

UNDERSTANDING THE MODERATOR ROLE OF COVID-19 PANDEMIC ANXIETY ON THE RELATIONSHIP BETWEEN INTERNET ADDICTION AND ONLINE SHOPPING ADDICTION

İNTERNET BAĞIMLILIĞI İLE ÇEVİRİMİÇİ ALIŞVERİŞ BAĞIMLILIĞI ARASINDAKİ İLİŞKİDE COVID-19 PANDEMİSİ ANKSİYETESİNİN DÜZENLEYİCİ ROLÜ

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Abstract

Internet addiction is one of the most important drivers of online shopping addiction. During Covid-19 pandemic people had to spend more time in their homes and had to use internet more than before to do their tasks. One of the tasks that should be performed on internet is shopping. On the other hand, it's obvious that Covid-19 pandemic has negative outcomes in terms of economy and psychology. One of the negative outcomes of pandemic is anxiety. In this study, the moderator role of Covid-19 anxiety on the relationship between internet addiction and online shopping addiction is examined. Although several studies are conducted during pandemic about the effects of pandemic this topic is not investigated. In this regard, this study is unique and suppose to add value to the related literature. The results of the analysis show that online shopping addiction consisted of three factors. Among those factors, the moderator role of Covid-19 anxiety was supported only for the negative effect factor. In other words, Covid-19 anxiety has moderating effect on the relationship between internet addiction and negative effect dimension of online shopping addiction. Finally, some suggestions were provided for the online shopping firms depending on the findings of the study.

Keywords: Online Shopping Addiction, Internet Addiction, Covid-19, Pandemic, Covid-19 Pandemic Anxiety

JEL Classification: M30, M31

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Öz

İnternet bağımlılığı çevrimiçi alışveriş bağımlılığının önemli nedenleri arasındadır. Covid-19 pandemisinde evlerinde daha fazla zaman geçirmek durumunda kalan bireyler daha fazla internet kullanmak ve işlerinin çoğunu çevrimiçi olarak yapmak zorunda kalmışlardır. Bu işlerden biri de alışveriştir. Öte yandan, Covid-19 pandemisinin insanlar üzerinde gerek ekonomik gerekse psikolojik olumsuz etkileri bilinmektedir. Bu etkilerden biri anksiyetedir. Bu çalışmada, internet bağımlılığının online alışveriş bağımlılığı üzerindeki etkisinde Covid-19 pandemisinin yarattığı anksiyetenin düzenleyici etkisi incelenmiştir. Pandemi zamanında pandeminin etkilerinin araştırıldığı çalışmaların oldukça fazla olmasına rağmen, bu konunun araştırılmamış olması çalışmanın özgün yönünü oluşturmaktadır. Çevrimiçi anket yöntemiyle 304 kişiden toplanan verilerin analizi sonucunda çevrimiçi alışveriş bağımlılığı üç faktör altında toplanmıştır. Analiz sonuçlarına göre Covid-19 pandemisinin yarattığı anksiyetenin, internet bağımlılığının çevrimiçi alışveriş bağımlılığı boyutlarından olumsuz etki üzerinde düzenleyici rolü olduğu sonucuna ulaşılmıştır. Çalışmanın son kısmında ise, çevrimiçi satış yapan işletmelere öneriler sunulmuştur.

Anahtar Kelimeler: Çevrimiçi Alışveriş Bağımlılığı, İnternet Bağımlılığı, Covid-19, Pandemi, Anksiyete, Covid-19 Pandemi Anksiyetesi

JEL Sınıflandırması: M30, M31

1. Introduction

The World is facing with many changes and improvements since its creation. These changes and improvements may show themselves in different extent such as; technology, culture, demography, climate, politics, economy etc. For instance, in terms of demography, the world's population is increasing year by year. As the results of migrations to different regions or countries, cultures are becoming similar or at least learning new things from each other. In terms of natural environment, the natural sources are decreasing and the environment is fighting against pollution caused by human beings.

The online environment offered by the internet has many disadvantages besides its advantages. It is certain that individuals may use the internet for various purposes such as financial activities, entertainment, shopping, academic search, communication, education, business, tracing the news, etc. There is no doubt that the internet made those activities easier to perform Besides its convenience advantage, the internet also eliminated the time and distance limits. It eliminated the boundaries between countries so that we can access the products, services, information produced in another country in the World and we can do this at any time we want whether it is so early in the morning or so late in the evening.

Besides those advantages, the internet may have some disadvantages for every human being. The negative effects of excess use of the internet may be seen in social, psychological, and even physical aspects. According to research conducted by Koc (2011) on students, it is found out that students who use the internet six hours a day generally have psychiatric symptoms such as obsessive-compulsive, somatization, anxiety, depression, interpersonal sensitivity, paranoid ideation, hostility, etc. Also, in their study, Christakis et al. (2011) revealed that heavy internet users are more likely to be depressed than non heavy internet users. In another study, the effects of heavy internet use on eating disorders were proved (Drtilova et al., 2021). On the other hand, it is expected that heavy internet users may

be more asocial than others due to the time that they spent on the internet. And also spending more time on the internet may cause some physical problems such as posture disorders, carpal tunnel syndrome, etc.

Despite its advantages, spending excess time on internet may create a dependency that is called “Internet Addiction” (Young, 1996). It is expected that the internet addiction affects the activities performed on internet positively. In other words, individuals who are considered as internet addicted would be more willing to do every activity on internet. Among those activities, online shopping may play an important role. Since the internet addiction requires to spent much time on internet, there will not be enough time for those individuals to make shopping from physical stores. This can create another problem or another addiction called as “online shopping addiction” that means uncontrollable action of making shopping online (Wang et al, 2020).

The relationship between the internet addiction and online shopping addiction is studied in many studies in literature before pandemic. But it is obvious that Covid-19 pandemic has changed many things in all our lives. During pandemic most of the people have started to spend more time at their homes and they have to use internet to do the ordinary tasks that they do offline before. This dramatic change in people’s lives also caused some psychological outcomes such as depression, anxiety.

Therefore, this study aimed to investigate the moderating role of anxiety caused by Covid-19 pandemic on the relationship between the internet addiction and online shopping addiction. Although pandemics created an opportunity for academicians to make research aimed to reveal the effects on pandemics on various marketing topics, no research has been conducted to see the relationship mentioned as the purpose of this paper. Although there are studies in the literature that aimed to investigate the relationship between the internet addiction and online shopping addiction, this study is unique due to the fact that it is conducted during pandemic which allows us to see the effects on pandemic and the outcomes of pandemic (such as anxiety) on this relationship. In other words, the paper may contribute to the literature by adding a different point of view resulted from Covid-19 pandemic.

Following this purpose, first of all a broad literature review was performed to define the main variables of the study which are the internet addiction, online shopping addiction and, Covid-19 anxiety. The hypotheses were formulated depending on the literature review conducted. Then in research methodology part, the details of the survey were explained and the findings were stated. At the end of the paper, the findings were discussed, and further research suggestions were offered.

2. Theoretical Framework

In this part, the internet addiction, online shopping addiction and, Covid-19 anxiety concepts were defined, the relationships between them were explained and the related hypotheses were formulated.

2.1. The Internet Addiction and Online Shopping Addiction

Addiction of anything can be defined as the use of something harmful (Ögel, 2012) where people want to give up using it but cannot achieve it. Addiction of any kind is traditionally associated with an uncontrollable urge, often accompanied by a loss of control, a preoccupation with use, and continued use despite the problems the behavior causes (Young, 2004).

The “Internet Addiction” concept was first used by Dr. Ivan Goldberg in 1995 (Dalal & Basu, 2016). The concept became popular with Young (1996)’s studies. In his study, the concept was used as the “Internet Addiction Disorder” and defined as “the compulsive overuse of the internet and the irritable or moody behavior when deprived of it” (Mitchell, 2000). Following the emergence of the concept, a dispute has begun among both the academicians and clinicians about the use of the word “addiction” to define excess and uncontrollable use of the internet (Young, 2004). Despite the supporters of the concept, “addiction” researchers such as Levy (1996) argued that since there are so many benefits of the internet, it is not logical to use the word “addiction” for heavy use of it.

Although the internet addiction does not cause the same type of outcomes as other addictions such as alcohol or drug cause, the ramifications on social interactions are similar. These include; cravings and withdrawal, social isolation, marital discord, academic failure, job termination, loss of control, excessive financial debt etc. (O’Reilly, 1996). Especially the psychological outcomes of the internet addiction may need attention. Several studies have focused on the effects of the internet addiction on individuals’ psychology. Some findings conclude that when the internet addiction increases, psychological symptoms such as depression and anxiety (Akin and Iskender, 2011; Bisen and Deshpande, 2020; Taş, 2018), obsessive-compulsive disorder, interpersonal sensitivity, and, paranoid ideation (Taş, 2018), impulsivity (Bisen and Deshpande, 2020) and introversion (Yan et al., 2014) also increase.

As can be seen from the stated examples, it is obvious that the internet addiction has some negative effects on social, physical and psychological aspects of human beings. Mostly due to the psychological outcomes of the internet addiction, it is important to pay enough attention to internet addiction and try to control the usage of it.

On the other hand, online shopping as stated by Young (1996) is one of the types of the internet addiction. In other words, it can be concluded that the internet addiction may cause excessive online shopping. In the literature, this excessive and uncontrollable online shopping behavior is considered as “online shopping addiction”. According to LaRose and Eastin (2002); online shopping addiction is a purchasing behavior that is out of one’s control due to the lack of self-monitoring.

Online shopping offers several benefits to users both before purchasing (information search) and at the time of the purchase (Rose and Dhandayudham, 2014). These benefits may be driven by rational aspects such as product or price comparisons, availability of discounted prices, ease of use, time elasticity, etc. (Günüç and Keskin, 2016). On the other hand, there may be also hedonic benefits as a result of hedonic motivations such as the pride and joy of shopping, smart shopper

self-perception, etc. Most of the users may start doing online shopping for the utilitarian benefits provided but through time hedonic benefits may become more attractive to obtain. In other words, driven by mostly hedonic motivations, online shopping may convert to an addiction. At the end, this uncontrollable addiction may cause users to spend higher amounts of money, time, and effort on online shopping (Tanoto and Evelyn, 2019).

There may be various drivers of online shopping addiction. According to Babin et al. (1994), these drivers may be categorized into two groups. In the first group, hedonic motivations, and in the second group need based utilitarian motivations exist. As stated earlier, utilitarian motivations may convert to hedonic motivations as the time passes and individuals get used to online shopping. Therefore, it would be logical to say that hedonic or psychological drivers of online shopping addiction are more dominant than utilitarian drivers. On the other hand, in the literature, there is evidence showing the relationship between the internet addiction and online shopping addiction (Seung-Hee and Won, 2005). Similarly, according to Kuss et al. (2013), the internet addiction may influence online shopping addiction in a positive way. Therefore, depending on the evidence from literature, we can state that people who are the internet addicted may spend more time on the internet than the others, so they would do all their tasks on internet including shopping. Considering the hedonic benefits provided by online shopping, these behaviors may convert to addictions throughout time. In other words, it can be concluded that the internet addiction may cause online shopping addiction.

2.2. Covid-19 Pandemic and Anxiety

In December 2019, the seventh human coronavirus, was discovered in Wuhan, in China and the Covid-19 virus disease was declared as pandemic by World Health Organization in February 2020 (Ciotti et al., 2020).

According to Georgieva (2020), Covid-19 pandemic is different than the other health crisis caused by pandemic before. Covid-19 pandemic is more complex, and has more negative outcomes on both individual and societal aspects due to the uncertainty in the treatment of the disease. The other reasons that make Covid-19 pandemic riskier than the previous pandemics are; the negative economic outcomes that it can create and its global context.

Unfortunately, the Covid-19 pandemic has many negative outcomes on human beings as the other pandemics encountered throughout the history. Among these, the most obvious ones are maybe the psychological ones. For instance, according to a study conducted on health personnel in China, the pandemic has increased the anxiety levels of the personnel (Pan et al., 2020). In another study conducted in China, the psychological outcomes of pandemic were investigated and it was found out that the participants described themselves as more stressful, anxious and depressed during pandemic (Wang et al., 2020).

Due to the uncertainty that the Covid-19 pandemic created, many people experienced the fear, depression and anxiety during this period. People who feel anxiety describe it as a feeling of fear without any reason. Since uncertainty increases during pandemic, they may feel worried nervous or

unease about something with an uncertain outcome. And these symptoms may also cause physical symptoms such as palpitation and trembling (Kuchenbuch, et al., 2020). Since pandemic caused lock downs and dramatic changes in people's lives, it is obvious to expect that people spend most of their times at their homes with the internet and by this way the possibility to feel those symptoms increase. When the time spent at home increases, individuals have to perform all the tasks at their homes using the internet. Therefore, it may create the internet addiction and online shopping addiction. Also, the anxiety caused by the uncertainty that pandemic creates may make people to find different ways to escape from this feeling such as spending more time on the internet. In other words, we assume that the effects of the internet addiction on online shopping addiction may increase under the feeling of anxiety caused by Covid-19 pandemic. Thus, the following hypothesis is formulated:

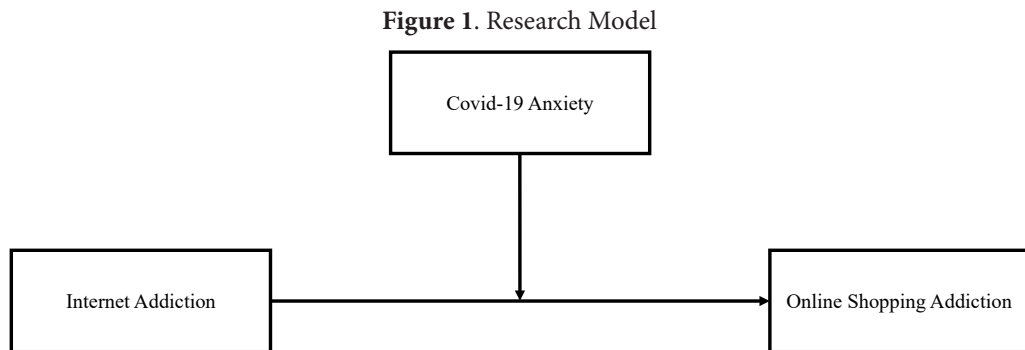
H₁: Covid-19 anxiety has a moderation role on the relationship between the internet addiction and online shopping addiction.

3. Methodology

In this part, the purpose of the study, data collection method, sampling procedure and the findings of the study will be discussed.

3.1. The Purpose of The Study and The Research Model

The purpose of this study is to explore the moderator role of Covid-19 anxiety on the effect of the internet addiction on online shopping addiction. In this context, depending on the data collected from literature, the following research model is formulated:



3.2. Data Collection Procedure

The data is collected via Google Forms with convenience sampling method during December, 2021. All the respondents participated in the survey are over the age of 18. The data is collected with a questionnaire containing closed-ended questions. Three different scales were used in the

questionnaire form. The internet addiction scale, adapted from Young's (1999) study, consists of 12 questions. The online shopping addiction scale, adapted from the study of Zhao et al. (2017), consists of 18 questions, and the Covid19 anxiety scale, adapted from the study of Ahorsu et al. (2020), consists of 10 questions. Questions were asked in a 5-point Likert form. A total of 304 people participated in the study and their demographic profiles are shown in Table 1.

Table 1: Demographic Variables

Gender	N	%	Marial status	N	%
Female	202	66.4	Married	109	35.9
Male	102	33.6	Single	195	64.1
Total	304	100.0	Total	304	100.0

Education	N	%	Age	N	%
Primary school	3	1.0	18-24	61	55.6
High school	90	29.6	25-31	108	35.5
Associate degree	30	9.9	32-38	70	23.0
Undergraduate	131	43.1	39-49	53	17.4
Graduate	50	16.4	50 and above	12	3.9
Total	304	100.0	Total	304	100.0

Occupation	N	%	Monthly Income (TL)	N	%
Unemployed	17	5.6	0-1.500 TL	48	15.8
Retired	2	0.7	1.501-2.500 TL	10	3.3
Housewife	13	4.3	2.501-3.500 TL	42	13.8
Public employee	76	25.0	3.501-4.500 TL	65	21.4
Student	48	15.8	4.501-5.500 TL	38	12.5
Private sector employee	118	38.8	5.501 TL and above	101	33.2
Freelancer	30	9.9	Total	304	100.0
Total	304	100.0			

3.3. Findings

First of all, exploratory factor analysis was conducted to reveal the dimensionality of the scales used in the study. Table 2 shows the results of the exploratory factor analysis and reliability analysis of the internet addiction scale. The scale consists of 11 items and these items are under one dimension. The scale is reliable (Cronbach's Alpha value>0.70) and its total explanatory power is 56.049%.

Table 2. The Internet Addiction Scale Exploratory Factor and Reliability Analysis Results

Factor	N of Items	Reliability Statistics (Cron. Alp.)	Total Variance Explained (%)
Internet Addiction	11	0.921	56.049
Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 0.931			
Bartlett's Test of Sphericity Significance 0.000			

Table 3 shows the results of the exploratory factor analysis and reliability analysis of the Covid-19 anxiety scale. The scale consists of 10 items. The scale is reliable (Cronbach's Alpha value>0.70) and its total explanatory power is 61.248%.

Table 3. Covid19 Anxiety Scale Exploratory Factor and Reliability Analysis Results

Factor	N of Items	Reliability Statistics (Cron. Alp.)	Total Variance Explained (%)
Covid19 Anxiety	10	0.929	61.248
Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 0.914			
Bartlett's Test of Sphericity Significance 0.000			

Table 4 shows the results of the exploratory factor analysis and reliability analysis of the online shopping addiction scale. The scale consisted of 18 items but due to the low factor loadings 3 items were eliminated. The remaining 15 items generated 3 factors. These factors are named as; mood modification (3 items), tolerance (3 items), and negative effect (including withdrawal, relapse and conflict – 9 items). As can be seen from Table4, all three factors are reliable (Cronbach's Alpha value>0.70) and the total explanatory power of the scale is 73.8%.

Table 4. Exploratory Factor and Reliability Analysis Results of Online Shopping Addiction Scale

Factor	Sub-factors	N of Items	Reliability St. (Cron. Alp.)	Variance Explained (%)
Online Shopping Addiction	Negative Effect	9	0.948	41.89
	Mood Modification	3	0.819	16.224
	Tolerance	3	0.822	15.686
Kaiser-Meyer-Olkin Measure of Sampling Adequacy:0.914				
Bartlett's Test of Sphericity Significance: 0.000				
Total Variance Explained: 73.8 %				

Table 5 figures out the explanatory statistics including min. and max. values, means and standard deviations of all the factors.

Table 5. Descriptive Statistics of Factors

Descriptive Statistics	N	Min.	Max.	Mean	Std. Dev.
Internet Addiction	304	1.00	5.00	2.337	0.829
Covid19 Anxiety	304	1.00	5.00	2.842	0.857
Negative Effect	304	1.00	5.00	2.005	0.854
Tolerance	304	1.00	5.00	2.611	0.911
Mood Modification	304	1.00	5.00	2.682	0.931

Bootstrapping regression analysis is used to test the moderator role of Covid-19 anxiety on the effect of the internet addiction on online shopping addiction. Many studies available in the literature show that the bootstrapping regression analysis is more reliable than Baron and Kenny's (1986) old method (Preacher et. al., 2007; Hayes, 2018; and Gürbüz, 2019). In the moderator effect analysis tested with Bootstrap technique, there should be no zero value in the 95% confidence interval (CI) for significance (MacKinnon et.al., 2004).

Process Macro developed by Hayes (2018) is used to test the moderator role. Each factor of online shopping addiction (negative effect, tolerance, and mood modification) is tested separately.

First, the moderator role of Covid-19 anxiety on the effect of the internet addiction on the negative effect was tested. Table 6 shows the results of the model. Accordingly, the significant value (p) in the model summary is less than 0.05. Thus, the model as a whole is significant. All predictive variables (internet addiction, Covid-19 anxiety and Int_1) explain approximately 45.5% (R^2 : 0.455) of the change in the outcome variable (negative effect).

The significance level of the interactive effect (Int_1) indicates whether Covid-19 anxiety has a moderator role. Accordingly, the p value of the Int_1 variable is less than 0.05 and the values of the confidence interval (CI) do not contain the value 0 (zero). In other words, Covid-19 anxiety has a moderator role on the effect of the internet addiction on the negative effect. Besides, the additional variance value (R^2 -chg) explained by the interactional effect (Int_1) is 2.5%.

Table 6. Model Summary and Coefficients Table

Model Nr. : 1

Y : Negative Effect

X : Internet Addiction

W : Covid19 Anxiety

Sample Size: 304

Model Summary	R	R^2	MSE	F	df1	df2	p
	0.674	0.455	0.402	83.086	3.000	298.000	0.000
Model	coeff	se	t	p	LLCI	ULCI	

constant	1.384	0.341	4.058	0.0001	0.7131	2.055
Internet Addiction	0.141	0.146	0.964	0.3358	-0.1475	0.430
Covid19 Anxiety	-0.316	0.114	-2.763	0.0061	-0.5411	-0.091
Int_1	0.175	0.047	3.689	0.0003	0.0817	0.268
Int_1 : Internet Addiction x Covid19 Anxiety						
Test(s) of highest order unconditional interaction(s):						
	R²-chg	F	df1	df2	p	
X*W	0.025	13.611	1.000	298.000	0.000	

Table 7 shows the results of the slope analysis to explain the moderator effect better. The three regression statistics in the table show whether the effects of the internet addiction on negative effect are significant when Covid-19 anxiety is low (2.000), medium (2.800) or high (3.800). In all three cases, the p value is less than 0.05 and the CI values do not include 0 (zero). The table shows that as the level of Covid-19 anxiety increases, the effect of the internet addiction on the negative effect also increases.

Table 7. Slope Analysis Results

Conditional effects of the focal predictor at values of the moderator:

Covid19 Anxiety	Effect	se	t	p	LLCI	ULCI
2.000	0.492	0.064	77.399	0.000	0.3668	0.6169
2.800	0.632	0.045	13.910	0.000	0.5425	0.7213
3.800	0.807	0.060	13.358	0.000	0.6881	0.9259

Focal predict: Internet Addiction (X)

Mod var: Covid19 Anxiety (W)

Figure 2 shows the moderator effect of Covid-19 anxiety graphically. The X axis shows the internet addiction and the Y axis shows the negative effect. The effects of low (-1), medium (0) and high (1) values of moderator variable (Covid19 anxiety), on the internet addiction and negative effects are shown with blue (low), red (medium) and green (high) colors. As can be seen from the graph, as Covid-19 anxiety increases, the effect of the internet addiction on the negative effect increases.

Figure 2. Graph of Moderator Effect of Covid-19 Anxiety

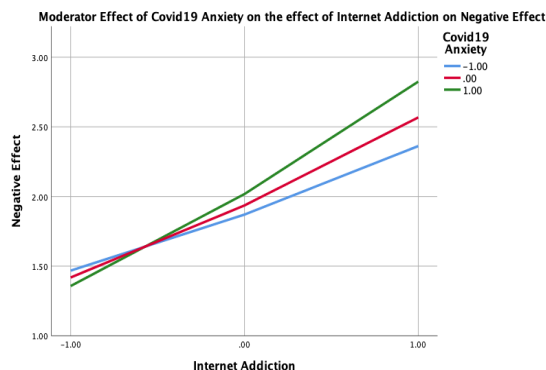


Table 8 shows the test results of the role of Covid-19 anxiety on the effect of the internet addiction on tolerance. Accordingly, the significant value (p) in the model summary is less than 0.05. Thus, the model as a whole is significant. All predictive variables (internet addiction, Covid-19 anxiety and Int_1) explain approximately 16.8% (R^2 : 0.168) of the change in the outcome variable (tolerance).

The significance level of the Int_1 indicates whether Covid-19 anxiety has a moderator role. Accordingly, the p value of the Int_1 variable is more than 0.05 and the value of the CI contains the value 0 (zero). Hence, Covid-19 anxiety has not a moderator role on the effect of the internet addiction on tolerance.

Table 8. Model Summary and Coefficients Table

Model Nr. : 1
Y : Tolerance
X : Internet Addiction
W : Covid19 Anxiety
Sample Size: 304

Model Summary

	R	R ²	MSE	F	df1	df2	p
	0.401	0.168	0.697	20.164	3.000	300.000	0.000
Model							
	coeff	se	t	p	LLCI	ULCI	
constant	1.569	0.449	3.490	0.000	0.684	2.453	
Internet Addiction	0.282	0.193	1.456	0.147	-0.990	0.663	
Covid19 Anxiety	0.037	0.156	0.245	0.806	-0.026	0.333	
Int_1	0.413	0.063	0.660	0.509	-0.082	0.164	
Int_1 : Internet Addiction x Covid19 Anxiety							
Test(s) of highest order unconditional interaction(s):							
	R²-chg	F	df1	df2	p		
X*W	0.001	0.4365	1.000	300.000	0.509		

Table 9 shows the test results of the role of Covid-19 anxiety on the effect of the internet addiction on mood modification. Accordingly, the significant value (p) in the model summary is less than 0.05. Thus, the model as a whole is significant. All predictive variables (internet addiction, Covid-19 anxiety and Int_1) explain approximately 16.9% (R^2 : 0.169) of the change in the outcome variable (mood modification).

The significance level of the Int_1 indicates whether Covid-19 anxiety has a moderator role. Accordingly, the p value of the Int_1 variable is more than 0.05 and the value of the CI contains the value 0 (zero). Thus, Covid-19 anxiety has not a moderator role on the effect of the internet addiction on mood modification.

Table 9. Model Summary and Coefficients Table

Model Nr. : 1
 Y : Mood Modification
 X : Internet Addiction
 W : Covid19 Anxiety
 Sample Size: 304

Model Summary

	R	R ²	MSE	F	df1	df2	p
	0.411	0.169	0.729	20.196	3.000	299.000	0.000
Model							
	coeff	se	t	p	LLCI	ULCI	
constant	1.287	0.460	2.796	0.005	0.381	2.192	
Internet Addiction	0.167	0.198	0.837	0.4034	-0.224	0.555	
Covid19 Anxiety	0.307	0.154	1.996	0.052	-0.004	0.610	
Int_1	0.012	0.064	0.209	0.759	-0.106	0.145	
Int_1 : Internet Addiction x Covid19 Anxiety							
Test(s) of highest order unconditional interaction(s):							
	R ² -chg	F	df1	df2	p		
X*W	0.000	0.095	1.000	299.000	0.758		

4. Conclusion and Discussion

The purpose of this study is to explore the moderator role of Covid-19 anxiety on the effect of the internet addiction on online shopping addiction. The results show that Covid-19 anxiety has a moderator role on the effect of the internet addiction only on negative effect, which is one of factors of online shopping addiction. Covid-19 anxiety does not have a moderator role for other two factors, which are tolerance and mood modification. Considering that the most powerful factor of online shopping addiction is negative effect (consisting of 9 items) it would be possible to say that Covid-19 anxiety has a partially moderator role on online shopping addiction.

As Covid-19 anxiety increases, the effect of the internet addiction on online shopping addiction also increases. Consumers who are locked down at their homes during Covid-19 pandemic started to spend more time on the internet and even became almost addicted. As a result, online shopping addictions have also increased, especially with the uncertainty that has arisen during the Covid-19 pandemic. It is hardly surprising that Covid-19 anxiety plays a moderator role in the negative dimension of online shopping addiction. Because, as a result of online shopping addiction triggered by anxiety, negative effects have occurred on consumers. Negative effects consisting of withdrawal, relapse and conflict have a broader meaning. In other words, the effect of the internet on the negative emotions and experiences occurred when online shopping is restricted increases when people feel anxiety caused by Covid-19 pandemic.

The findings of the study highlight the ethical aspect of online shopping. We all know that organizations want to sell more and more to their target markets. This results in an uncontrollable consumption pattern. Consumers may buy impulsively without thinking the outcomes of their purchases and face with economical problems at the end. Since the results of the study proves the moderator role of Covid-19 anxiety on the relationship between the internet addiction and online shopping addiction, it would be appropriate to state that people would be more the internet and online shopping addicted during pandemic. Maybe during this pandemic online companies may send socially responsible messages to their customers that would make them feel less anxiety and feel better. And also, aggressive selling efforts and promotions should be avoided for not to make people online shopping addicted.

Companies should prevent using campaigns that make people feel guilty and sad after shopping who are surrounded by Covid-19 anxiety. Also, they should not motivate people to buy and buy all the time which will create addiction. In this regard, social responsibility projects and activities would be playing a very important role.

For further research, the effects of other psychological variables such as escaping from reality, negative mood reduction or hedonism may be analyzed on these variables. Also, a comparison between generations may be done in further research to reveal whether there is a difference between the X, Y or Z generations.

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