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EXAMINATION OF THE RELATIONSHIP BETWEEN THE SMART PHONE ADDICTION AND ONLINE COMPULSIVE BUYING BEHAVIOR AS THE CORONAVIRUS (COVID-19) FEAR LEVEL PRECURSORS

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Abstract

The aim of this study was to examine the relationship between smartphone addiction and online compulsive buying behavior the precursors of fear of coronavirus (COVID-19) caused by the novel coronavirus pandemic, which has affected the world since December 2019. The research was carried out with the relational screening model. The research was conducted by using random sampling method and in this context, Personal Information Form, COVID-19 Fear Scale, Smartphone Addiction Scale Short Form and Online Compulsive Buying Scale were used online via Google Forms. A total of 525 people, 318 women and 207 men, participated in the study. Correlation and regression analyzes were used to determine the relationships between fear of COVID-19, smartphone addiction and online compulsive buying behaviors. Independent groups t-test analysis was performed to determine whether the variables differed according to gender and marital status. Correlation and regression analyzes were used to determine the relationships and directions between the variables. In the study, it was observed that there was a weak positive relationship between fear of COVID-19 and smartphone addiction, a weak positive relationship between fear of COVID-19 and online compulsive buying behavior, and a moderately positive relationship between smartphone addiction and online compulsive buying behavior.

Keywords: Coronavirus fear, smartphone addiction, online compulsive buying.

INTRODUCTION

The noval coronavirus (Covid-19) emerged in Wuhan City, Hubei Province of China, in December 2019 and spread rapidly, causing an infectious pandemic worldwide (Bao, Sun, Meng, Shi and Lu, 2020, p. 1). The virus was first observed in the animal market in the city of Wuhan and has spread rapidly. The virus which first affected the city of Wuhan and Hubei province, spread to all of China in a short while and then all of the world's countries (https://covid19.saglik.gov.tr/:2020). Individual and public measures taken to prevent the spread of coronavirus have begun to have some effects on people's psychology. Although these psychological effects differ from person to person, it is seen that the most basic emotions are stress, anxiety and fear (Cakir Kardes, 2020:161). Banerjee (2020) stated the psychological effects of the coronavirus epidemic on people as: (a) anxiety of those who have experienced epidemics before (Sars, Ebola, etc.) that they will experience an epidemic again in the future, (b) fear of livelihood due to isolation and restrictions, (c) fear of leaving home, (d) concern for other family members and loved ones, (e) stocking of protective materials such as masks, disinfectants, etc., (f) stigmatization due to misinterpretation of symptoms such as cough, sneeze, mild fever, cold or

seasonal flu, (g) fear, stress and panic growing under the influence of social media and other communication tools.

The individual and public measures taken to control the coronavirus pandemic and the feelings of anxiety and fear experienced during this process have led people stay home. This situation has caused people to increase the usage time of internet and technological tools. (Cantekin & Arpaci, 2020, p. 1140). With the development of today's technology, smart phones are the leading technological tools that lead to changes in the behavior of the individuals (Sata, Celik, Erturk, & Tas, 2016, p. 157). Smartphones are the transformation of mobile phones into tiny pocket computers. They have many features such as taking photos, listening to music, accessing the internet, banking transactions, playing games, and video chatting, as well as calling and messaging operations performed by conventional mobile phones (Cuhadar, Demirel, Er, & Serdar, 2020, p. 2530).

The use of smartphones is increasing in Turkiye as well as in all countries of the world. It is stated that according to the data of the Turkish Statistical Institute (TUIK), the rate of smartphone use in Turkey is 53.8% https://www.bik.gov.tr/ :2017), and Tasci (https://www.istanbul.edu.tr/: 2020) stated that the rate of smartphone use in Turkey as of this year is 77% according to the Mobile Communication Sector Report published by the Mobile Communication Tools and Information Technology Businessmen Association (MOBISAD). Many features of smartphones that differ from classical mobile phones make our lives easier (Sata, Celik, Erturk, & Tas, 2016, p. 157). Smartphones are thought to affect people physically or psychologically, as well as culturally. Individuals express their feelings and thoughts and explain to the outside world what kind of person they are through their smartphones (Mert & Ozdemir, 2018, p. 90). The fact that smartphones provide such convenience to our lives, direct our behaviors, such increasing usage rates in the world and in our country, and the continuous development of technology bring to mind the question of whether we are becoming dependent on smartphones.

Turkish Language Society (2020) defines addiction as "condition of being addicted, dependence". According to the Turkish Green Crescent Society (2020), addiction is defined as an individual's falling under the influence of a foreign substance or losing control over his/her behaviors. According to the Turkish Green Crescent Society (2020), addiction diagnosis criteria are: (a) developing tolerance, (b) onset of withdrawal symptoms, (c) unsuccessful efforts to control or end substance abuse or behavior considered as addiction, (d) obtaining the substance of abuse or repeating the behavior considered as addictive, spending a great deal of time in obtaining the substance and ending the substance abuse and addictive behavior, (e) deterioration in the social life of the individual, negative impact on the individual's work and personal activities (f) continuing to substance abuse or to exhibit behaviors that are considered addicted behaviors despite the onset and increase of physiological or psychological problems. It is seen that there are different conceptualizations for the concept of addiction in the literature. According to Incekara and Berra (2021), addiction is defined as an uncontrollable desire to which one becomes addicted as a result of a dysfunctional relationship with any object, substance or another individual. When the individuals cannot access the substances to which they are addicted, they may show withdrawal symptoms and develop tolerance.

When addiction is mentioned, addictions related to substance abuse come to mind. However, there are also behavioral addictions. Addictions such as gambling, internet and game addiction, shopping addiction, smartphone addiction are some of our behavioral addictions (Ulas & Eksi, 2019). Smartphone addiction can be defined as people's continued use of smartphones to such an extent that they disrupt their daily routines (Demirci, Akgonul, & Akpinar, 2015, p. 85). The first thing that individuals with smartphone addiction do when they wake up in the morning is to check on their smartphones, and the last thing they do when they go to bed at night is to take a glance at their smartphones. Besides, individuals with smartphone addiction check their smartphones at least 3-4 times a day without any reason (Suler, 2016, p. 14).

Like other behavioral addictions, smartphone addiction does not start overnight. At first, it appears as a pattern of behavior that does no or little harm to the individual. For instance, buying a phone for personal

safety, sending messages or checking social media accounts, etc (Ulas, 2017). It is stated that at the end of long-term use, the smartphone user cannot stop using the smartphone and continues to use it despite the negative consequences (Akif, Enver, & Sevim, 2019). The motivation behind smartphones use becomes an addiction rather than a need (Roberts, Yaya, & Monalis, 2014, p. 255). Smartphone addiction does not appear to be an official diagnosis included in American Psychiatric Association's (APA, 2013) Diagnostic and Statistical Manual of Mental Disorders [DSM-V]. However, like other types of addiction, smartphone addiction also shows signs of addiction such as mood changes, cognitive-emotional and behavioral preoccupation, developing tolerance, failure, attempts to reduce success, experiencing interpersonal conflicts and relapses (Kuss & Griffiths, 2011, p. 3530). Smartphone addiction causes some psychological and social problems such as shyness, social anxiety, loneliness, anxiety and depression, as well as headaches and neck pain, and some disorders in the musculoskeletal system (Gunal & Pekcetin, 2018, p. 115; Hayirci & Sari, 2020; Aktas & Yilmaz, 2016).

According to the Turkish Language Association (2020), shopping is defined as “buying and selling". Based on the definition of Turkish Language Association, there is a person who sells the product (seller) and a person who buys it (buyer/consumer). Considering the literature, it is seen that there are many definitions of the consumer concept. A consumer is a genuine person who purchases or has the potential to purchase shopping materials for individual or his/her family needs and wants (Karabulut, 1981: 11’den Akt. Olcun, 2017, p. 3). Many models have been developed to understand the shopping dynamics and purchasing decisions of the consumers and to manage their behaviors. (Kirezli, 2015; Olcun, 2017). Motivations of individuals have been tried to be better understood by categorizing shopping and consumption behaviors. People's consumption behaviors are categorized as follows, respectively: (a) hedonic consumption, (b) utilitarian consumption, (c) impulsive consumption, (d) compulsive buying/shopping addiction (Tokgoz, 2019). Compulsive buying can be expressed primarily as a persistent, repetitive buying behavior that becomes the primary response to a negative event or negative emotion. While it provides some perceived benefits at the beginning, such chronic behavior becomes very difficult to stop and can ultimately lead to harmful consequences. Consequences of the relevant behavior can be not only economic but also psychological and social (Faber & O' Guinn, 1992, p. 459).

For most people, buying is a normal and routine part of daily life. For compulsive buyers, the inability to control of an overpowering impulse to buy takes over their lives and has significant and sometimes serious consequences. Compulsive buyers do not buy too much of a purchased good to get benefit or service since they seek to gain satisfaction through the purchasing process itself (O’ Guinn & Faber, 1989, p. 147). In simple terms, individuals who are addicted to shopping act with strong, uncontrollable urges to buy. Since compulsive buying is not included in the DSM-V and ICD-11 (International Statistical Classification of Diseases and Related Health Problems-11) classification, there are no clear diagnostic criteria for compulsive buying behavior. However, McElroy et al. (1994) suggested the following diagnostic criteria for compulsive buying behavior in their study: (a) buying efforts or tendencies that are usually unbearable, unsettling or unreasonable, (b) buying products even though there is no need, buying more products than the financial situation allows or exhibiting shopping behavior for longer than planned, not being able to control inappropriate buying behavior, (c) compulsive buying behavior leading to deterioration of personal, social and business life, and financial problems, (d) compulsive buying behavior does not occur only during periods of mania or hypomania attack. It has been determined that the reward mechanism in the brain plays a significant role in the formation and development of compulsive buying behavior. Additionally, it is also thought that the serotoninergic and dopaminergic systems play an active role in the development of addiction. These systems play a prominent role in the process and reveal the symptoms of addiction. Besides, social activities such as eating and going to the movies while shopping can increase the attractiveness of compulsive buying behavior.

The perceived compensatory benefits of compulsive buying behavior related to the individual's personal deficiencies such as self-esteem, self-identity, mood problems have been previously emphasized by researchers who have studied both compulsive and impulses behaviors. It is stated that the individual's

unmet needs and conditional parental attitudes, the individual's perfectionist approaches and cognitive distortions related to shopping play an active role in the formation of compulsive buying behavior (Kyrios, Forst, & Steketee, 2004, p. 253; Ozturk, Ogel, Evren, & Bilici, 2019, p. 762). It is considered that there are multiple factors affecting the compulsive buying behavior of the individual. Personality traits, post-modern consumption patterns and attitudes towards advertising are at the top of these factors (Eroglu, 2016, p. 256). Compulsive buying tendencies may end up with different moods and behavior patterns such as shopping again in the short and long term, feeling happy or depressed, feelings of regret and guilt after shopping, borrowing, alienation from social environment and isolation, and a decrease in the individual's self-belief and self-esteem (Korur & Kimzan, 2016, p. 45). In addition, individuals who exhibit compulsive buying behavior experience visible financial losses. Financial losses are followed by the deterioration of bilateral relations with family, social environment and people in business life (Yuncu & Kesebir, 2014, p. 143).

Importance of the Research

The increasing use of technology in recent years, the increase in social media use increase the narcissistic tendencies of individuals and their envy for each other, and the increase in socioeconomic levels and the increase in credit card use also increase the compulsive buying tendencies of individuals. Additionally, with technological progress, buying behavior has become even more uncontrollable and easy. With the developing technology, compulsive buying behavior is evolving into online compulsive buying behavior (Korur & Kimzan, 2016; Armagan & Temel, 2018). Online compulsive buying is defined as shopping made by accessing online shopping sites over the internet with computers, tablets and smart phones. The motivations of individuals who shows online compulsive buying behavior are similar to those of individuals with compulsive buying behavior. The most important reasons that trigger online compulsive buying behavior are discount campaigns, gift vouchers, promotions that become continuous on shopping sites. Besides, individuals can compare the prices of the products they will buy online and think that they save money. The idea of buying at an affordable price can gradually increase the shopping motivation of individuals. Additionally, since online shopping eliminates the concepts of time and space, the individual can shop at any time, which constantly increases the compulsive buying behavior (Deniz, 2020, p. 212; Civek & Ulusoy, 2020, p. 148; Duroy, Gorse, & Lejoyeux, 2014).

As a result of the relevant literature review, the aim of this study was determined as "to reveal whether there is a relationship between individuals' COVID-19 fear levels and smartphone addiction levels and online compulsive buying behaviors". In consequence of the general purpose determined, answers to the following questions were sought in this study.

1- What are the individual's COVID-19 fear levels, smartphone addiction levels, and online compulsive buying levels?

2- Do individuals' COVID-19 fear levels, smartphone addiction levels, and online compulsive buying levels differ depending on demographic variables such as gender and marital status?

3- Is there a significant relationship between individuals' COVID-19 fear levels, smartphone addiction levels, and online compulsive buying behaviors?

4- Do individuals' COVID-19 fear levels predict their smartphone addictions?

5- Do individuals' COVID-19 fear levels predict their online compulsive buying behavior?

6- Do individuals' smartphone addictions predict their online compulsive buying behavior?

7- Do individuals' COVID-19 fear levels and smartphone addictions significantly predict online compulsive buying behaviors together?

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METHOD

Model of the Study

The aim of this study is to reveal whether there is a relationship between individuals' COVID-19 fear levels and smartphone addiction and online compulsive buying behaviors. Therefore, relational screening method, one of the quantitative research methods, was used in the study. Relational screening model is the research model used to determine whether there is a relationship between at least two variables and also to determine the direction and level of any relationship (Simsek, 2012, p. 96).

Study Group

In this study, data were collected online via Google Forms between March 05, 2021 and June 05, 2022 using the appropriate sampling method. Due to the continuing psychological effects and health risks caused by the risk of catching Corona virus, appropriate sampling technique was preferred instead of face-to-face data collection methods (Buyukozturk et al.). Target population of the study consisted of 3 million 186 thousand 325 people between the ages of 18-55 living on the Anatolian side of Istanbul (Turkish Statistical Institute-TURKSTAT- https://www.tuik.gov.tr/). Sample size was calculated and the minimum number of participants for the 95 percent reliability level was found to be 384. It was aimed to differentiate the demographic characteristics of the participants and to equalize their likelihood of participating in the research (Buyukozturk & et al.). For this purpose, individuals living in different districts, in different occupational groups and with various socioeconomic characteristics were reached. 443 volunteers participated in the study. Demographic information form, Fear of COVID-19 Scale, Smartphone Addiction Scale Short Form, online compulsive Buying Scale were used to collect data.

Data Collection Tools

Personal Information Form

Questions such as age range, gender and marital status were asked to the participants who participated in the study on a voluntary basis and answered the forms and scales, and general information about them was tried to be obtained.

COVID-19 Fear Scale

The scale was developed by Ahorsu et al. (2020) to determine the novel coronavirus fear levels experienced by individuals. The scale is a one-way scale and does not have a sub-dimension. The scale was graded as a 5-point Likert scale consisting of 7 items. Although there is no cut-off point in the scale, an increase in the score obtained from the scale is interpreted as the individual's COVID-19 fear level is high. Turkish adaptation of the scale was made by Bekiroglu, Korkaz and Ercan (2020). Corrected item-total correlations of scale items . were between 62 and 72 and the internal consistency coefficient was .88.

Smartphone Addiction Scale Short Form

The scale consists of 10 questions developed by Kwon et al. (2013) to determine the risk of smartphone addiction. The scale is a one-way scale and does not have a sub-dimension. The scale was graded as a 6-point Likert scale. There are no cut-off points on the scale. The high score obtained is interpreted as the high risk of smartphone addiction. Noyan et al. (2015) conducted the studies on the adaptation of the scale to Turkish and the measurement of its psychometric properties. In this study, Cronbach's alpha coefficient of the scale was calculated as 86 and the test-retest reliability coefficient was calculated as .92.

Online Compulsive Buying Scale

The scale is the adapted form of Bergen Shopping Addiction Scale developed by Andreassen et al. (2015) for online shopping in Turkish (Bozdag and Yalcinkaya Alkar, 2018). The scale consists of 28 items It is rated as a 5-point Likert and there is no cut-off score on the scale. The high score obtained from the scale shows that the level of online compulsive buying disorder of individuals increases. Cronbach's alpha coefficient for internal consistency was calculated as .95.

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Data Analysis

The data of the study were analyzed with the SPSS 22.0 package program. First of all, the descriptive statistics of the participants in the research were examined and the kurtosis and skewness values were examined in order to determine whether the data showed a normal distribution in order to be able to analyze. It was observed that the data showed normal distribution and independent sample t-test was applied to determine whether the variables differed according to demographic variables such as gender and marital status. Finally, Pearson Correlation Analysis and regression analysis were performed to determine whether the variables were related to each other.

FINDINGS

In order to define the descriptive information of the participants, demographic information of the participants is as in Table-1.

Table 1. Demographic data of participants.

Variables	Group	n	%
Gender	Male	207	39.4
	Female	318	60.6
Marital Status	Married	248	47.2
	Single	277	52.8
Age Range	15-19	138	26.3
	20--24	34	6.5
	25-29	118	22.5
	30-34	119	22.7
	35-39	59	11.2
	40-44	24	4.6
	45 - 49	20	3.8
	50-54	4	0.8
	55-59	6	1.1
	60-64	3	0.6
	65+	0	0

Study sample consists of 207 male (39.4%) and 318 female (60.6%) participants. 248 of the participants were married (47.2%), 277 were single (52.8%); the age ranges were 15-19 (26.3%) for 138 people, 20-24 (6.5%) for 34 people, 25-29 (22.5%) for 118 people, 30-34 (22.7%) for 119 people, 35-39 (11.2%) for 59 people, 40-44 (4.6%) for 24 people, 45-49 (3.8%) for 20 people, 50-54 (0.8%) for 4 people, 55-59 (1.1%) for 6 people, and 60-64 (0.6%) for 3 people.

T-Test Results of Participants' COVID-19 Fear, Smartphone Addiction, and online compulsive Buying Behavior Scores by Genderare given in Table 2:

Table 2. T-Test Results of Participants' COVID-19 Fear, Smartphone Addiction, and online compulsive Buying Behavior Scores by Gender.

Variables	Group	n	*Mean*	Std.Dev.	t	p
Covid-19 Fear Scale	Male	207	2.10	.93	-5.819	.001*
	Female	318	2.60	.97		
Smartphone Addiction Scale	Male	207	4.68	1.98	.229	.819
	Female	318	6.64	2.16		
Online compulsive Buying Behavior Scale	Male	207	.46	.77	-2.956	.003*
	Female	318	.67	.81		

*p<.05

In the research, T-test was conducted to determine whether the mean scores of male and female participants from COVID-19 fear scales of smartphone addiction, and online compulsive buying behaviors differed. When Table-2 is examined, the levels of COVID-19 fear and online compulsive buying behaviors differ significantly by gender (p<.05), whereas smartphone addiction levels do not differ significantly by gender (p<.05). The COVID-19 fear levels of females($\bar{X}$=2.60) were significantly

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higher than the COVID-19 fear levels of males ($\overline{X}$=2.10). Females' online compulsive buying behavior levels ($\overline{X}$=.67) were significantly higher than males' online compulsive buying behavior levels ($\overline{X}$=.46).

T-Test Results of Participants' COVID-19 Fear, Smartphone Addiction, and online compulsive Buying Behavior Scores by Marital Status are given in Table 3.

Table 3. T-Test Results of Participants' COVID-19 Fear, Smartphone Addiction, and online compulsive Buying Behavior Scores by Marital Status.

Variables	Group	n	Mean	Std.Dev.	t	p
Covid-19 Fear Scale	Married	248	2.51	.99	2.207	.028*
	Single	277	2.32	.97		
Smartphone Addiction Scale	Married	248	4.35	2.00	-3.175	.002*
	Single	277	4.93	2.14		
Online compulsive Buying Behavior Scale	Married	248	.58	.84	-.385	.701
	Single	277	.60	.77		

*p<.05

In the study, T-test was conducted to determine whether the mean scores of married and single participants from the scales of fear of COVID-19, smartphone addiction, and online compulsive buying behavior differed. When Table-3 is examined, fear of COVID-19 and smartphone addiction levels differ significantly according to marital status. The COVID-19 fear levels of married people ($\overline{X}$=2.51) were significantly higher than the COVID-19 fear levels of single people ($\overline{X}$=2.32). The smartphone addiction levels of singles ($\overline{X}$=4.93) were significantly higher than the smartphone addiction levels of married people ($\overline{X}$=4.35) (p<.05). online compulsive buying behavior levels do not differ significantly according to marital status (p>.05).

Correlation Analysis Results Regarding Participants' COVID-19 Fear, Smartphone Addiction, and online compulsive Buying Behavior Scales are given in Table 4.

Table 4. Correlation Analysis Results Regarding Participants' COVID-19 Fear, Smartphone Addiction, and online compulsive Buying Behavior Scales.

	Fear of Covid-19	Smartphone Addiction	Online compulsive Buying Behavior Scale
Fear of Covid-19	1	.266*	.294*
Smartphone Addiction	.266*	1	.466*
Online compulsive Buying Behavior Scale	.294*	.466*	1

*p<.05

According to Pearson correlation analysis results shown in Table-4, a weak positive correlation between individuals' COVID-19 fear levels and smartphone addiction levels (r=.266; p<.01), and a weak positive correlation between COVID-19 fear levels and online compulsive buying behaviors (r =.294; p<.01) were observed. It was also observed that there was a positive moderate level (r =.466; p<.01) between smartphone addiction and online compulsive buying behaviors.

The results of the Regression Analysis on Whether Individuals' COVID-19 Fear Levels Predict Smartphone Addictions are given in Table 5:

In the regression analysis, it was determined that individuals' fears of COVID-19 significantly predicted smartphone addiction. COVID-19 fear levels of individuals explain 7% of the total variance in smartphone addictions (p<.05). In other words, as individuals' fear of COVID-19 increases, their smartphone addiction also increases.

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Table 5. Regression Analysis on Whether Individuals' COVID-19 Fear Levels Predict Smartphone Addictions.

Independent Variable	B	Std. Error	(β)	t	p
Fear of COVID-19	3.29	.233	.26	14.146	.00

R= .26 Rsquare = .071 F $_{(1,523)}$ =39.758 p=.000
Dependent Variable: Smartphone Addiction

The results of Regression Analysis on Whether Individuals' COVID-19 Fear Levels Predict online compulsive Buying Behaviors are given in Table 6.

Table 6. The results of Regression Analysis on Whether Individuals' COVID-19 Fear Levels Predict online compulsive Buying Behaviors.

Independent Variables	B	Std. Error	(β)	t	p
Fear of COVID-19	.018	.089	.294	0.20	.00

R= .29 Rsquare = .086 F $_{(1,523)}$ =49.484 p=.000
Dependent Variable: online compulsive Buying

In the regression analysis, it was determined that individuals' fear of COVID-19 significantly predicted their online compulsive buying behavior. COVID-19 fear levels of individuals explain 9% of the total variance of online compulsive buying behaviors (p<.05). In other words, as individuals' fear of COVID-19 increases, their online compulsive buying behaviors also increase.

The results of Regression Analysis on Whether Individuals' Smartphone Addictions Predict online compulsive Buying Behaviors are given in Table 7:

Table 7. Regression Analysis on Whether Individuals' Smartphone Addictions Predict online compulsive Buying Behaviors.

Independent Variables	B	Std. Error	(β)	t	p
Smartphone Addiction	.23	.076	.46	3.146	.00

R= .46 Rsquare = .217 F $_{(1,523)}$ =145.367 p=.000
Dependent Variable: online compulsive Buying

In the regression analysis, it was determined that smartphone addictions of individuals significantly predicted online compulsive buying behaviors. Smartphone addictions of individuals explain their online compulsive buying behaviors by 25% (p<.05).

The results of the Multiple Regression Analysis on Predicting online compulsive Buying Behaviors of the Participants are given in Table 8:

Table 8. Multiple Regression Analysis on Predicting online compulsive Buying Behaviors of the Participants.

Independent Variables	B	Std. Error	(β)	t	p
Fear of Covid-19	.149	.032	.183	4.64	.00
Smartphone Addiction	.161	.015	.418	10.61	.00

R= .49 R^2adjusted = .25 F $_{(2,522)}$ =86.356 p=.000
Dependent Variable: online compulsive Buying

Multivariate linear regression analysis was performed to predict the online compulsive buying behavior variable using the fear of COVID-19 and smartphone addiction variables. When Table-6 is examined, the variables of fear of COVID-19 and smartphone addiction show a positive and significant relationship with online compulsive buying behavior (R=.49, $R^2_{adjusted}$=.25; p<.05). Fear of COVID-19 and smartphone addiction variables together account for 25% of the total variance of online compulsive

buying behavior. According to the standardized regression coefficient (β), smartphone addiction predicts online compulsive buying behavior positively and moderately significantly (β=.42, $t_{(522)}$=10.61), fear of COVID-19 predicts online compulsive buying positively and weakly significantly (β=.18, $t_{(522)}$=4.65) p<.05.

DISCUSSION, CONCLUSION, and RECOMMENDATIONS

This research was carried out to reveal whether there is a relationship between smartphone addiction and online compulsive buying behaviors as predictors of COVID-19 fear level that has emerged during the novel coronavirus pandemic that has been affecting the world since December 2019. In line with this purpose, when the average of the COVID-19 fear levels of the participants in the research was examined, according to the gender variable, it was seen that there was a statistically significant difference. Women have a significantly higher fear level of novel coronavirus than men. In his research, Duman (2020) stated that the fear of COVID-19 did not reveal a significant difference according to the gender variable. In their study, Gashi (2020) stated that women's COVID-19 fear levels were higher than men's, but there was no statistically significant difference between them. Bekiroglu, Korkmaz and Ercan (2020) reported that, when the fear of COVID-19 was examined in terms of the gender variable, the fear levels of women were significantly higher than that of men, and Gencer (2020) reported that women's COVID-19 fear levels were significantly higher than that of men.

When the mean of COVID-19 fear levels were analyzed in terms of marital status variable, it was seen that the fear levels of married people were significantly higher than those of singles. Gencer (2020) found in his study that singles feel more fear than married people. Ciftci and Demir (2020) reported in their research that the COVID-19 fear levels of married people were higher than single people, but this did not constitute a statistical significance. In their study, Atay et al. (2020) found that the COVID-19 fear levels of the participants did not differ according to the mineral state variable.

When smartphone addiction was examined according to the gender variable, no statistically significant difference was found. When looked at the relevant literature, it was seen that the gender variable did not make a statistically significant difference on smartphone addiction. (Kuyucu, 2020; Minaz & Cetinkaya Bozkurt, 2017). In their research, Aktas and Yilmaz (2016) stated that women spend more time on smartphones than men and have more anxiety about controlling their smartphones.

When the smartphone addiction levels were analyzed in terms of marital status variable, it was observed that the risk of smartphone addiction of singles was higher than that of married people. Tohumcu (2018) stated that singles have a higher risk of smartphone addiction than that of married people in his study on internet addiction, smartphone addiction, self-esteem and loneliness variables with the participation of 230 people. Ankara, Tekin and Oz (2020), in their study with 155 participants researching the socioeconomic factors affecting smartphone addiction, stated that singles were busy with smartphones for a longer time than married people, and their smartphone addiction levels were significantly higher than married people.

When the statistical data of online compulsive buying behavior were examined, it was observed that the gender variable was an element that made a significant difference on buying behavior, and it was seen that online compulsive buying behavior levels of women were higher than men. In their study, Droy, Gorse, and Lejoyeux (2014) stated that the gender factor was not a variable that had a statistically significant effect on online compulsive buying behavior. In his study, Akkas (2021) also found that gender is not a factor that makes a significant difference in online shopping addiction. Armagan and Temel (2018) stated that women's online buying behavior levels were higher than men's. The marital status of the participants did not show a statistically significant difference in online compulsive buying behaviors. When the relevant literature is reviewed, studies stating that marital status was not a factor affecting attitudes towards online shopping were seen (Ozguven, 2011; Akkas, 2016).

In the research, the main purpose is to determine whether there is a relationship between fear of COVID-19, smartphone addiction and online compulsive buying behaviors. As a result of the statistical

analyses carried out in line with this purpose, the correlation coefficient between fear of COVID-19 and smartphone addiction was determined as .26 and a weak positive correlation was observed between the variables. The correlation coefficient between fear of COVID-19 and online compulsive buying behavior was determined as .29 and there was a weak positive correlation. In addition, the correlation coefficient between smartphone addiction and online compulsive buying behavior was determined as .47 and it was interpreted as there is a positive moderate relationship between the variables. In his study investigating the factors affecting online compulsive buying behaviors of university students, Deniz (2020) stated that there is a positive moderate relationship between problematic phone use and online buying behavior. In his study, Kukrek (2021) determined that there was a weak positive correlation between fear of coronavirus and online compulsive buying behavior (r=.20).

Conclusion and Recommendations

The coronavirus pandemic, which we have been exposed to since 2019, has emerged as a situation we have not experienced before. For reducing the spread of the disease during the pandemic process, curfews, closure of places with high human circulation such as places of worship, shopping malls, frequent exposure to anxiety producing information pollution in the written and verbal media, as well as on social media, may have triggered people's anxiety about contracting COVID-19 virus. Additionally, the measures taken may have caused people to withdraw from their work and social lives, and the only entertainment elements to be limited to home activities and internet-based applications. During the social isolation process, people's smartphone usage time has increased in order to meet their basic needs such as having fun, following the developments, continuing their business life, shopping, and thus they they may have developed smartphone addiction. In this process, people have experienced the comfort of shopping through unlimited options, regardless of time and space, thanks to internet-based mobile applications. This comfort process is further multiplied by the fact that mobile shopping sites offer continuous campaigns and discounts throughout the year. Besides, the anxiety of contracting the virus may have caused people to use the strategy of managing anxiety by shopping and distraction. Apart from this, following discounts, taking advantage of the discounts and the happiness of buying cheap products may have played an important role in reinforcing the compulsive buying behaviors of individuals. The fact that the research data were collected online via Google Forms may have affected the sincere response levels of the participants. The results of the research show that although time has passed since the Covid 19 process, its effects continue and leave lasting effects on people's behavior. It is considered that more in-depth quantitative and qualitative scientific research in behavioral changes caused by corona virus can be more enlightening in this field. Another suggestion could be to conduct scientific research on how people's withdrawal from social life due to fear of disease affects other types of addictions and communication skills other than technology. In conclusion, it is considered that it would be beneficial to conduct social awareness and preventive studies on technology addiction and online compulsive buying behavior by the relevant stakeholders.

Ethics and Conflict of Interest

The authors declare that the study has not unethical issues and that research and publication ethics have been considered carefully. The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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