YAŞAM BECERİLERİ PSİKOLOJİ DERGİSİ
LIFE SKILLS JOURNAL OF PSYCHOLOGY
www.dergipark.org.tr/ybpd E-ISSN: 2587-1536
Yıl(Year): 2022, Cilt(Volume): 6, Sayı(Issue): 12, ARALIK(DECEMBER)
Geliş Tarihi(Received): 02/09/2022 Kabul Tarihi(Accepted): 17/12/2022
Life Skills Journal of Psychology, 2022; 6(12), 127-142. / Yaşam Becerileri Psikoloji Dergisi, 2022; 6(12), 127-142.
DOI: 10.31461/ybpd.1170318
RESEARCH ARTICLE / ARAŞTIRMA MAKALESİ

IMPULSIVE BUYING TENDECY: THE ROLE OF COGNITIVE FACTORS, PERSONALITY TRAITS AND AFFECT

Hatice KAFADAR[1], Selin YILMAZ[2]

ABSTRACT

Impulsive buying is considered to be an emotional and unplanned decision-making behaviour. Because this type of purchasing rate has fairly increased in recent years, examining the determinants of impulsive buying is important to understand which intervention programs should be designed. In the current study, it was aimed to develop a model in which impulsive buying tendency is predicted by variables such as personality traits, affect and cognitive factors (problem solving skills and cognitive flexibility). Overall, 300 young adults (198 female and 102 male), took part in the study. The mean age of the participants for the current study was as 21.29 years (SD=2.95). Impulsive buying tendency, personality traits, affect, problem solving skills and cognitive flexibility variables were measured via Consumer Buying Impulsivity Scale (CBI), Behavioural Inhibition/Activation System Scales (BIS/BAS), Positive and Negative Affect Scale (PANAS), Problem Solving Inventory (PSI) and Cognitive Flexibility Scale (CFI), respectively. The results indicated that personality traits in the behavioral activation system (reward system) could be an important determinant of impulsive buying tendency when examined together with other variables. In sum, high reward responsiveness may result in impulsive buying. Furthermore, affective factors (both negative and positive affect) rather than cognitive factors may be a triggering factor for impulsive buying.

Key Words

Impulsive Buying, Problem Solving, Personality, Behavioural Activation, Behavioural Inhibition

DÜRTÜSEL SATIN ALMA EĞİLİMİ: BİLİŞSEL FAKTÖRLER, KİŞİLİK ÖZELLİKLERİ VE DUYGULANIMIN ROLÜ

ÖZ

Dürtüsel satın alma duygusal ve planlanmamış karar verme davranışı olarak kabul edilmektedir. Bu tür satın alma oranı son yıllarda oldukça arttığından, dürtüsel satın almanın belirleyicilerinin incelenmesi, hangi müdahale programlarının tasarlanması gerektiğini anlamak açısından önemlidir. Bu çalışma ile dürtüsel satın alma eğiliminin bireyin kişilik özellikleri, duygulanım ve bilişsel faktörleri (problem çözme becerileri ve bilişsel esneklik) gibi değişkenler tarafından yordandığı bir model geliştirmek amaçlanmıştır. Toplam 300 genç yetişkin (198 kadın ve 102 erkek) çalışmaya katılmıştır. Katılımcıların yaş ortalaması 21.29'dur (SS=2.95). Dürtüsel satın alma eğilimi, kişilik özellikleri, duygulanım, problem çözme becerileri ve bilişsel esneklik değişkenleri sırasıyla Dürtüsel Satın Alma Ölçeği, Davranışsal İnhibisyon/Aktivasyon Sistemi Ölçeği, Pozitif ve Negatif Duygulanım Ölçeği, Problem Çözme Envanteri ve Bilişsel Esneklik Ölçeği ile ölçülmüştür. Sonuçlar özellikle davranışsal aktivasyon sisteminde (ödül sistemi) yer alan kişilik özelliklerinin diğer değişkenlerle bir arada incelendiğinde dürtüsel satın alma eğiliminde önemli bir belirleyici olabileceğine işaret etmektedir. Özetle, yüksek ödül tepkisi dürtüsel satın almayla sonuçlanabilmektedir. Ayrıca, sonuçlar bilişsel faktörlerden ziyade duygusal faktörlerin (pozitif ve negatif duygulanım) dürtüsel satın alma için tetikleyici faktör olabileceğini göstermektedir.

Anahtar Kelimeler

Dürtüsel Satın Alma, Problem Çözme, Kişilik, Davranışsal Aktivasyon, Davranışsal İnhibisyon

[1]Assoc. Professor, Bolu Abant Izzet Baysal University, E-mail: haticekafadar@yahoo.com, ORCID: 0000-0002-0802-6550
[2]Asst. Professor, Adana Alparslan Türkeş Science and Technology University, E-mail: yilmaz-selin@outlook.com, ORCID: 0000-0001-9960-1321

Citation: Kafadar, H., Yilmaz, S. (2022). Impulsive buying tendecy: The role of cognitive factors, personality traits and affect. *Life Skills Journal of Psychology, 6*(12), 127-142.

Introduction

Impulsive buying is generally seen as being synonymous with unplanned buying (Stern, 1962). Therefore, both terms are used in the same sense throughout this article. According to Rook (1987), impulsive buying is characterized by strong and persistent impulses that are often emotionally rather than rationally driven, and can result in the buyers overlooking the potential negative consequences of their decisions.

Impulsive buying is considered to be relatively common worldwide. For instance, Hausman (2000) argues that about 90% of people buy goods impulsively. Ünal (2008) suggested that 70% to 80% of the consumers make impulse buying. Recently, Dawson and Kim (2010) showed that 50% of consumers buy products impulsively. Another study conducted by Wu et al. (2016) reported that 82% of the survey participants engaged in impulse purchasing. Despite these high rates, there is lack of models including which psychological mechanisms may be more crucial for this buying behavior. The present study aimed to make up deficiency in the literature in terms of understanding which process may be more important in impulsive buying, by presenting a model that deals with emotion, cognitive processes and personality traits together.

Particularly, on account of an increase in credit card misuse (Norvilitis et al., 2006) and internet shopping, financial problems are observed among university students (Jariah et al., 2004). Hence, these results led researchers to investigate various psychological factors affecting impulsive buying in this sample group in order to understand how these factors influence their impulsive buying behavior (Lai, 2010; Pirog and Roberts, 2007). Some researchers reported credit card misuse and financial problems related to impulsive buying tendency among university students (Jariah et al., 2004; Norvilitis et al., 2006). More researches are needed to understand the mechanisms underlying impulsive buying tendencies of university students. For this reason, the sample group of the current study consisted of only university students in order to understand different factors influencing the impulsive buying in these participants.

Impulsive buying involves a faster decision-making process than planned buying (Amiri et al., 2012), and an individual's inability to make rational decisions while purchasing a product or service has been observed to lead to this behaviour. According to Rook & Hoch (1985), there are five main factors that distinguish consumers who demonstrate impulsive or unplanned buying behaviour from those who engage in planned buying behaviour: (1) a sudden, unexpected desire to buy, (2) psychological imbalance (a temporarily failure of self-control or willpower), (3) psychological conflicts, (4) automatic decision-making with lack of cognitive assessments, and (5) failure to consider the possible consequences of buying. Moreover, it is assumed that the impulsive buying tendency consists of two dimensions: affective and cognitive (Youn &Faber, 2002). Accordingly, affect and cognition are thought to influence purchasing decisions, and affect corresponds to feelings, senses and moods, while cognition corresponds to interpreting information and thinking. Affective dimension involves positive buying emotions, irresistible urge to buy and mood management. Cognitive dimension includes unplanned to buying, disregard to future and cognitive deliberation. Rook & Fisher

(1995) suggested that making decisions based on impulsive buying raise probability of adverse outcomes, such as in areas of post-purchase satisfaction, personal finance, social reactions and overall self esteem. Thus, it seems important to understand the psychological factors underlying the poor decision-making mechanism in impulsive buyers.

Firstly, gender is a sociodemographic factor influencing an individual to engage in impulsive buying. In terms of gender, recent studies have emphasized the influence of the intrinsic factor of impulsive buying on behaviour as a tendency more often seen in females than in males (Akturan, 2009; Coley & Burgess, 2003; Pentecost & Andrews, 2010; Tifferet & Herstein, 2012). These studies generally suggested that females are more impulsive than males in terms of emotional dimension of impulsive buying. These studies generally explain the increased impulsive buying tendency in women to the fact that women are more likely than men to always buy a product they really like. In addition, women were more likely than men to report feeling excitement when making a purchase. In the parallel with these studies, Girişken (2015) suggested that women have positive attitudes towards buying and they make a purchase to relax and have thrill. On the contrary, it is stated that men have negative attitudes towards shopping and define shopping as an action necessary to meet their needs. Moreover, it was argued that women mostly shop for clothing, books and cosmetics, while men buy transportation services, food and technology products. Additionally, it was determined that men rarely prefer online shopping, while women shop more online (TC Ticaret Bakanlığı, 2018). On the other hand, some studies did not report a relationship between gender and impulsive buying (Foroughi et al., 2013; Rana & Tirthani, 2012). These contradictory results may be resolved by the present study. As a result, the following hypothesis is proposed:

H1: Gender differences are expected in terms of only the affective dimension of impulsive buying tendency.

Secondly, it is mentioned that impulsive buying has emotional and cognitive dimensions (Verplanken & Herabadi, 2001; Virvalaite, Saladiene & Bagdonaite, 2009; Youn & Faber, 2002). From the perspective of the emotional dimension, the effects of positive and negative moods on impulsive buying have been described in several studies. Mood and emotion regulation in particular were directly or indirectly associated with impulsive buying by Rook (1987) and Weinberg and Gottwald (1982). Individuals who had a higher expectation of positive emotions after shopping were observed to spend more by using credit cards (Wiener et al., 2007). According to the impulsive buying model of Beatty & Ferrell (1998), the positive mood state plays an incentive role for impulsive purchasers. Rook & Gardner (1993) claimed that people buy impulsively while in both the negative and positive moods; however, the positive mood is more commonly associated with impulsive buying. The role of buying behavior in creating positive emotions is particularly evident in impulsive buying. It is also thought that shopping can strongly motivate people to maintain a positive mood or repair a negative mood (Altuğ, 2022; Fenton-O'Creevy et al., 2018). Moreover, Thompson & Prendergast (2015) also suggested that positive and negative affect predict impulsive buying.

On the other hand, there is a lack of evidence on which cognitive brain function may be included in the cognitive dimension of the impulsive buying in the literature. Korniotis & Kumar (2011) emphasized that effective cognitive abilities are crucial in the quality for financial decisions**.** Shivapour et al. (2012) indicated that problem solving and mental flexibility might have a supporting role in financial decisions. Decision making studies based on the gambling tasks also revealed that impaired planning and problem solving skills as well as mental flexibility are associated with risky decision-making (Brand et al., 2005; Brand, et al., 2007; Buelow, 2015). These are frontal lobe functions and anterior frontal cortex seems to be important for financial decision (Koenigs & Tranel, 2007; Wischnewski et al., 2018). Therefore, we can deduce that frontal lobe functions such as problem solving and mental flexibility may also be related to impulsive buying decisions.

Lastly, individual personality traits may also be associated with impulsive buying behaviour. A study depend on the five-factor personality theory revealed that extraversion, conscientiousness and neuroticism personality traits predict impulsive buying (Thompson & Prendergast, 2015). Another study conducted by Badgaiyan and Verma (2014) found that impulsive buying was positively correlated with the personality trait of extraversion and negatively correlated with that of conscientiousness. Gray's biopsychological personality theory, known as the reinforcement sensitivity theory (RST), involving the prefrontal cortex, amygdala, septo hippocampal system and relevant structures, emphasized that punishment and reward systems are determinants of human behaviours such as anxiety, fear and impulsiveness (Pickering & Gray, 2001). According to Gray's theory, the behavioural activation system (BAS) motivates individuals to seek rewarding situations and/or avoid punishment, and the behavioural inhibition system (BIS) influences final decision-making via inhibition, attention, and arousal while in a state of anxiety (McNaughton & Corr, 2004). The BAS is associated with impulsivity and sensitivity to rewards. The mechanism of BAS is believed to involve the release of dopamine neurotransmitters from the mesolimbic dopaminergic pathways (Pickering & Gray, 2001). Gray's theory therefore suggests that an individual's lack of inhibition is mediated by high BAS activation and low BIS activation (Corr, 2004). Gray's biopsychological personality theory also suggests that the prefrontal cortex and dopamine projection to the mesolimbic pathway responsible for the reward system are important factors in impulsive behaviours (Pickering & Gray, 2001). One study found a correlation between high BAS activation and addictive behaviours, and noted in particular that the drug-addicted participants had more drive and fun-seeking traits than the study's control group (Franken et al., 2006). Low BIS activation and high BAS activation have also been associated with alcohol abuse and dysfunctional eating (Loxton & Dawe, 2001; Pardo et al., 2007). There were few studies investigating the relationship between impulsive buying tendency and Gray's personality theory in the literature. In that, Ramanathan & Menon (2006) used the BAS scale to demonstrate that impulsive buying tendency and reward seeking lead individuals to impulsive behaviours and high reward seeking score is associated with impulsive buying; however, Vohs & Faber (2007) found that low BIS score is associated with impulsive buying.

This study mainly aimed to develop an impulsive buying tendency model which included personality traits, affect and cognitive factors. The most important contribution of the present study to the literature is that it is the first study to examine mentioned these three important factors predicting impulsive buying tendency within the framework of a model. Thus, this model can enable us to find out the association between impulsive buying and other processes and which variables contribute more than other variables to the impulsive buying in university students. For this reason, the hypotheses below were tested in the current study:

H2: There is a significant model explaining the relationship between impulsive buying tendency, personality traits, affect and cognitive factors.

H3: Personality traits are a significant predictor of impulsive buying tendency.

H4: Affect is a significant predictor of impulsive buying tendency.

H5: Cognitive factors are a significant predictor of impulsive buying tendency.

Method

Participants

A total of 300 healthy university students (198 female and 102 male) took part in this study. It is stated that the minimum sample size for SEM-based research should be at least ten times the number of parameters (N>P*10) to be estimated (Meade & Lautenschlager, 2004). Therefore, the number of samples was considered to be relatively sufficient for the current research analysis. The mean age of the participants for the present study was as 21.29 years (SD = 2.95, age range = 18-30 years). The demographic variables of the participants are presented in Table 1.

Measures

Standard Information Form

This form includes knowledge about gender, age, and state of health (whether they have any illness neurologic or psychiatric disorders, they are on psychiatric medication) of the all participants. As the target population of the current study is healthy young adults, all participants who did not report neurological or disease history were included in the study.

Consumer Buying Impulsivity (CBI) Scale: The original Consumer Buying Impulsivity (CBI) scale was developed by Youn & Faber (2002) to measure impulsive buying tendency. The CBI was adapted into a Turkish version by Unal (2008) and Dursun & Yener (2014). The scale included two dimensions: affective and cognitive. The cognitive dimension consisted of the two subscales of cognitive deliberation and disregarding the future /impulsive buying, with Cronbach's alpha coefficients determined as .82 and .80. In the current study, these values were reported as .81 and .73 The internal consistent coefficient for the whole scale was .88. In the present study internal consistency coefficients were calculated as .90 for the overall scale. Factor analysis showed that all factors explained 62.56% of the total variance (Dursun & Yener, 2014).

Cognitive Flexibility Scale (CFS): This scale was developed by Martin & Rubin (1995) so as to evaluate an individual's ability to shift the thought process between multiple concepts. It was adapted into a Turkish version by Altunkol (2011). The scale is one dimensional and consists of 12 items. Internal consistency for the adapted Turkish CFS was found as .81. In the current study, this value was calculated as .78. The test-retest correlation was .73. The scale showed correlation with the Dysfunctional Attitudes Scale ($r=-.23$, $p<0.01$) and the Irrational Belief test ($r=.14$, $p<0.01$). Higher scores indicated greater cognitive flexibility, while lower scores indicated poor cognitive flexibility.

Problem Solving Inventory (PSI): The original version of this test was developed by Heppner & Petersen (1982) and adjusted to a Turkish version by Sahin et al. (1993). The scale consisted of 35 items scored on a 6-point Likert-type scale. Six factors were obtained from the Turkish reliability and validity study. The total Cronbach's alpha coefficient value for reliability study was .88. This score was found to be .90 in the present study.

Positive and Negative Affect Scale (PANAS): This test was developed by Watson et al. (1988) and adjusted into Turkish by Gencoz (2000). The scale contains of 20 items scored on 5-point Likert-type scale. The scale items are divided between 10 positive and 10 negative affective states. The Cronbach's alpha coefficients for positive affect ($r=.86$) and negative affect ($r=.83$) were high. In the current study, for both of them these internal reliability coefficients were found as .85 (Gencoz, 2000).

Behavioural Inhibition/Activation System Scales (BIS/BAS): Personality traits were measured using the 24-item Behavioural Inhibition System/Behavioural Activation System (BIS/BAS) scales. This scale was developed by Carver & White (1994) and the Turkish version of the scale was adapted by Sisman (2012). The scale consisted of behavioural activation and behavioural inhibition subscales. The total BAS scale included three subscales: drive, fun seeking, and reward responsiveness. Internal consistency coefficients were obtained for the behavioural inhibition, reward responsiveness, fun seeking, and drive subscales with scores of .69, .57, .63, and .69, respectively, and with test-retest reliability coefficients of .69, .59, .58, and .80, respectively (Sisman, 2012). In the current study the Cronbach's alpha coefficient values for behavioural inhibition, reward responsiveness, fun seeking, and drive were found as .74, .73, .63 and .70, respectively. According to the widely accepted approach regarding the interpretation of the internal consistency coefficient, a Cronbach's alpha of .70 and above is good and a value within .60 and .70 is acceptable (George & Mallery, 2003). Also, values within .60 and .80 indicated that the reliability of scale was at medium level (Ozdamar, 2002).

Procedure

Participants were selected from various departments of Bolu Abant Izzet Baysal University via a convenience sampling method. All information in this study obtained in accordance with Bolu Abant Izzet Baysal University Humanities and Social Sciences Research Ethics Committee (Protocol No: 2017/66, 08.03.2017). The current research was conducted between 2017-2019. Participants were not paid any money related to the study. Participants were approached in their classes

and they were given approximately 20 minutes to complete all aforementioned questionnaires. After being informed about the study, their consents were obtained and they voluntarily participated in the study. Participants completed printed questionnaires with randomized test questions. Initially 300 participants (18-30 years of age) completed these questionnaires and because there were no participant reporting any psychiatric or neurological illness and any psychiatric medication use, all of them were included in study. Finally, the data was analyzed using independent sample t-test and SEM. The SEM analysis was conducted via the AMOS 23.0 program. The findings were evaluated at .05 significant levels.

Results and Discussion

Table 1. Demographic characteristics of participants

Variable	n	%
Gender		
Female	198	66.0
Male	102	34.0
Payment method		
Credit card	98	32.7
Cash	202	67.3
Number of credit cards owned		
0	92	30.7
1	160	53.3
2	40	13.3
More than 2	8	2.7
Shopping frequency		
Every day	6	2.0
More than once a week	44	14.7
Every week	29	9.7
Beweekly	70	23.3
More than once a month	115	38.3
Every few months or rarer	36	12.0
Shopping environment		
Online	40	13.3
Conventional (physical store)	260	86.7
	M	**SD**
Age	21.3	2.95
Monthly spending (₺)	367.18	420.72
Monthly credit card spending(₺)	211.01	418.56

Initially, the differences between the men's and women's impulsive buying tendencies were investigated. As seen in Table 2, the independent samples t-test analysis indicates that the women reported a significantly greater impulsive buying tendency than men in the affective dimension, based on data from the following subscales: irresistible urge to buy, emotional conflict, positive buying emotions, and mood management. On the other hand, the men and women scored equally in the cognitive dimension of impulsive buying. Thus, the findings supported the first hypothesis. These results are consistent with those found in studies conducted by Akturan (2009) and Chavosh et al. (2011). These results suggested that women are more susceptible than men to make emotional buying decisions. This result can be associated with the differentiation of the reasons for shopping between genders. This may be due to the fact that women see shopping as a symbol in meeting their emotional needs compared to men. Based on these

results, the gender factor should not be ignored in studies investigating impulsive buying.

Table 2. Mean scores and Independent Samples t-test results regarding gender differences and impulsive buying tendency

	Gender						
	Males (N=102)		Females (N=198)		t	p	Cohen's d
	M	SD	M	SD			
Affective dimension							
Irresistible urge to buy	17.82	6.08	19.81	6.38	2.60	0.010**	0.02
Emotional conflict	12.38	4.94	13.74	4.94	2.33	0.020*	0.02
Positive buying emotions	10.05	3.80	11.10	4.02	2.17	0.030*	0.02
Mood management	11.60	4.75	14.49	5.18	4.70	0.000***	0.07
Cognitive dimension							
Cognitive deliberation	15.45	3.14	14.83	2.93	-1.69	0.090	0.00
Disregarding the future and impulsive buying	4.90	2.27	5.20	2.32	1.05	0.290	0.00

*p<0.05, **p≤0.01, ***p<0.001.

Structural Equation Model

In the present study, a set of fit indices were used based on the literature. Accordingly, when testing whether the hypothetical model has been verified, these indices are considered: RMSEA<10, (Browne & Cudeck, 1993); CFI ≥.90 (Hu & Bentler, 1999); $x^2/df<5$ (Kline, 2005). Some studies suggested that since some index values including GFI, AGFI and NFI are sensitive to the parameter values and sample size in the model, they have produced biased values (Brown, 2006; Hu & Bentler, 1999; Kline, 2005). So, these values do not need to be used.

Firstly, the measurement models with eighteen observed variables and four latent variables were tested, before describing a proposed structural model. The first measurement model was evaluated using the maximum likelihood method, which did not produced a reasonable fit to the data and behavioural inhibition seemed to be a nonsignificant indicator of personality traits latent variable [$x^2(44, N=300)=397.56$, $p<0.001$; $x^2/df=3.130$; RMSEA=0.08; CFI=0.86]. Therefore, the second measurement model was tested by removing this observed variable and all loadings were statistically significant (Figure 1). The factor loadings of the final model ranged from .38 to .88 ($p<0.001$). Thus, this final measurement model indicated that the latent variables were estimated successfully from the observed variables [$x^2(42, N=300)=278.16$, $p<0.001$; $x^2/df=2.506$; RMSEA=0.07; CFI=0.90].

The reliability and convergent validity were assessed by calculating the composite reliability (CR) and Average Variance Extracted (AVE) (Fornell & Larckner, 1981). The studies recommended that CR should exceed 0.70 and AVE for each construct

should exceed 0.50 (Bagozzi & Yi, 1988; Fornell & Larckner, 1981). In the current study AVE values for impulsive buying tendency, personality traits, affect and cognitive factors latent variables were computed as 0.40, 0.42, 0.37 and 0.55, respectively. In addition, CR values for impulsive buying tendency, personality traits, affect and cognitive factors latent variables were calculated as 0.87, 0.76, 0.71 and 0.81, respectively. According to these results, cognitive factors latent variable has acceptable AVE value. However, the low AVE values for impulsive buying tendency, personality traits and affect are acceptable due to condition that if AVE value is less than 0.5, but composite reliability is higher than 0.6, the convergent validity of the construct is acceptable (Fornell & David, 1981). In sum, measurement model in this research relatively shows good reliability and convergent validity.

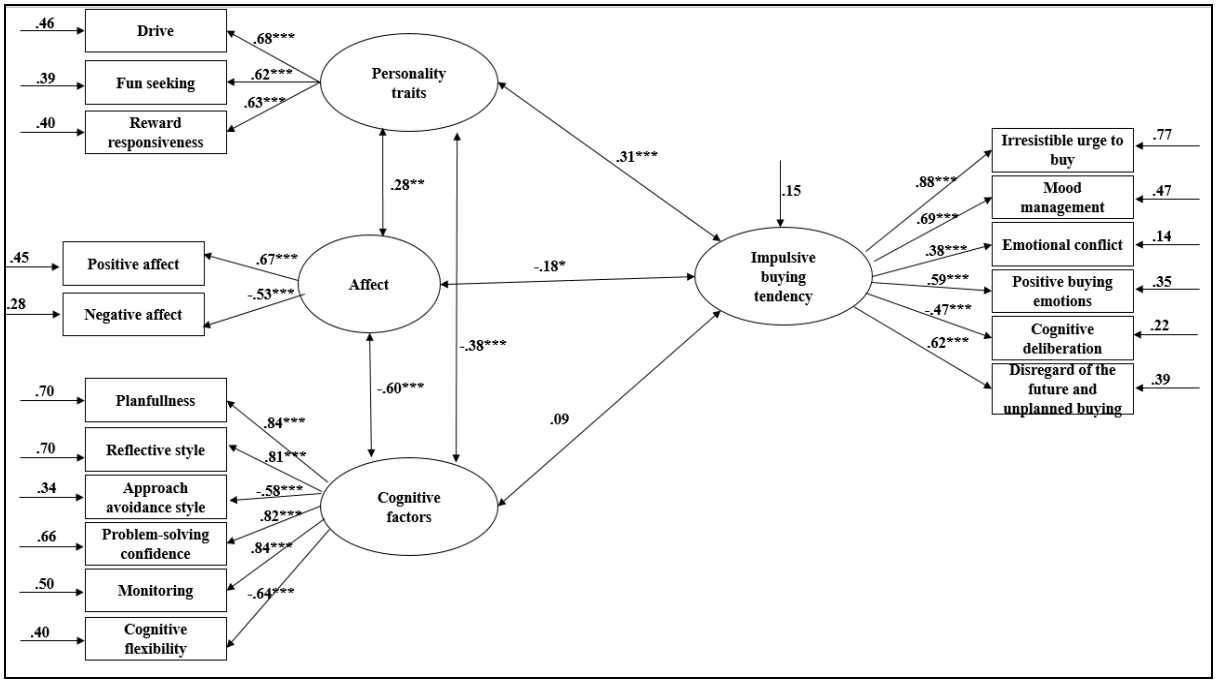

Figure 1. The measurement model for Impulsive buying tendency.

(*p≤0.05, **p<0.01, ***p<0.001)

The present study's structural equation model was presented in figure 2. Structural coefficients regarding the three latent independent variables predicted the latent dependent variables as follows: personality traits=0.42, affect=-0.23, cognitive factors=0.11. According to these results, personality traits (ß=0.40, p<0.001) and affect (ß=-0.23, p≤0.05) directly and significantly predicted impulsive buying tendency; however, the impacts of cognitive factors (ß=0.11, p>0.05) on impulsive buying tendency were not significant. Gender was not used as a multi-group moderator because it did not create a difference in the model. Thus, the results relatively revealed the compatibility of data to the sample: [$x^2$43, N=300)=255.75, p<0.001; x^2/df=2.325; RMSEA=0.067; CFI=0.92;]. The second hypothesis was also supported.

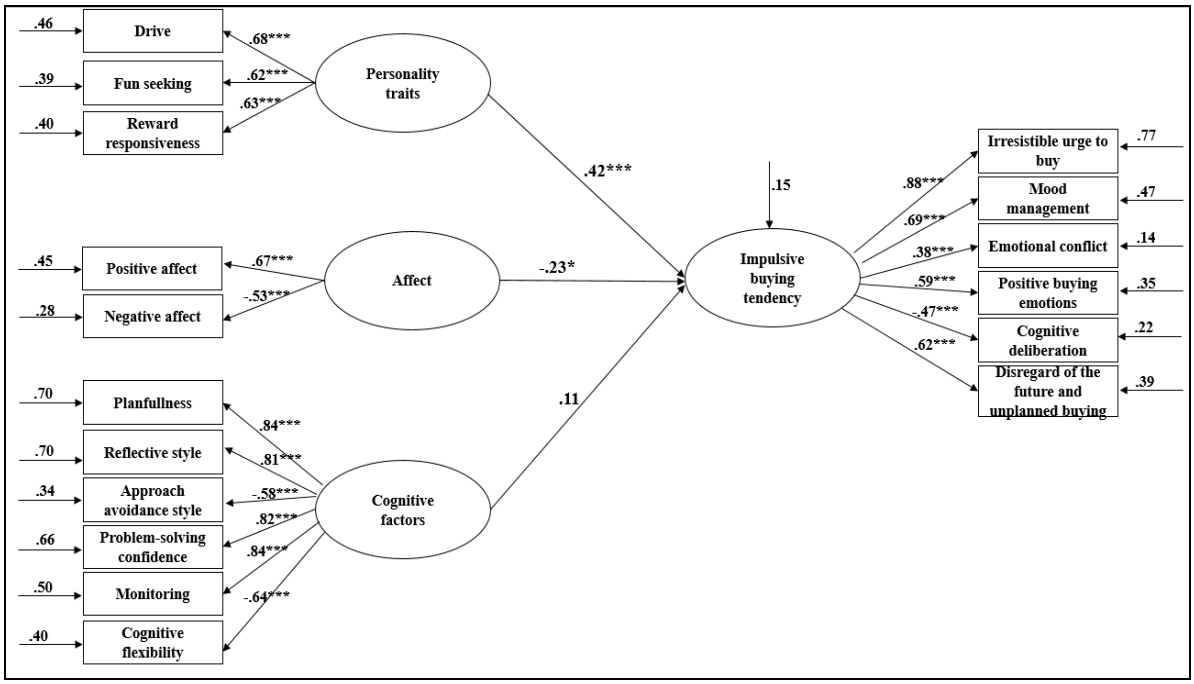

Figure 2. The Impulsive buying tendency model. (*p≤0.05, ***p<0.001)

In parallel with the third hypothesis, personality traits significantly predict impulsive buying. The model indicates several personality traits that contribute more than other variables to the impulsive buying tendency, including drive, reward responsiveness, fun seeking, and behavioural inhibition. Particularly, the current research findings on the link between BAS scale and impulsive buying tendency are consistent with prior research conducted by Ramanathan and Menon (2006). Consequently, the present study supports these previous studies by reinforcing the importance of personality traits on impulsive buying.

The model presented by the study shows that the reward and punishment system together with an individual's emotions closely relate to the impulsive buying tendency. According to Knutson et al. (2007), expectations while making a purchase activate the nucleus accumbens, while high product prices deactivate the mesial prefrontal cortex. Thus, the activation of the nucleus accumbens and mesial prefrontal while purchasing indicates a relationship between the reward and punishment system and the impulsive buying tendency. In summary, high reward responsiveness may result in impulsive buying.

Within the scope of the fourth hypothesis, the contribution of affect on impulsive buying was analyzed and the hypothesis was accepted. Thus, the present study indicated that affect is an important component of impulsive buying. This finding is consistent with previous studies dealing with buying behaviour (Silvera et al. 2008; Youn & Faber, 2002). The brain study conducted by Hubert et al. (2013) supports findings that VmPFC, considered an important region for emotions, is also related to impulse buying. As a result, both negative and positive affect may be a triggering factor for impulsive buying.

Finally, in the context of the fifth hypothesis, the contribution of the cognitive factors on impulsive buying was examined and it was seen that it does not

significantly predict impulsive buying and so the hypothesis was rejected. This result referred that problem solving and cognitive flexibility cognitive processes are not sufficient to explain impulsive buying. Hence, future studies in which other cognitive processes such as intelligence, and executive functions are also investigated may contribute to literature. According to literature, even though individuals making impulsive buying use their cognitive skills at a certain level, emotional processes can overcome their cognitive processes at certain points in the decision-making process. That is, cognitive skills are seen as part of impulsive buying, but emotional factors have been suggested to play a much larger role (Rook & Fisher, 1995; Weinberg & Gottwald, 1982). Similarly, the current research reveals that mood has a stronger effect on predicting impulsive buying than cognitive skills such as cognitive flexibility and problem solving. Eventually, the current study important to understand the mechanisms underlying impulsive buying, because it may lead to compulsive buying indirectly which is an impulse disorder (Darrat et al., 2016). Eventually, the current study important to understand the mechanisms underlying impulsive buying that may lead to compulsive buying indirectly which is an impulse disorder (Darrat et al., 2016).

Conclusion

The purpose of the current study was to examine the link between impulsive buying tendency and the psychological process, such as, personality traits, affect and cognitive factors, and to clarify the relations with one another by means of SEM. The most important originality of the current study is that it is the first study to scrutinize these variables together within the framework of a model. This modeling technique enabled us to comprehend the association between impulsive buying and other processes, and which process predict more than other processes to the impulsive buying behaviour in young adults. For this reason, this research aimed to contribute to the impulsive buying field by determining its potential risk factors in college students. The potentiation of student's ability to cope with and regulate the negative emotions, would contribute to decreasing the risk of young adults becoming impulsive buyers. Therefore, it is recommended that prevention and intervention guidelines be comprised concentrated on alleviating the symptoms of psychological distress. Especially, because having some personality traits can create a risk factor for impulsive buying, these guidelines should not neglect to focus on these groups. In addition all these, it is also suggested that financial management courses should be organized at universities.

Limitations

The current study has some limitations. Particularly, this study was conducted with university students, which limits the generalizability of the results. This study should be supported by studies conducted on various age and educational level groups. Finally, a limited number of variables were examined in the present study. Future studies with different variables especially in healthy individuals, will contribute to the body of literature.

References

Akturan, U. (2009). Identifying gender differences in relation with impulsive buying tendencies: A pilot research concerning university students. *Istanbul University Institute of Business Administration-Management Journal*, 64, 62-77.

Altuğ, O. (2022). Online alişverişte kıtlık pazarlamasi ile dürtüsel satın alma arasındaki ilişki ve alışverişten keyif almanın aracılık rolü. *Erciyes Akademi, 36*(2), 723-738.

Altunkol, F. (2011). *The analysis of the relation between cognitive flexibility and perceived stress levels of college students* (Unpublished Master's Thesis). Adana: Çukurova University.

Amiri, F., Jasour, J., Shirpour, M., & Alizadeh, T. (2012). Evaluation of effective fashionism involvement factors effects on impulse buying of customers and condition of interrelation between these factors. *Journal of Basic and Applied Scientific Research, 2*(9), 9413-9419.

Badgaiyan, A.J., & Verma, A. (2014). Intrinsic factors affecting impulsive buying behaviour-Evidence from India. *Journal of Retailing and Consumer Services, 21*(4), 537-549.

Beatty, S. E., & Ferrell, M. E. (1998). Impulse buying: Modeling its precursors. *Journal of Retailing, 74*(2), 169-191.

Brand, M., Fujiwara, E., Borsutzky, S., Kalbe, E., Kessler, J., & Markowitsch, H.J. (2005). Decision-making deficits of korsakoff patients in a new gambling task with explicit rules: Associations with executive functions. *Neuropsychology, 19*(3), 267-277.

Brand, M., Recknor, E. C., Grabenhorst, F., & Bechara, A. (2007). Decisions under ambiguity and decisions under risk: correlations with executive functions and comparisons of two different gambling tasks with implicit and explicit rules. *Journal of Clinical and Experimental Neuropsychology, 29*(1), 86-99.

Browne, M.W., & Cudeck, R. (1993). Alternative ways of assessing model fit. *SAGE Focus Editions*, 154, 136-136.

Buelow, M. T. (2015). Predicting performance on the Columbia Card Task: Effects of personality characteristics, mood, and executive functions. *Assessment, 22*(2), 178-187.

Carver, C.S., & White, T.L. (1994). Behavioural inhibition, behavioural activation, and affective responses to impending reward and punishment: the BIS/BAS scales. *Journal of Personality and Social Psychology, 67*(2), 319-333.

Chavosh, A., Halimi, A.B., Namdar, J., Choshalyc, S.H., & Abbaspour, B. (2011). *The contribution of product and consumer characteristics to consumer's impulse purchasing behaviour in Singapore*. In: Proceedings of 2011 International Conference on Social Science and Humanity, 1, 248-252.

Coley, A., & Burgess, B. (2003). Gender differences in cognitive and affective impulse buying. *Journal of Fashion Marketing and Management: An International Journal, 7*(3), 282-295.

Corr, P.J. (2004). Reinforcement sensitivity theory and personality. *Neuroscience & Biobehavioural Reviews, 28*(3), 317-332.

Darrat, A.A., Darrat, M.A., & Amyx, D. (2016). How impulse buying influences compulsive buying: The central role of consumer anxiety and escapism. *Journal of Retailing and Consumer Services*, 31, 103-108.

Dawson, S. & Kim, M. (2010). Cues on apparel web sites that trigger impulse purchases. *Journal of Fashion Marketing and Management, 14*(2), 230-246.

Dursun, T., & Yener, D. (2014). An attempt towards the adaptation of impulse buying scales for Turkish consumer in apparel industry. *Electronic Journal of Vocational Colleges, 4*(1), 22-31.

Fenton-O'Creevy, M., Dibb, S., & Furnham, A. (2018). Antecedents and consequences of chronic impulsive buying: Can impulsive buying be understood as dysfunctional self-regulation?. *Psychology & Marketing, 35*(3), 175-188.

Fornell, C. & Lacker D.F. (1981). Evaluating structural equations with unobservable variables and measurement error. *Journal of marketing Research, 18*(1), 39-50.

Foroughi, A., Buang, N.A., Senik, Z.C., & Hajmisadeghi, R.S. (2013). Impulse buying behavior and moderating role of gender among Iranian shoppers. *Journal of Basic and Applied Scientific Research, 3*(4), 760-769.

Franken, I.H., Muris, P., & Georgieva, I. (2006). Gray's model of personality and addiction. *Addictive Behaviours, 31*(3), 399-403.

Gencoz, T. (2000). Positive and Negative Affect Schedule: A study of validity and reliability. *Turkish Journal of Psychology, 15*(46), 19-28.

George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference*. 11.0 update (4th ed.). Boston: Allyn & Bacon.

Girişken, Y. (2015). Kadın ve erkeklerin alışveriş deneyimi sırasındaki tutum ve davranışlarına ilişkin keşfedici bir araştırma. *İstanbul Üniversitesi Siyasal Bilgiler Fakültesi Dergisi*, 53, 123-136.

Hausman, A. (2000). A multi-method investigation of consumer motivations in impulse buying behavior. *Journal of Consumer Marketing, 17*(5), 403-426.

Heppner, P.P., & Petersen, C.H. (1982). The development and implications of a personal problem-solving inventory. *Journal of Counseling Psychology, 29*(1), 66-75.

Hu, L.T., & Bentler, P.M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3, 424-453.

Hubert, M., Hubert, M., Florack, A., Linzmajer, M., & Kenning, P. (2013). Neural correlates of impulsive buying tendencies during perception of product packaging. *Psychology & Marketing, 30*(10), 861-873.

Jariah, M., Husniyah, A.R., Laily, P., & Britt, S. (2004). Financial behavior and problems among university students: Need for financial education. Journal of *Personal Finance, 3*(1), 82-96.

Kline, R.B. (2005). *Principles and practice of structural equation modeling*. New York: Guilford Press.

Knutson, B., Rick, S., Wimmer, G.E., Prelec, D., & Loewenstein, G. (2007). Neural predictors of purchases. *Neuron, 53*(1), 147-156.

Koenigs, M., & Tranel, D. (2007). Irrational economic decision-making after ventromedial prefrontal damage: evidence from the Ultimatum Game. *Journal of Neuroscience, 27*(4), 951-956.

Korniotis, G.M., and Kumar, A. (2011). Do older investors make better investment decisions?. *The Review of Economics and Statistics, 93*(1), 244-265.

Lai, C.W. (2010). How financial attitudes and practices influence the impulsive buying behavior of college and university students. *Social Behavior and Personality: An International Journal, 38*(3), 373-380.

Loxton, N.J., & Dawe, S. (2001). Alcohol abuse and dysfunctional eating in adolescent girls: The influence of individual differences in sensitivity to reward and punishment. *International Journal of Eating Disorders, 29*(4), 455-462.

Martin, M.M. & Rubin, R.B. (1995). A new measure of cognitive flexibility. *Psychological Reports*, 76, 623-626.

Meade, A. W., & Lautenschlager, G. J. (2004). A comparison of item response theory and confirmatory factor analytic methodologies for establishing measurement equivalence/invariance. *Organizational Research Methods, 7*(4), 361-388.

McNaughton, N., & Corr, P.J. (2004). A two-dimensional neuropsychology of defense: Fear/anxiety and defensive distance. *Neuroscience & Biobehavioural Reviews, 28*(3), 285-305.

Norvilitis, J.M., Merwin, M.M., Osberg, T.M., Roehling, P.V., Young, P., & Kamas, M.M. (2006). Personality factors, money attitudes, financial knowledge, and credit-card debt in college students 1. *Journal of Applied Social Psychology, 36*(6), 1395-1413.

Özdamar, K. (2002). *Paket programlarla istatistiksel veri analizi-1*. 4. Baskı. Eskisehir: Kaan Kitabevi.

Pardo, Y., Aguilar, R., Molinuevo, B., & Torrubia, R. (2007). Alcohol use as a behavioural sign of disinhibition: Evidence from JA Gray's model of personality. *Addictive Behaviours, 32*(10), 2398-2403.

Pentecost, R., & Andrews, L. (2010). Fashion retailing and the bottom line: The effects of generational cohorts, gender, fashion fanship, attitudes and impulse buying on fashion expenditure. *Journal of Retailing and Consumer Services, 17*(1), 43-52.

Pickering, A., & Gray, J.A. (2001). Dopamine, appetitive reinforcement, and the neuropsychology of human learning: An individual differences approach. *Advances in Individual Differences Research*, 113-149.

Pirog, S.F., & Roberts, J.A. (2007). Personality and credit card misuse among college students: The mediating role of impulsiveness. *Journal of Marketing Theory and Practice, 15*(1), 65-77.

Ramanathan, S., & Menon, G. (2006). Time-varying effects of chronic hedonic goals on impulsive behaviour. *Journal of Marketing Research, 43*(4), 628-641.

Rana, S., & Tirthani, J. (2012). Effect of education, income and gender on impulsive buying among Indian consumer an empirical study of readymade garment customers. *Management, 1*(12), 145-146.

Rook, D.W. (1987). The buying impulse. *Journal of Consumer Research, 14*(2), 189-199.

Rook, D.W., & Fisher, R.J. (1995). Normative influences on impulsive buying behaviour. *Journal of Consumer Research, 22*(3), 305-313.

Rook, D.W., & Gardner, M.P. (1993). In the mood: Impulse buying's affective antecedents. *Research in Consumer Behaviour, 6*(7), 1-28.

Rook, D.W., & Hoch, S.J. (1985). Consuming impulses. *Advances in Consumer Research,* 12, 23-27.

Sahin, N., Sahin, N. H., & Heppner, P. P. (1993). Psychometric properties of the problem solving inventory in a group of Turkish university students. *Cognitive Therapy and Research, 17*(4), 379-396.

Shivapour, S.K., Nguyen, C.M., Cole, C.A., & Denburg, N.L. (2012). Effects of age, sex, and neuropsychological performance on financial decision-making. *Frontiers in Neuroscience*, 6, 82.

Silvera, D.H., Lavack, A.M., & Kropp, F. (2008). Impulse buying: the role of affect, social influence, and subjective wellbeing. *Journal of Consumer Marketing, 25*(1), 23-33.

Sisman, S. (2012). Turkish adaptation of behavioural inhibition system/ behavioural activation system scales (BIS/BAS Scales): Validity and reliability studies. *Studies in Psychology, 2*(2), 1-22.

Stern, H. (1962). The significance of impulse buying today. *Journal of Marketing, 26*(2), 59-62.

Unal, S. (2008). *İçgüdüsel alışveriş*. Ankara: Detay Yayıncılık.

T.C. Ticaret Bakanlığı. (2018). *Tüketici profili ve bilinç düzeyi araştırma raporu.* ticaret.gov.tr/data/5cca9f5c13b8760c08096092/17-12-2018%20tuketici%20baski.pdf adrsinden edinilmiştir.

Thompson, E.R., & Prendergast, G.P. (2015). The influence of trait affect and the five-factor personality model on impulse buying. *Personality and Individual Differences*, 76, 216-221.

Tifferet, S., & Herstein, R. (2012). Gender differences in brand commitment, impulse buying, and hedonic consumption. *Journal of Product & Brand Management, 21*(3), 176-182.

Verplanken, B., & Herabadi, A. (2001). Individual differences in impulse buying tendency: Feeling and no thinking. *European Journal of Personality, 15*(1_suppl), 71-83.

Virvalaite, R., Saladiene, V., & Bagdonaite, R. (2009). Peculiarities of impulsive purchasing in the market of consumer goods. *Engineering Economics, 62*(2), 101-109.

Vohs, K.D., & Faber, R.J. (2007). Spent resources: Self-regulatory resource availability affects impulse buying. *Journal of Consumer Research, 33*(4), 537-547.

Watson, D., Clark, A.L., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology,* 54, 1063-1070.

Weinberg, P., & Gottwald, W. (1982). Impulsive consumer buying as a result of emotions. *Journal of Business Research, 10*(1), 43-57.

Wiener, R.L., Holtje, M., Winter, R.J., Cantone, J.A., Gross, K., & Block-Lieb, S. (2007). Consumer credit card use: The roles of creditor disclosure and anticipated emotion. *Journal of Experimental Psychology: Applied, 13*(1), 32-46.

Wischnewski, M., Bekkering, H., & Schutter, D.J. (2018). Frontal cortex electrophysiology in reward-and punishment-related feedback processing during advice-guided decision making: An interleaved EEG-DC stimulation study. *Cognitive, Affective, & Behavioural Neuroscience, 18*(2), 249-262.

Wu, L., Chen, K.W. & Chiu, M.L. (2016). Defining key drivers of online impulse purchasing: A perspective of both impulse shoppers and system users. *International Journal of Information Management, 36*(3), 284-296.

Youn, S., & Faber, R.J. (2002). The dimensional structure of consumer buying impulsivity: measurement and validation. *Advances in Consumer Research*, 29, 280.