction and social media addiction in students as well as to investigate the predictive status which smartphone addiction shows in the association within the addiction to social media and general belonging, metacognition problems and perceived stress in high school students. The regression model recognised for the prediction of the participants' General Belongingness Scale, Perceived Stress Scale and Metacognition Scale scores of the Smartphone Addiction Scale and Social Media Addiction Scale scores was determined to be at a statistically significant level and the variance clarified in the model were found to be 14.4% and 17.7% respectively.

While the results of the current study, which were comparable to those of other researchers (Göldağ, 2019; Kozan et al., 2019), indicated no significant connection amid gender and smartphone and social media addiction, other studies have found the contrary (Taywade & Khubalkar, 2019). In light of the additional literature, it may be concluded that smartphone addiction is now pervasive and affects people of both genders. In this case, it may be claimed that smartphone addiction affects people of both gender because people use them unknowingly rather than because of a gender difference.

Students with a monthly income of 5001–7000 TL were shown to have a greater rate of smartphone addiction than those with a monthly income of 3000 TL or less. Kumcagiz et al. (2020) found greater rates of smartphone addiction in students with a monthly income of more than 1500 TL, which is reliable with the findings of this study. In this context, it can be claimed that students who earn more money each month may choose smartphones with various capabilities, and their frequent usage of these phones may give rise to addiction-like tendencies in them. As the features of smartphones develop, the usage time of smartphones increases and individuals may become more prone to the development of addiction. In addition, individuals with a high monthly income can go out more and socialize, which allows them to share more on social media platforms.

Participants' smartphone addiction was much lower when they shared a residence with a partner than when they did so with relatives or friends, and it was also significantly lower when they did so on their own than when they did so. On the other side, it may be claimed that certain studies' findings suggest that loneliness may raise the likelihood of smartphone

addiction (Sar, 2013). It is well recognized that family dynamics strongly influence how addictions develop (Li et al., 2014). People who live alone are more able to express their emotions without fear of judgment from their family or friends. People who live with a family may be more impacted by problems with family and friends, and this negative attitude may cause the person to engage in addictive behaviour in an effort to deal with the familial issues.

The present study reveals that Social Media Addiction scores of students whose birthplace is TRNC are higher than the scores of students whose place of birth is TR. Similarly, in another study on nomophobia (no mobile phone phobia) in the TRNC, the fear of being without a smartphone was found to be higher in TRNC-born individuals than TR-born individuals (Babayiğit et al., 2019). The finding in question might be taken as the cultural acquaintance of individuals living in the TRNC with smart phones and other technological devices at a young age may cause them to use social media platforms more actively. Taking photos and sharing is also very common in the population. In addition to this, TRNC is a small population compared with TR, so social connections are more common throughout people who live in TRNC. People might be more prone to follow what other people doing via social media platforms.

According to research findings, those who connect to the internet with their smartphones and those who use their smartphones for 6 hours or more have higher social media addiction scores. Kaya and Kaya (2020) also found similar results. Smartphones, which have a much higher level of computing capability than ordinary mobile phones, enable their users to do almost anything they can do on a computer (sending and receiving e-mails, accessing and editing office documents, playing games, watching videos / movies, etc.) with the help of various applications. provides a wide range of uses. Smart phones can run more than one application at the same time with their touch interfaces, display images with the help of internal or addable memory (Kuyucu 2017; Doğan & Tosun, 2016). With its features such as / or voice recording, it meets almost every need of today's users. With such features, sharing photos or stories on social media platforms, shooting videos and following other users can be done in any environment in a much more practical way. This situation may increase the risk of developing addiction. There are also various studies which show similar results in terms of the time spent with smartphones in a day. As the time spent on smartphone increases, the risk of emerging addiction is also increasing (Bal & Balcı, 2019).

Social media addiction was found to be more common in students who use alcohol compared to those who do not. When the related literature is inspected, there are results

consistent with the research results. In research directed in Turkey, it remained defined that the rates of smoking and alcohol use in students with internet addiction were higher than those without internet addiction (Alaçam et al., 2014). Similar to alcohol and substance addiction, many behavioural addictions can stimulate dopaminergic receptors, causing a decrease in the feeling of stress and making the person feel better (Öztürk et al., 2007). In relation with this explanation, this finding can be interpreted as the participants of the study are more prone to different type of addictive substances and behaviours as a way of coping strategy with the stressors. Both alcohol and social media usage can be observed by means of a result of relieving negative feelings. It is thought that social media addiction, like other addictive behaviours, may be based on a reason related to the regulation and control of problematic behaviours. As a way of coping with stress and problems, students might rely on alcohol and social media use.

According to current data, people who use social media for conversing, gaming, or amusement are more likely to develop a smartphone addiction. According to the findings of numerous academics, internet addiction is more common among individuals who use the internet for enjoyment than among those who use it for knowledge (Taş, 2018). The time spent online, playing games, and using social media is more enjoyable for those with internet addictions than going out with friends (Brian & Wiemer-Hastings, 2005). Through social media, they utilize their smartphones for conversing and amusement. People could feel more alone as a result of this circumstance, which could further worsen their addiction. According to this theory, teen-led social and recreational activities can help them meet these demands in the actual world.

A substantially significant negative correlation existed between the participants' General Belonging and Smartphone Addiction ratings. In contrast to the findings of Kozan et al. (2019), which showed a negative correlation between smartphone addiction and happiness, smartphone addiction is strongly influenced by a sense of belonging. However, it has been shown that people generally choose smartphones and the internet to meet their demands for creating relationships and being accepted. As the sample of this study was university student, the feeling of belongingness becomes a more important factor for their well-being. The effect of the sense of belonging in the formation of the impression of the person's answer to the question "who am I" and the quality of his relations with other people depends on his ability to perceive himself as a valuable and important actor. Maslow states that the need for self-actualization and esteem cannot be satisfied when the needs for belonging and being loved, which are lower in the hierarchy of needs, are not satisfied (Çakır,

2019). Students who start university also enter into a social change as well as the changes in meeting their basic needs such as nutrition, sleep and shelter. He begins to experience different social relations in his new environment, which is foreign to him. It is important for individuals to be capable to encounter their belongingness needs in these relationships. The difficulties caused by the changes arising from university life and the developmental characteristics of that period may cause the need for a sense of belonging to be experienced more intensely.

An increase in the scores gained from the Smartphone and Social Media Addiction scale is connected with rises in the scores for optimistic beliefs, uncontrollability and risk, cognitive confidence, desire to control thoughts, and cognitive awareness from metacognitions. Another study found that uncontrollability and risk, cognitive attention, difficulty in detecting emotions, and positive beliefs all have a favourable impact on problematic internet use. The same study also demonstrated that metacognition has a favourable and significant impact on problematic internet use (Böckün, 2021). According to Spada et al. (2013), the association among problematic internet use and negative emotions can be better understood with the metacognition hypothesis, which demonstrates how metacognition functions as a mediator. According to Böçkün's study from 2021, there is a substantial correlation between participants' degrees of cognitive awareness, need to manage thoughts, cognitive confidence, and positive views as well as problematic internet use and its sub-dimensions. Sevim (2017) found that problematic internet use is favourably and significantly influenced by metacognitions. It is also well established that individuals are more prone to involve in Internet, social media, and smartphone use when their beliefs about these behaviours' beneficial impacts on emotions and cognitions are stronger (Casale, Musico, & Spada, 2021). Positive metacognitions may also be crucial in the expansion of smartphone and social media addictions, whilst negative metacognitions may cause excessive use of smartphone and social media platforms as a means of self-relaxation. It is also seen in recent studies that positive metacognitions about the smartphone use is an important predictor for the formation of smartphone addiction (Shi et al., 2021).

It was discovered that the participants' ratings on the General Belongingness Scale's Exclusion sub-dimension negatively and statistically significantly predicted their scores on the Smartphone Addiction and Social Media Addiction Scales. As a result, the students' scores on the Smartphone Addiction Scale declined as their General Belongingness Scale scores rose in the Exclusion subdimension. There is research in the literature demonstrating both comparable and dissimilar outcomes (Tras et al., 2019; Knowles et al., 2015). If a person

actively utilizes social media platforms on a smartphone, that person may have a tendency to limit their usage of social media since they will feel more excluded when they see other users' social shares but are unable to participate in them. The association among exclusion and smartphone addiction can be explained by the fact that when people feel less excluded and more a part of the community, they may experience a greater urge to communicate online and interact with others. In other words, while using a smartphone, she or he may feel more accepted, and this acceptance may work as reinforcement (Nadkarni & Hofmann, 2012). Students who scored higher on the sub-dimension of needing to control their thoughts also scored higher on the Smartphone Addiction Scale. In a study, Sevim (2017) showed that metacognition and thought control were positively correlated, while thought control was positively correlated with problematic internet use. Additionally, it was discovered that thought control significantly mediates the connection among problematic internet use and metacognition. Similar findings were made by Atıcı (2017), who discovered that teenagers with higher levels of control exhibited lower levels of smartphone addiction. In other words, it was shown that people who have self-control have lower levels of smartphone addiction.

Participants' scores on the Smartphone Addiction and Social Media Addiction Scale rose along with their scores on the Perceived Stress Scale's stress/discomfort perception sub-dimension. The study's findings, which were reported by Göldağ (2019), were comparable. Samaha and Hawi (2016) discovered in their research that there is a weakly positive correlation amid perceived stress levels and phone addiction levels. Additionally, it was found in the study by Lepp et al. (2014) that students who have a high level of smartphone addiction also have high anxiety levels. As a result, students' perceptions of stress rise along with their smartphone addiction levels. According to the general stress theory, when people are under tension and stress, they will employ a variety of coping mechanisms to reduce their negative feeling and the bad effects that tension can have, like unfavourable life events and problems (Agnew, 1992). According to several studies, engaging in problematic activity is primarily done to alleviate stress and unpleasant emotions that arise from day-to-day existence (Long et al., 2016). Stress is a known factor for problematic smartphone use, according to earlier studies. According to a recent study, problematic smartphone use is significantly positively correlated with perceived stress (Zhao et al., 2021). These findings validate the general strain theory and support other cross-sectional studies (Jun & Choi, 2015). According to a previous study, perceived stress may lower positive affect and impulsive control, making it a dangerous trigger for problematic smartphone use (Chen et al., 2017). This finding can be viewed as a warning that as daily pressures rise, people may start

using social media and their smartphones as a form of self-relaxation. A person may experience a variety of issues with their schooling, employment, social life, and health as a result of spending too much time on social media, to put it another way (Kesici, 2015). The degree of stress might rise as a result of all these cognitive, emotional, and physical issues.

CHAPTER VI

Conclusion and Recommendations

This chapter displays conclusions related to the study results conferring to the objective and sub objective(s) of the research and gives recommendations accordingly.

6.1. Conclusion

In order to conclude, referring to the current study findings, factors such as working status, monthly income and who students live with were originated as risk factors for smartphone addiction. Students who use smartphone for gaming and amusement instead of gaining knowledge are at higher risk for developing smartphone addiction. Being born in TRNC, Drinking alcohol and using smartphone more hours were found as a risk factors for social media addiction. In addition, students' exclusion (subdimension of general belonging), stress/discomfort perception (subdimension of perceived stress), and control of thoughts (subdimension of metacognition problems) scores significantly predicted smartphone addiction. Human beings commonly choose smart phones and the social media for various reasons in terms of their need for acceptance, relationship building and relieve the feeling of stress. The results of this study's data indicate that focusing solely on smartphone and social media addiction will not be sufficient. In smartphone addiction treatment trials, it is anticipated that specialist interventions on perceived stress, general belongingness, and metacognition will help lessen or minimize the consequences of smartphone addiction as well as lower the risk of future relapse. For instance, it is believed that in those who rely on their smartphones and social media platforms for diversion in order to deal with rumination, the desire to do so may vanish if the ruminative framework is eliminated.

Each sub-dimension of smartphone addiction refers to how people use their phones to meet various demands or purposes. Therefore, it is anticipated that the life-threatening use of smartphone addiction would decline as usage needs in many areas are better understood, along with how these needs might be satisfied. Smartphones and developing technologies have both positive and negative aspects; Besides helping to ensure worldwide communication, they enable many tasks such as new technologies, social networking sites, social computing and social software to be carried out quickly and efficiently through social media. On the other hand, long-term use leads to addictive behaviours and problematic use.

The result of our study is an indication of the existence of smartphone and social media addictions in the young population.

The theories of some leading names were taken as basis in the development and design of this study subject. These are; Uses and Gratification Theory, Cognitive Behavioural Model, Harry Stack Sullivan's Theory of Interpersonal Relations, Bowlby's Attachment Theory. The study results are important empirical data as they reveal and support the basis of these theories and the literature. According to the study results a positive significant association was established among SPAS, SMAS and MCS. In addition to this, positive relationship was also recognised within SPAS, SMAS and PSS. It is also found that as the general belongingness increases smartphone and social media addiction decreases. It was determined that the regression model showed concerning the predictive capability of the participants' scores for the GBS, PSS and MCS on their scores for the SPAS was at a statistically significant level.

It is also known that smartphones and social media have greatly impacted knowledge management as they offer new channels for creating, sharing, and accessing information and knowledge. However, they also present challenges such as information overload and the need for curation and verification of information. From the social media addiction perspective, if tacit capacity of knowledge can be managed affectively for the social media users, the addiction can be under controlled because tacit knowledge could be evaluated under the control circumstances cognitively. Additionally, using smartphones and social media are entirely evaluated as innovation attributes. Therefore, process types of innovation could be considered in this context for the users. It is clear that there is a relation between knowledge management, smartphone and social media addiction, belongingness, perceived stress and metacognition.

Knowledge management and general belongingness are important elements in any organization or community. Knowledge management ensures that valuable information and experiences are captured, shared and utilized to enhance decision making and improve performance. Meanwhile, general belongingness refers to a sense of belonging and connectedness among individuals within a group, which can improve employee engagement, satisfaction and overall performance. When both elements are effectively integrated, organizations and communities can foster a culture of continuous learning and growth, leading to greater success and competitiveness.

Additionally, knowledge management plays a crucial role in reducing perceived stress in organizations. By providing employees with access to the information they need to

perform their tasks effectively, organizations can foster a sense of empowerment and improve job satisfaction. Moreover, implementing effective knowledge management strategies can help employees stay on top of their workloads and avoid burnout. Therefore, organizations should prioritize knowledge management as a means to mitigate stress and enhance the productivity of their employees. At last, knowledge management and metacognition are crucial components in organizations and individuals. The proper management of knowledge can help individuals and organizations make better decisions, improve performance, and increase innovation. On the other hand, metacognition helps individuals to understand their own thinking process, making them more aware of their strengths and weaknesses and empowering them to make better decisions.

6.2. Recommendations

It is crucial that authorized individuals concentrate on smartphone addiction right once and conduct studies to look into the underlying causes. Additionally, it is anticipated that researches on smart phone addiction in addition problematic internet usage, as well as trainings for healthy internet use, might decrease risk aspects. In future studies, it is thought that addressing subjects such as social support, methods of coping with stress and problem-solving skills can contribute to understanding the relationship between smartphone addiction and metacognition. When the literature is investigated, it has been seen that studies showing the relationships between psychosocial concepts such as metacognition and general belonging and addictions are quite limited. Further studies on these issues might close the gap in the literature.

Young population generally become addict to smart phones and the social media platforms for specific reasons in terms of their need for acceptance and feeling of belonging. Therefore, it is necessary to create environments where adolescents and emerging adults can meet their social needs in real life instead of the virtual world, and increase their social skills. The sense of belonging is one of the most important phenomena in the socialization and personality development of individuals. Therefore, especially from adolescence, families, teachers and field experts should create opportunities for children to express their feelings.

In the light of these results, it has been seen that it is necessary to organize awareness-raising seminars on mobile phone use, especially for university students, and to evaluate the mobile phone tariffs especially for young people, considering mental health, with the thought that excessive mobile phone use can reach the level of addiction. It is vital to take into

account perceived level of stress, metacognitive problems and sense of belongingness while understanding the development of addictions such as smartphone and social media addictions. More research and multicenter studies are needed to further explore the psychological aspects and solutions of smartphone addiction. Replication researches with specific experimental as well as longitudinal designs are strongly recommended to confirm the findings and verify the causality within the factors in question. At last, the number of samples participating in our study is limited and consists of only university students, it is recommended to conduct it on a larger sample and general population to increase its generalizability according to the results obtained.

Lastly, in relation to knowledge management and innovation, it is also recommended that instead of just using technology for entertainment, individuals should use technology for learning and knowledge management by utilizing online resources such as educational websites and digital libraries. Moreover, to manage digital distractions individuals might use tools such as focus modes, app blockers, and website blockers to manage digital distractions and stay focused on learning and knowledge management. In the age of information, it is important to seek reliable sources of information and avoid misinformation. Individuals should take steps to verify the accuracy of information found online. Additionally, organizations can provide training and resources to support employees in using smartphones effectively for knowledge management. Organizations must have systems in place to ensure that knowledge is captured, shared, and leveraged effectively. Individuals must be trained in metacognitive skills to help them better understand and improve their thinking process. Addressing these challenges will lead to better decision-making and improved performance.

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Appendices

Appendix A

.

Participant Information and Informed Consent Form

Sayın Katılımcı,

Bu anket, üniversite öğrencilerinde akıllı telefon bağımlılığı ve sosyal medya bağımlılığının düzeyini saptamak, genel aidiyet, algılanan stress ve üstbiliş problemleri ile ilişkisini araştırmaktır. Aşağıda bulunan anketi doldurarak araştırmaya katılmayı kabul etmiş olacaksınız.Bu araştırmaya katılmak tamamen gönüllülük esasına dayalıdır. Kimlik bilgileriniz araştırma ekibi dışında kimse ile paylaşılmayacaktır. Bu çalışma süresince toplanan veriler, sadece akademik araştırma amacı ile kullanılacaktır ve yalnızca ulusal/uluslararası akademik toplantılarda ve/veya yayınlarda sunulacaktır. Bizimle iletişime geçerek istediğiniz zaman çalışmadan çekilebilirsiniz. Eğer çalışmadan çekilirseniz, sizden toplanan tüm veriler veri tabanımızdan silinecektir ve sizinle ilgili veriler çalışmada kullanılmayacaktır. Bu konu ile ilgili herhangi bir sorunuz veya endişeniz olursa, bize aşağıdaki iletişim bilgilerinden ulaşabilirsiniz.

Hüseyin Aras Babayiğit
arasbabayigit90@gmail.com

Appendix B

Questionnaire

Sosyo-Demografik Bilgi Formu

1.Cinsiyetiniz?: 1.( ) Kadın 2.( ) Erkek

2.Kaç yaşındasınız?:.....

3. Doğum yeriniz?: 1.( )Kıbrıs 2.( ) Türkiye 3.( ) İngiltere 4.( ) Diğer…….

4.Eğer Kıbrıs'ta doğmadı iseniz kaç yıldır Kıbrıs'ta yaşıyorsunuz?:

……..

5.Medeni durumunuz?: 1.( )Evli 2.( )Bekar 3.( )Boşanmış/Dul

6.Çocuğunuz var mı?: 1.( )Yok 2.( )Var (*Çocuk sayısı* **…….**)

7.En uzun süre ikamet ettiğiniz yerleşim yeri: 1.( ) Köy 2.( ) Şehir merkezi

8. Eğitim durumunuz:

1.( )Okur-yazar değil 2.( )Okur-yazar 3.( ) İlkokul 4.( )Ortaokul

5.( )Lise 6.( )Ön lisans 7.( )Lisans 8.( ) Lisansüstü

9. Çalışma durumunuz? 1.( )Evet 2.( )Hayır

10. Mesleğiniz:……

11. Eve giren ortalama aylık gelir ne kadardır? : ……..TL

12. Oturduğunuz evinize nasıl sahip oldunuz?

1.( )Kendi olanaklarımla 2.( )Devlet yardımıyla 3.( )Kirada oturuyorum

4.( )Aileden miras 5.( )Diğer…….

13. Kiminle yaşıyorsunuz?

1.( )Yalnız 2.( )Eş/ partner/sevgili 3.( )Anne/baba/ kardeş

4.( )Arkadaş 5.( )İkinci dereceden akraba 6.( ) Diğer, belirtiniz (……)

14. Doktor tarafından tanısı konmuş herhangi fiziksel bir hastalığınız var mı?

1.( )Var**.....** 2.( )Yok

15. Doktor tarafından tanısı konmuş herhangi bir psikiyatrik hastalığınız var mı?

1.( )Var**……** 2.( )Yok

16.Hayatınız boyunca kaç kez alkollü bir içecek içtiniz?

1) 0 2) 1-2 3) 3-5 4) 6-9 5) 10-19 6) 20-39 7) 40-veya daha fazla

17.Hayatınız boyunca kaç kez sigara içtiniz?

1) 0 2) 1-2 3) 3-5 4) 6-9 5) 10-19 6) 20-39 7) 40-veya daha fazla

18.Hayatınız boyunca herhangi bir uyuşturucu madde (uçucu madde, eroin, esrar, bonzai, amfetamin, vb.) denediğiniz oldu mu? Eğer denediyseniz denediğiniz maddeyi belirtin.

1) Hayır 2) Evet (**……)**

19. Akıllı telefonunuzu günde toplam kaç saat kullanırsınız?

1)Hiç 2)1-2 saat 3) 3-5 saat 4) 6 saat ve üzeri

20. İnternete aşağıdakilerden hangisiyle daha sık bağlanırsınız?

1) Cep telefonu 2) tablet 3) bilgisayar 4) laptop

21. Sosyal medyayı daha çok hangi amaçla kullanıyorsunuz?

1) eğlence 2) iletişim- haberleşme 3) bilgi alışverişi 4) iş

Akıllı Telefon Bağımlılığı Ölçeği

Yönerge: Aşağıda akıllı telefon kullanımı ile ilgili çeşitli duygu ve düşünceleri içeren anlatımlar verilmiştir. Lütfen her anlatımın size ne kadar uyduğunu değerlendirerek en uygun seçeneği yuvarlak içine alınız.

1-Kesinlikle katılmıyorum, 2-Katılmıyorum, 3-Kısmen katılmıyorum, 4-Kısmen katılıyorum, 5-Katılıyorum, 6-Kesinlikle katılıyorum

		1	**2**	**3**	**4**	**5**	**6**
1	Akıllı telefon kullanmaktan dolayı planladığım işleri aksatırım.	1	2	3	4	5	6
2	Akıllı telefonu kullanmaktan dolayı derslerime odaklanmakta, ödevlerimi yapmakta ve işlerimi tamamlamakta güçlük çekerim.	1	2	3	4	5	6
3	Akıllı telefon kullanmaktan dolayı el bileğimde veya ensemde ağrı hissederim.	1	2	3	4	5	6
4	Akıllı telefonumun yanımda olmamasına tahammül edemem.	1	2	3	4	5	6
5	Akıllı telefonum yanımda olmadığında sabırsız ve sinirli olurum.	1	2	3	4	5	6
6	Kullanmasam da, akıllı telefonum aklımdadır.	1	2	3	4	5	6
7	Günlük yaşamımı aksatmasına rağmen akıllı telefonumu kullanmaktan vazgeçemem.	1	2	3	4	5	6
8	İnsanların twitter veya facebook üzerindeki konuşmalarını kaçırmamak için sürekli akıllı telefonumu kontrol ederim.	1	2	3	4	5	6

9	Akıllı telefonumu hedeflediğimden daha uzun süre kullanırım.	1	2	3	4	5	6
10	Çevremdeki insanlar akıllı telefonumu çok fazla kullandığımı söylerler.	1	2	3	4	5	6

Sosyal Medya Bağımlılığı Ölçeği

Aşağıda internette sosyal medya kullanımıyla ilgili çeşitli durumlar verilmiştir. Sizden, her ifadeyi dikkatlice okumanız ve kendiniz için en doğru olan ifadenin üzerine **X** işaretini koymanız istenmektedir. Lütfen boş madde bırakmayınız ve her durum için bir işaretleme yapınız.

① Bana Hiç Uygun Değil ② Bana Uygun Değil ③Kararsızım ④ Bana Uygun ⑤ Bana Çok Uygun

		1	**2**	**3**	**4**	**5**
1	Sosyal medyayı gerçek dünyadan bir kaçış olarak görüyorum.	1	2	3	4	5
2	Sosyal medyada planladığımdan daha uzun süre kalırım.	1	2	3	4	5
3	Kendimi mutsuz hissettiğim zamanlarda sosyal medyada olmak beni rahatlatır.	1	2	3	4	5
4	Sosyal medyada çok zaman geçirdiğimden işlerimi aksatıyorum.	1	2	3	4	5
5	Sosyal medyaya gerekmedikçe girmem.	1	2	3	4	5
6	Sosyal medya yüzünden verimliliğimin azaldığını farkediyorum.	1	2	3	4	5
7	Sosyal medyada çok zaman geçirdiğim için çevremdekiler beni eleştirirler.	1	2	3	4	5
8	Sosyal medyayı kullanırken biri beni rahatsız ettiğinde sinirleniyorum.	1	2	3	4	5
9	Sosyal medyada iken kendimi özgür hissediyorum.	1	2	3	4	5
10	Sabah uyandığımda ilk işim sosyal medyaya girmek olur.	1	2	3	4	5
11	Sosyal medya kullanmayı sevmiyorum.	1	2	3	4	5
12	Güncel olaylardan haberdar olmak için sosyal medyadan ayrılamıyorum.	1	2	3	4	5
13	Çevremde birileri varken bile, sosyal medyada olmayı tercih ederim.	1	2	3	4	5

14	Özel bazı duyuruları görebilmek ya da paylaşabilmek için sosyal medyada daha çok zaman geçiriyorum.	1	2	3	4	5
15	Sosyal medyadan dolayı aile üyelerini ihmal ettiğim olur.	1	2	3	4	5
16	İnsani amaçlı sosyal projelerde yer almak için sosyal medyayı kullanmaktan kendimi alamıyorum.	1	2	3	4	5
17	Sosyal medyada bağlantı kurduğum insanlara kendimi daha iyi anlatıyorum.	1	2	3	4	5
18	Sosyal medyadaki arkadaşlıkları gerçek yaşamdaki arkadaşlıklara tercih ederim.	1	2	3	4	5
19	Sosyal medya gruplarıyla iletişim halinde olabilmem için sosyal medyayı daha uzun süre kullanırım.	1	2	3	4	5
20	Çeşitli sosyal duyarlılıklar konusunda çabuk haberdar olma isteği beni daha çok sosyal medyada olmaya itiyor.	1	2	3	4	5

Genel Aidiyet Ölçeği

Açıklama: Bu ölçek, insanların diğer insanlarla ilişkilerinde kendilerini nasıl hissettiklerini belirlemek amacıyla geliştirilmiştir. Ölçekte bulunan ifadelere ne ölçüde katıldığınızı, size en uygun seçeneğe **(X)** işareti koyarak belirtiniz.

Kesinlikle

Tamamen

Katılmıyorum

Katılıyorum

1 2 3 4 5 6

7

		1	**2**	**3**	**4**	**5**	**6**	**7**
1	İnsanlarla bir arada iken, onlarla birlikte olduğumu hissediyorum	1	2	3	4	5	6	7
2	Ailem ve arkadaşlarımla yakın/samimi bağlarım var.	1	2	3	4	5	6	7
3	Başkaları tarafından kabul edildiğimi hissediyorum	1	2	3	4	5	6	7
4	Aidiyet duygusuna sahibim	1	2	3	4	5	6	7

5	İlişkilerimde ve paylaşımlarımda kendimi diğer insanlara eşit görürüm	1	2	3	4	5	6	7
6	Çevremdeki insanlarla bağlarım olduğunu hissediyorum	1	2	3	4	5	6	7
7	Ailem ve arkadaşlarım beni planlarına dâhil etmezler	1	2	3	4	5	6	7
8	Kendimi dışlanmış hissediyorum	1	2	3	4	5	6	7
9	Sanki insanlar beni önemsemiyor/umursamıyor gibi hissediyorum	1	2	3	4	5	6	7
10	Diğerlerine bağlanamadığım için onlardan uzak duruyorum	1	2	3	4	5	6	7
11	Kendimi dış dünyadan soyutlanmış hissediyorum	1	2	3	4	5	6	7
12	İnsanlarla birlikteyken kendimi yabancı gibi hissediyorum	1	2	3	4	5	6	7

Algilanan Stres Ölçeği

		Hiçbir zaman	**Neredeyse Hiçbir Zaman**	**Bazen**	**Oldukça Sık**	**Çok sık**
1.	Geçen ay, beklenmedik bir şeylerin olması nedeniyle ne sıklıkta rahatsızlık duydunuz?					
2.	Geçen ay, hayatınızdaki önemli şeyleri kontrol edemediğinizi ne sıklıkta hissettiniz?					
3.	Geçen ay, kendinizi ne sıklıkta sinirli ve stresli hissettiniz?					
4.	Geçen ay, ne sıklıkta gündelik zorlukların üstesinden başarıyla geldiniz?					
5.	Geçen ay, hayatınızda ortaya çıkan önemli değişikliklerle etkili bir şekilde başa çıktığınızı ne sıklıkta hissettiniz?					
6.	Geçen ay, kişisel sorunlarınızı ele alma yeteneğinize ne sıklıkta güven duydunuz?					

7.	Geçen ay, her şeyin yolunda gittiğini ne sıklıkta hissettiniz?					
8.	Geçen ay, ne sıklıkta yapmanız gereken şeylerle başa çıkamadığınızı fark ettiniz?					
9.	Geçen ay, hayatınızdaki zorlukları ne sıklıkta kontrol edebildiniz?					
10.	Geçen ay, ne sıklıkta her şeyin üstesinden geldiğinizi hissettiniz?					
11.	Geçen ay, ne sıklıkta kontrolünüz dışında gelişen olaylar yüzünden öfkelendiniz?					
12.	Geçen ay, kendinizi ne sıklıkta başarmak zorunda olduğunuz şeyleri düşünürken buldunuz?					
13.	Geçen ay, ne sıklıkta zamanınızı nasıl kullanacağınızı kontrol edebildiniz?					
14.	Geçen ay, ne sıklıkta problemlerin üstesinden gelemeyeceğiniz kadar biriktiğini hissettiniz?					

Üst Biliş Ölçeği

Bu anket kişilerin kendi düşüncelerine ilişkin inançlarını incelemektedir. Aşağıda bireyler tarafından ifade edilmiş bazı inanç maddeleri listelenmiştir. Lütfen her bir maddeyi okuyarak her birine ne kadar katıldığınızı uygun rakamı işaretleyerek belirtiniz (1: kesinlikle katılmıyorum; 2: kısmen katılmıyorum; 3 kısmen katılıyorum; 4: kesinlikle katılıyorum). Lütfen tüm maddeleri cevaplandırınız. Bu ankette doğru ya da yanlış cevap bulunmamaktadır.

	Kesinlikle katılmıyorum	**Kısmen katılmıyorum**	**Kısmen katılıyorum**	**Kesinlikle katılıyorum**
1. Endişelenmek gelecekteki problemlerden kaçınmama yardımcı olur.	(1)	(2)	(3)	(4)
2. Endişelenmem benim için tehlikelidir.	(1)	(2)	(3)	(4)

3. Aklımdan geçenlerle çok uğraşırım.	(1)	(2)	(3)	(4)
4. Endişe ede ede kendimi hasta edebilirim.	(1)	(2)	(3)	(4)
5. Bir problem üzerinde düşünürken zihnimin nasıl çalıştığının farkındayımdır.	(1)	(2)	(3)	(4)
6. Eğer beni endişelendiren bir düşünceyi kontrol edemezsem ve bu gerçekleşirse, benim hatam olur.	(1)	(2)	(3)	(4)
7. Düzenliliğimi sürdürebilmem için endişe etmeye ihtiyacım var.	(1)	(2)	(3)	(4)
8. Kelimeler ve isimler konusunda belleğime güvenim pek yoktur.	(1)	(2)	(3)	(4)
9. Ne kadar engellemeye çalışırsam çalışayım, endişe verici düşüncelerim devam eder.	(1)	(2)	(3)	(4)
10. Endişelenmek kafamdaki düşünceleri düzene sokmama yardım eder.	(1)	(2)	(3)	(4)
11. Endişe verici düşünceler aklıma geldiğinde onları görmezden gelemiyorum.	(1)	(2)	(3)	(4)
12. Düşüncelerimi izlerim.	(1)	(2)	(3)	(4)
13. Düşüncelerimi her zaman kontrol altında tutmalıyım.	(1)	(2)	(3)	(4)
14. Belleğim zaman zaman beni yanıltır.	(1)	(2)	(3)	(4)
15. Belirli düşüncelerimi kontrol etmediğim için cezalandırılacağım.	(1)	(2)	(3)	(4)
16. Endişelerim beni delirtebilir.	(1)	(2)	(3)	(4)
17. Düşündüğümün her an farkındayımdır.	(1)	(2)	(3)	(4)
18. Zayıf bir belleğim vardır.	(1)	(2)	(3)	(4)
19. Dikkatim zihnimin nasıl çalıştığıyla meşguldür.	(1)	(2)	(3)	(4)
20. Endişelenmek bir şeylerin üstesinden gelmeme yardım eder.	(1)	(2)	(3)	(4)
21. Düşüncelerimi kontrol edememek bir zayıflık işaretidir.	(1)	(2)	(3)	(4)
22. Endişelenmeye başladığım zaman kendimi durduramam.	(1)	(2)	(3)	(4)
23. Endişelenmek problemleri çözmede bana yardımcı olur.	(1)	(2)	(3)	(4)

24. Bir yerleri hatırlama konusunda belleğime pek güvenmem.	(1)	(2)	(3)	(4)
25. Belirli şeyleri düşünmek kötüdür.	(1)	(2)	(3)	(4)
26. Belleğime güvenmem.	(1)	(2)	(3)	(4)
27. Eğer düşüncelerimi kontrol edemezsem işlerimi sürdüremem.	(1)	(2)	(3)	(4)
28. yi çalışabilmek için endişelenmeye ihtiyacım vardır.	(1)	(2)	(3)	(4)
29. Olayları hatırlama konusunda belleğime pek güvenmem.	(1)	(2)	(3)	(4)
30. Düşüncelerimi sürekli gözden geçiririm	(1)	(2)	(3)	(4)

Appendix C
Ethical Clearence Letter

YAKIN DOĞU ÜNİVERSİTESİ

BİLİMSEL ARAŞTIRMALAR ETİK KURULU

23.05.2019

Sayın Yrd. Doç. Dr. Meryem Karaaziz

Bilimsel Araştırmalar Etik Kurulu'na yapmış olduğunuz YDÜ/SB/2019/469 proje numaralı ve **"Üniversite öğrencilerinde akıllı telefon ve sosyal medya bağımlılığının, genel aidiyet, algılanan stres ve üstbiliş problemleri ile ilişkisinin incelenmesi"** başlıklı proje önerisi kurulumuzca değerlendirilmiş olup, etik olarak uygun bulunmuştur. Bu yazı ile birlikte, başvuru formunuzda belirttiğiniz bilgilerin dışına çıkmamak suretiyle araştırmaya başlayabilirsiniz.

Doçent Doktor Direnç Kanol

Bilimsel Araştırmalar Etik Kurulu Raportörü

Direnç Kanol

Appendix D

Permissions Regarding Use of Scales

Sosyal Medya Bağımlılığı Ölçeği için kullanım izninizi talep ediyoruz.
Ilginiz için simdiden teşekkür ederim.

Asra Babayiğit
Yakın Doğu Üniversitesi
Psikoloji Bölümü

Cengiz ŞAHİN
to me

Turkish > English Translate message

Asra Hoca merhaba,
Geliştirdiğimiz ölçekleri çalışmalarınızda kullanabilirsiniz.

Meryem Karaaziz <meryem.karaaziz@gmail.com>
to me

Turkish > English Translate message

---------- Yönlendirilen ileti ----------
Gönderen: **C. Onur Noyan** <onurnoyan@hotmail.com>
Tarih: 17 Nis 2019 Çar, saat 21:13
Konu: Re: Akıllı telefon bağımlılığı ölçeği izin
Alıcı: Meryem Karaaziz <meryem.karaaziz@gmail.com>

Meryem Karaaziz <meryem.karaaziz@gmail.com> Mon, Apr 22, 12:17 PM (13 days ago)
to me

Turkish > English Translate message Turn

---------- Yönlendirilen ileti ---------
Gönderen: **ERDİNÇ DURU** <eduru@pau.edu.tr>
Tarih: 17 Nis 2019 Çar, saat 12:44
Konu: ölçek ve makale
Alıcı: Meryem Karaaziz <meryem.karaaziz@gmail.com>

Merhaba,

Araştırmanızda kullanmayı düşündüğünüz ölçek ve ölçekle ilgili makalemi ekli dosya olarak gönderiyorum. Çalışmanızda şimdiden başarılar dileğiyle...

Fwd: Algılanan Stres Ölçeği Ölçek İzni Inbox ×

Meryem Karaaziz <meryem.karaaziz@gmail.com> Mon, Ap
to me

Turkish > English Translate message

---------- Yönlendirilen ileti ---------
Gönderen: **MEHMET ESKiN** <meskin@adu.edu.tr>
Tarih: 17 Nis 2019 Çar, saat 21:51
Konu: Re: Algılanan Stres Ölçeği Ölçek İzni
Alıcı: Meryem Karaaziz <meryem.karaaziz@gmail.com>

Kullanabilirsiniz hocam, başarılar dilerim. Makale ekte. Gereksinme duyduğunuz tüm bilgiler makalede mevcut.

Mehmet Eskin, professor of psychology
Adnan Menderes University, Faculty of Medicine
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Cc: 'Metehan IRAK' <metehan.irak@bahcesehir.edu.tr>
Konu: RE: Üstbiliş Ölçeği-30

Merhaba,
Tabi ki kullanabilirsiniz.
Kolay gelsin.
Ahmet Tosun

Yrd.Doç.Dr. Ahmet Tosun
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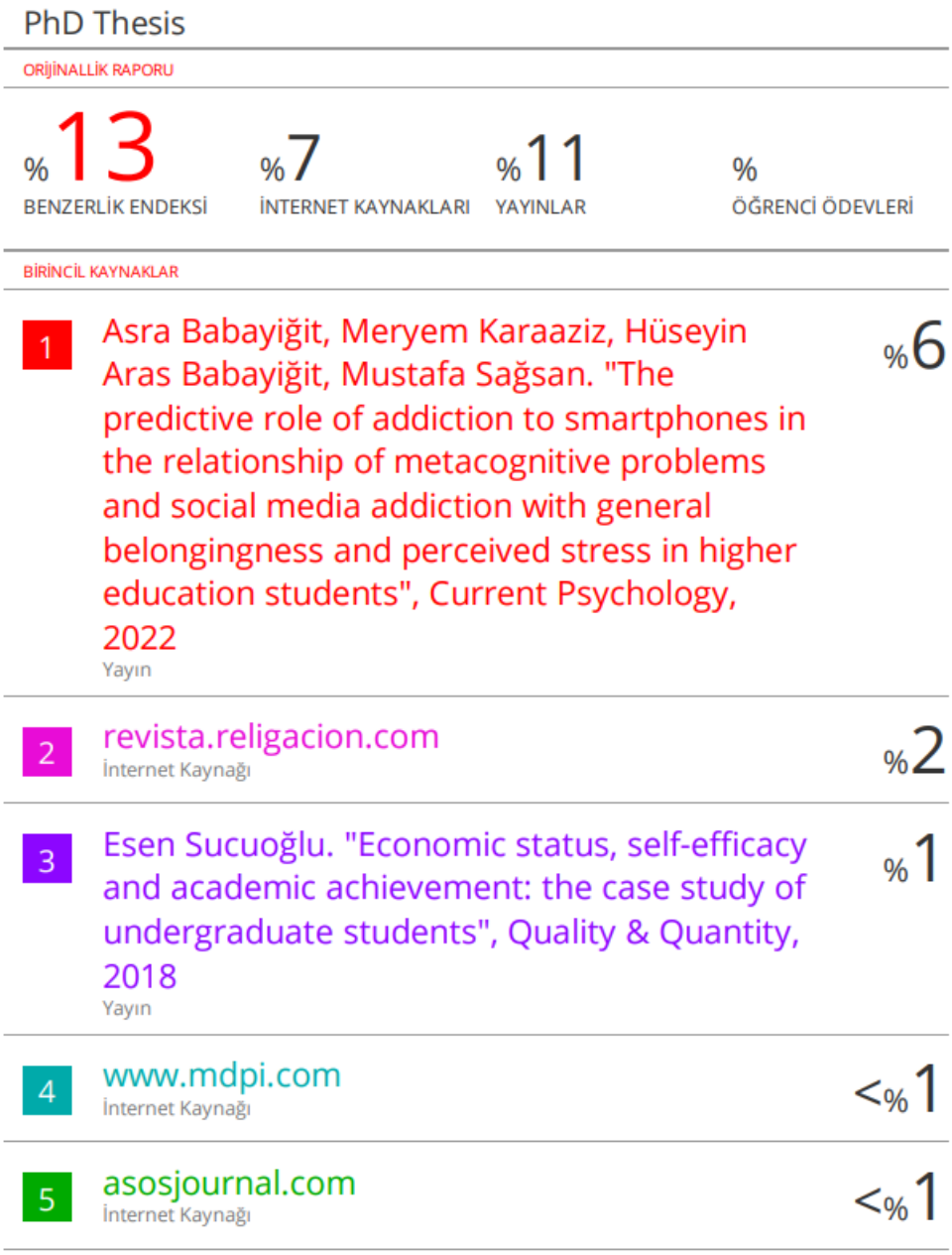
Appendix E

Turnitin Similarity Report



PhD Thesis

ORİJİNALLİK RAPORU

%13	%7	%11	%
BENZERLİK ENDEKSİ	İNTERNET KAYNAKLARI	YAYINLAR	ÖĞRENCİ ÖDEVLERİ

BİRİNCİL KAYNAKLAR

1	Asra Babayiğit, Meryem Karaaziz, Hüseyin Aras Babayiğit, Mustafa Sağsan. "The predictive role of addiction to smartphones in the relationship of metacognitive problems and social media addiction with general belongingness and perceived stress in higher education students", Current Psychology, 2022 Yayın	%6
2	revista.religacion.com İnternet Kaynağı	%2
3	Esen Sucuoğlu. "Economic status, self-efficacy and academic achievement: the case study of undergraduate students", Quality & Quantity, 2018 Yayın	%1
4	www.mdpi.com İnternet Kaynağı	<%1
5	asosjournal.com İnternet Kaynağı	<%1

Appendix F

CV

1. **Name-Surname** **:** Hüseyin Aras BABAYİĞİT
2. **Date of Birth** **:** 07.11.1990
3. **Title** **:** MSc
4. **Education:**

Degree	Field	University	Yıl
Bachelor	Business	Middle East Technical University	2013
Master	Human Resources Management	Near East University	2016
PhD	Innovation and Knowledge Management	Near East University	

5. **Titles**

MSc in Human Resources Management- Near East University 2016

6. **Publications**

6.1.Articles Published in International Journals

Babayiğit, A., Karaaziz, M., Babayiğit, H.A., & Sağsan, M. (2022). The predictive role of addiction to smartphones in the relationship of metacognitive problems and social media addiction with general belongingness and perceived stress in higher education students. *Current Psychology,* https://doi.org/10.1007/s12144-022-04113-8