

## The Relationship between Sensation Seeking and Compulsive Buying

Author Details: Ertuğrul Gödelek

Mersin University, Science and Literature Faculty, Mersin, Turkey

### Abstract

*this study aims at investigating the relationship between high-level sensation seeking and compulsive buying. The main hypothesis of this study is that “individuals who exhibit high-level sensation-seeking behavior also exhibit compulsive buying behavior.” Of course, the opposite of this would be a valid argument. Put it differently, “consumers who exhibit compulsive buying behavior also are high-level sensation seeking individuals.” To test this hypothesis, the Sensation Scale (Zuckerman, 1972; Zuckerman, 1971; Zuckerman, 1964) was administered to voluntary participants at first. Later, the “Buying Impulsiveness Scale” developed by Rook et al. (1995) was administered to measure compulsive buying behavior (Gödelek et al., 2018). 250 (151 women and 99 men) voluntary individuals participated in the study. The correlation analysis, multiple regression analysis, and path analysis techniques were used in the analysis of the data. It is found that the findings of the study confirmed the hypothesis.*

**Keywords:** sensation seeking, compulsive buying, purchase

### 1. Introduction

It can be argued that sensation seeking originates from the need for exhibiting new, strange and complex emotions and experiences. In addition, sensation seekers are willing to take physical and social risks in certain experiences (Blackburn, 1969; Brevers et al., 2017; Lambert et al., 1972; Miller et al., 2018; Swami et al., 2012; Thorne, 1971; Voss et al., 2018; Zuckerman et al., 1979; Zuckerman, 1979; Zuckerman, 1964). Compulsive buying can be defined as an individual’s unintentional, sudden, mostly strong and insistent desire to buy and wish to purchase anything immediately. This behavior involves the tendency to “act unintentionally and impulsively” (Bratko et al., 2013; Conner et al., 2007; Fossati et al., 2016; Lam et al., 2018; Verplanken et al., 2005; Verplanken et al., 2011.)

Pathological gambling, sex addiction and compulsive buying cause problems in individuals’ lives. It has been argued that impulse control might be effective in the control of these behaviors (Miller, 2010). Thus, Impulse Control Disorder Protocol (ICDP) therapy can be effective in the control of the aforementioned compulsive behavior (Cox, et al. 2007; Dittmar, 2004; Hase et al., 2008; Scherrer et al., 2007)

The aim of this study is to investigate the relationship between high-level sensation seeking and compulsive buying. According to the hypothesis of the study, individuals exhibiting high-level sensation seeking also exhibit a compulsive buying behavior. To confirm this hypothesis, the participants were first given the sensation seeking scale - Form 5, (Zuckerman et al.; 1964; Zuckerman et al.; 1968; Zuckerman, 1972). The buying behaviors of the individuals who obtained high scores in Zuckerman’s scale were measured using the “Buying Impulsiveness Scale,” and the results were compared with other groups. As expected, a positive correlation was found between these two behaviors.

The significance of this study is that there is not any similar study in the literature. The research can be considered a pioneer for further studies on this topic. In addition, it is emphasized, with this study, that sensation seeking is not only influential on physical activities but also on lifestyles. The relation of sensation seeking other social life activities can be investigated in further studies.

#### 1.1. Sensation Seeking

Sensation seeking originates from the need for exhibiting new, strange and complex emotions and experiences. Sensation seekers are willing to take physical and social risks in certain activities (Zuckerman et al.; 1964; Zuckerman et al.; 1972; Zuckerman et al., 1978; Ridgeway et al., 1980). Sensation seeking can be characterized by illegal or risky behaviors such as substance abuse, sexual risk taking, reckless driving, smoking,

and alcohol abuse.

Individuals who get high scores in the sensation seeking scale are the adventurous people, who constantly seek novelties in their lives, like change, and cause problems just to overcome boredom, find satisfaction in excitement and enthusiasm. Individuals who get low scores; on the other hand, do not quite require adventure and change in their lives and prefer the safety and accustomed comfort of their homes to anything. The low scores in adventurousness indicate flexibility, and high scores indicate rigidity. When considered in association with the results of risk taking, it is a behavior, the possible losses, and gains of which are significantly uncertain. Risk taking is not the main tenet of sensation seeking. It cannot be argued that most behaviors of high-level sensation seekers are risky, but some behaviors are risky, such as listening to rock music at high volumes, watching porn or horror movies, traveling to exotic places or attending drug parties. Sensation seekers, at the same time, do dangerous and extreme sports, such as paragliding, scuba diving, car races, rock climbing, and waterski. Interest in such kind of sports is considered under the “thrill and adventure seeking” subcategory of sensation seeking. There is also sensation seeking behaviors that are not related to physical interests, such as violation of social order (disinhibition), looking for different lifestyles (experience seeking), and attempting to change the ordinary lifestyle (boredom susceptibility). Risky behaviors such as smoking, alcohol and drug abuse, unprotected sexual intercourse, reckless driving, and gambling are related to these variables of sensation seeking. The definition of risk should be clarified in order to relate it with sensation seeking (Blackburn, 1969; Brevers et al., 2017; Lambert et al., 1972; Miller et al., 2018; Swami et al., 2012; Thorne, 1971; Voss et al., 2018; Zuckerman, et al., 1978, Zuckerman, et al., 1972; Zuckerman, 1971).

Risk is the possibility to lose a valuable thing or to be involved in an accident. Risk is unsparing the disturbing event or an accident; the danger of being harmed, the possibility to suffer; and challenging the deed. The outcomes can be predicted when taking risks, but mistakes can be made; there is an insistence in continuing the risky behavior and a need for accomplishment. Risk quantification is related to the assessment of the degree of a risk associated with a particular danger. In previous studies on risk perception, it was found that age and sex are related. Youngsters cannot perceive risks as adults do. This is due to lack of experience. Due to the same reason, the sensation seeking scores of youngsters are higher. When sex is considered, it is seen that men exhibit risky behavior more frequently. Girls have a better risk perception (Shanks et al., 2015; Kastenmuller et al., 2014; Visser et al. 2014; Heinz et al., 2013)

The sensation seeking scale (Form 5) is comprised of 40 item pairs to be scored as 0 and 1. The sensation seeking scale has been developed and updated since the 1960s. Form 5 is the fifth of this series. Four factors have become important in this form: *sensation seeking, experience seeking, boredom susceptibility and disinhibition* (Zuckerman 1971.)

## 1.2. Buying and Impulsive Buying Behavior

Buying behavior is related to shopping. Shopping is one of the most crucial phenomena in the modern individual's life today. Shopping and consumption in modern societies have ceased to be an activity to fulfill physiological needs only but started to play a role in shaping human lives and lifestyles, and even personalities to obtain new dimensions. Therefore, some researchers resort to using concepts related to emotions or beliefs such as “psychological treatment” or “worship” in defining the notion of shopping. With regard to the role assigned, shopping provides moderating and soothing benefits to people today. Hedonist consumption, vanity consumption, and unplanned shopping can be listed among the concepts related to buying behavior (Odabaşı, 2010).

The individual has to make certain assumptions in order to arrive a decision and carry out an evaluation between the options in the buying process. Since the decision making process is carried out, frequently, under certain circumstances, and mostly there are uncertain circumstances, the consumer is confronted with various risks. Financial, functional, physical, social and psychological risks can be listed among the aforementioned risks. Unplanned buying can be defined as an individual's unintentional, sudden, often strong and insistent desire to buy and wish to purchase anything immediately. This behavior involves a tendency to “act unintentionally.” This tendency emerges spontaneously and hinders the individual from seeing clearly the

outcomes of their behavior (Piron, 1991; Rook et al., 1985).

The buying behavior of a consumer is a very complicated process. While performing a buying act, the consumer makes decisions under the influence of numerous internal and external variables. Personality, lifestyle, and values have important contributions to the development of the individual's buying style. Consumer behavior rests upon three bases: 1. Cultural factors such as behavioral norms and socialization; 2. Individual factors such as learning and recollection; 3. Group factors such as imitation, suggesting taking, and the influence of family and leaders. Unnecessary buying with an irresistible and uncontrollable urge is called “oniomania” in the medical literature.

The phenomenon of impulsive buying has been studied for over sixty years. It had attracted the attention of the researchers in the marketing field since the 1940s, and the first comprehensive studies had been conducted between 1945 and 1965 under the name DuPont Consumer Buying Habit Studies, in the USA. These studies had encouraged the impulsive buying research (Piron, 1991). However, the common ground for the research on impulsive buying comprised of making a valid definition (Stern, 1962; Kollat et al., 1967; Rook et al., 1985; Rook; 1987; Piron 1991).

*“Some studies have shown that impulsive buying tendency is associated with both positive and negative emotions. Herabadi et al., (2009) showed that the self-rating of buying impulsiveness, which correlated .70 with Verplanken et al.'s (2001) impulse buying tendency scale, taken 2 months earlier, predicted positive high arousal feelings associated with a purchase. On the other hand, Verplanken, Herabadi, et al., (2009) found that affective aspects of impulsive buying tendency were positively correlated with high negative affect ( $r = .32$ ). Since research has shown that personality traits influence emotional reactions, it could be that Extraversion and Neuroticism are also driving the relationship between impulsive buying tendencies and positive and negative emotions (Bratko et al., 2013).”*

In the English-Turkish dictionary published by the Turkish Language Association, the term “impulsive buying” is defined as “buying a good without thinking its price, ‘sudden’ buying”, and the term “impulsive buyer” is defined as “a person who buys something without thinking, at first sight, ‘sudden’ buyer”. Müftüoğlu (2004) argues that impulsive buying was termed as “unplanned purchase”; however, it was not the consumer investigated in the studies that defined impulsive buying as unplanned buying, conducted to reveal the consumer buying habits, which had drawn interest after the 1940s, but it was the buying behavior. In this respect, the term impulsive buying is preferred in our study.

Rook and Hoch (1985) defined impulsive buying as “unplanned purchases done without any need and benefit received,” and thus focused on the cognitive and emotive responses the consumers experienced during unplanned purchases. Later, Rook (1987) asserted that impulsive buying emerged with the sudden, most powerful and nonstop urge of a consumer to buy something. This urge to buy creates mental chaos, and emotional conflict occurs.

Piron (1991) conducted a meta-analysis of the studies conducted by numerous researchers on impulsive buying and analyzed the definitions by categorizing them under 13 categories. Later, he unified these definitions and suggested an exhaustive definition for impulsive buying. The researcher defined impulsive buying as unplanned purchase as a result of a stimulus *decided* on-the-spot; and asserted that the consumer experienced motive and/or cognitive reactions after the purchase.

Beatty and Ferrell (1998) defined the impulsive buying tendency as the tendency to feel the spontaneous urge that causes to buy on-the-spot and acting according to the urge, without much assessment. In Bellenger et al. (1978) entertainment consumers are the consumers with a greater tendency for impulsive buying. These consumers do not make any plans about what to buy before going shopping. Even more, Rook and Hoch's (1985) study states that consumers with a greater tendency for impulsive buying go shopping instantaneously. Rook and Fisher (1995) argued that consumers with a greater tendency for impulsive buying were highly sensitive to impulsive stimuli, their shopping lists were open-ended, and they were full of thoughts for buying anything. It is emphasized, in the literature, that the behaviors of consumers who exhibit impulsive buying, acted as a reaction to the stimuli and it is very difficult for them to control their behaviors.

Impulsive buying has a 4.2 trillion dollars trading size annually in the USA (Kacen and Lee, 2002). The research on impulsive buying in Turkey is not up to the mark yet.

## 2. Method

### 2.1. Data Collection Tools

The Sensation Seeking Scale – Form 5 (Zuckerman, 1971) was used in this study to measure the sensation seeking behavior. This scale is comprised of 40 item pairs to be scored as 0 and 1. Therefore, the score to be obtained from the scale ranges between 0 and 40. The scale is comprised of four subfactors: thrill and adventure seeking, experience seeking, boredom susceptibility and disinhibition (Zuckerman, 1979). The reliability coefficient of the scale was found  $\alpha=.83$ . The KMO = .80 was found for validity.

Impulsive buying scale comprises of 9 items, and it is answered with a five-point Likert scale. During the assessment of each answer by the participants, 5 points were given to “Strongly

Agree”, 4 points to “Agree,” 3 points to “Neither agree nor disagree,” 2 points for “Disagree” and 1 point for “Strongly Disagree.” Thus, the highest score a participant could get from the impulsive buying scale would be 45. The lowest would be at 9. In order to understand the power of the impulsive buying scale to measure the intended, the construct validity was conducted on all the data. To collect data for construct validity, the “rotation of principal components” was used. The compliance of the data for the factor analysis was tested with the Kaiser-Meyer-Olkin (MKO) coefficient and Bartlett Sphericity test (Hair et al., 2006; Howell, 1982; Roscoe, 1975; Walker et al., 1969.) KMO is a statistical test used to determine whether data and sample size are appropriate and sufficient for the selected analysis. If the KMO converges to 1, it means the data are appropriate for the analysis, and if it is 1, it means a perfect fit is present. According to the analysis, the KMO value was found at 0.925. The Cronbach’s Alpha reliability of the whole test is 0.919 (Gödelek, 2018)

### 2.2. Sample

The sensation seeking scale and the buying impulsiveness scale were presented to the individuals in succession. 250 individuals living in Mersin were included in the study. The participants were determined with a random assignment method. First, the sensation seeking scale was administered, then the buying impulsiveness scale, and at the end, a personal information form was presented. The participants were all volunteers.

### 2.3. Procedure

The procedure was implemented in front of supermarkets using the face-to-face technique. The participants completed the procedure in averagely 25 minutes.

## 3. Findings and Discussion

### 3.1. Demographic Findings

151 women and 99 men participated in the study. The arithmetic mean of the participants’ age was 41, and the standard deviation is 11.17. Table 1 summarizes the demographic characteristics of the participants.

Table 1 Descriptive Statistics and Cross-Correlations between Variables

Variable	Range	$\bar{X}$ (s)	SS	TAS	ES	BS	Dis
Compulsive Buying (CB)	14-41	33.71(14.13)	.67***	.83***	.73***	.70***	.83***
Sensation seeking (SS)	11-37	27.12(13.66)	-----	.58***	.54***	.61***	.63***
Thrill and Adventure Seeking (TAS)	3-8	6.64(10.13)		-----	.60***	.51***	.73***
Experience Seeking (ES)	2-9	8.14(11.66)			-----	.66***	.83***
Boredom Susceptibility (BS)	3-8	7.41(12.51)				-----	.77***
Disinhibition (Dis)	4-9	6.66(17.13)					-----

(\*\*\*  $p<.01$ ; \*\*  $p<.05$ )

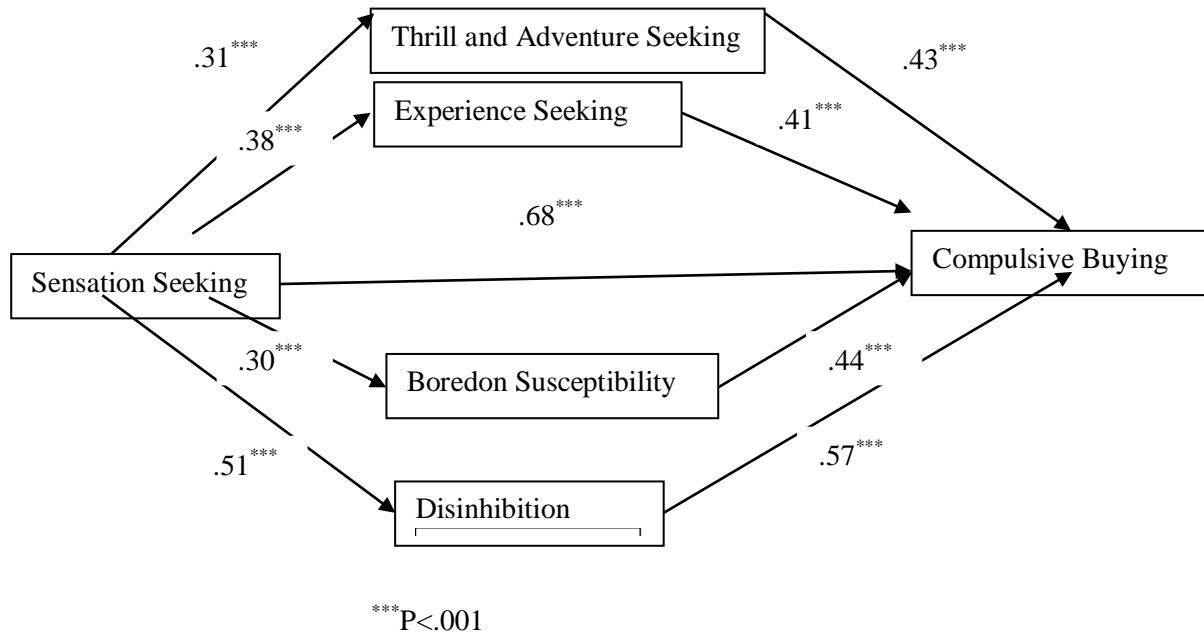
151 female and 99 male participants were separately analyzed with regard to the scores they obtained in the Compulsive Buying, Sensation Seeking, Experience Seeking, Boredom Susceptibility and Disinhibition scales. The results obtained exhibit many similarities with the general view summarized in Table 1. The basic hypothesis of the study, which states “there is a positive and statistically significant correlation between Compulsive Buying and Sensation Seeking” seems to be confirmed at this point. A step further was taken and the subtests of the Sensation Seeking Scale, namely the Experience Seeking, Boredom Susceptibility, and Disinhibition scores were analyzed taking the sex variable into consideration, and again consistent results were obtained. A remarkable point here is that female participant has a greater tendency for Compulsive Buying ( $t=61.17$ ;  $SD=248$ ;  $p<.001$  – Two tailed test) and Sensation Seeking ( $t=87.13$ ;  $SD=248$ ;  $p<.001$  – Two tailed



test).

### 3.2. Path Analysis Results

Figure 1 Presents the Path model between the variables of Sensation Seeking, Thrill and Adventure Seeking, Experience Seeking, Boredom Susceptibility, Disinhibition, and Compulsive Buying. The Path coefficients are standardized regression coefficients.



At the beginning of the study, it was hypothesized that compulsive buying is related to sensation seeking behavior. Hence, it was also hypothesized that the subfactors of the sensation seeking behavior, i.e., Thrill and Adventure Seeking, Experience Seeking, Boredom Susceptibility, and Disinhibition, could somehow be related to compulsive buying. Ultimately, when Figure 1 is examined, it is seen that these hypotheses are confirmed. In order to understand in which proportion the variance between the Sensation Seeking and Compulsive Buying is shared by the variables of Thrill and Adventure Seeking, Experience Seeking, Boredom Susceptibility and Disinhibition, a regression analysis was carried out on the scores obtained for these variables. According to the results of this analysis, all variables yielded statistically significant results. The  $\beta$  values calculated for each of the five variables are as follows: Sensation Seeking  $\beta=7.16$  ( $p<.001$ ), Thrill and Adventure Seeking  $\beta=9.13$  ( $p<.001$ ), Experience Seeking  $\beta=5.18$  ( $p<.001$ ), Boredom Susceptibility  $\beta=6.11$  ( $p<.001$ ), and Disinhibition  $\beta=5.01$  ( $p<.001$ ).

When the sex variable is considered, it was mentioned above that female participant is significantly different from male participants. The effect of sex in compulsive buying is marked out in several studies (Dittmar, 2004). In this study, a series of variables in addition to the sex variable was also taken into consideration. These variables included several products listed in the ISIC (International Standard Industrial Classification of All Economic Activities) classification system (ISIC; United Nations 2008). Six product groups were selected from among this classification; motor vehicles (ISIC Group code= 451), food-beverages-tobacco (ISIC group code= 472), information and communications equipment (ISIC Group code= 474), household equipment (ISIC Group code = 475), entertainment and recreation (ISIC Group code = 176), clothing-footwear-cosmetics (ISIC Group code = 477). The buying habits of the participants were examined with regard to these product groups. However, relevant findings were not included in this report; they are left for the following report.

### 4. Conclusion

It is found that there is a positive and statistically significant correlation between compulsive buying and sensation seeking. This finding confirms the hypothesis of the study. A similar result was obtained when the sex variable was taken into consideration. In other words, there is a highly positive and statistically significant correlation between sensation seeking and compulsive buying for both female participants and male participants. Compulsive buying scores were categorized as low, middle and high. The same procedure was applied to the

sensation seeking scores. Therefore, a 3 by 3 table was obtained. The Chi-square test ( $\chi^2$ ) was conducted on this table considering the sex variable.  $\chi^2 = 388.12$ ,  $Sd = 4$ ,  $p < 0.01$  for the whole group;  $\chi^2 = 413.71$ ,  $Sd = 4$ ,  $p < 0.01$  for male participants, and  $\chi^2 = 477.69$ ,  $Sd = 4$ ,  $p < 0.01$  for female participants. These findings indicate that these two variables are somehow related. Similar results were obtained considering the sex variable. This finding does not show that there is a causal relationship between the sensation seeking variable and compulsive buying. It only indicates that these two variables are related somehow. Put it differently, the compulsive buying increases as sensation seeking increases. This situation did not change when the sex variable is included. The literature already mentions that women exhibit compulsive buying behavior more frequently than men (Dittmar, 2004). The genuine finding of this study is that male participants, too, exhibit compulsive buying as women do. However, a statistically significant difference was found between female and male participants in a comparison based on sex.

Sensation seeking is comprised of four subfactors. Both the method and the findings sections make references to this information. These subfactors are thrill and adventure seeking, experience seeking, boredom susceptibility and disinhibition (Zuckerman, 1979). The cross-correlations of the scores obtained from subfactors among each other and with the total scores were examined. This is summarized in Table 1. All of the correlations were strong, positive and statistically significant. This finding provides information about the homogeneity of the scale. Since this scale has successfully passed both the reliability and validity tests, it can be argued that our finding is not surprising. However, it is remarkable that the participants are susceptible to sensation seeking as much as they are susceptible to compulsive buying. Furthermore, this situation also holds for thrill and adventure seeking, experience seeking, boredom susceptibility and disinhibition subfactors. In other words, thrill and adventure seeking participants also exhibit compulsive buying behavior. In addition, participants susceptible to boredom or exhibiting disinhibition display compulsive buying behavior. Does this situation change considering the sex variable? No, it does not. In summary, individuals who are sensation seeking, thrill and adventure seeking, experience seeking, who are susceptible to boredom and disinhibited, also exhibit compulsive buying behavior. It should be noted again that this relation is not a casual one. The researcher does not have any such claim. There is only a relation. When one increases, the other one increases too. However, this increase does not occur in a neutral or negative zone. An increase in the positive zone is in question. Put it differently, the majority of the participants are individuals who have a tendency of sensation seeking and, at the same time, have a compulsive buying habit.

It was already mentioned in the findings section that inter-participant comparisons were conducted considering a series of products. These findings were not included in this report and left for another report. However, to mention briefly, the product was selected with regard to the ISIC classification (United Nations 2008). When considered in the context of the relevant products, it was seen that sensation seeker continued to seek sensation and compulsive buyers purchased compulsively. In fact, in this context, the category width scale adopted to Turkish and improved by the researcher was administered to the participants, and it was found that participants with wide category width are susceptible to sensation seeking and to compulsive buying at the same time.

The researcher plans to expand the sample of the research in the next study and conduct a more in-depth analysis including different scales and product groups. At this point, some analyses about causality can also be conducted.

## References

- i. Beatty, S., Ferrel, E. M. (1998). "Impulse Buying Modeling Its Precursor," *Journal of Retailing*, Volume 74, p. 169-191
- ii. Bellenger, D. N., Robertson, D. H., Hirschman, E. C. (1978) "Impulse buying varies by product," *Journal of Advertising Research*, 18, 15–18.
- iii. Blackburn, R. (1969). Sensation seeking, impulsivity, and psychopathic personality, *Journal of Consulting and Clinical Psychology*, Vol. 33, No. 5, 571-574
- iv. Bratko D., Butkovic A., Bosnjak M. (2013) "Twin Study of Impulsive Buying and its Overlap with Personality", *Journal of Individual Differences*, Vol. 34(1): 8-14
- v. Brevers, D., Foucart, J., Verbanck P., Turel, O. (2017) Examination of Validity and Reliability of the French Version of the Brief Self-Control Scale, *Canadian Journal of Behavioral Science*, Vol.49, No.4, 243-250

- vi. Conner K.R., Houston, R.J., Sworts L.M., Meldrum S. (2007) “Reliability of the Impulsive Premeditated Aggression Scale (IPAS) in treated opiate-dependent individuals,” *Addictive Behaviors*, 32, 655-659
- vii. Cox, R. P., & Howard, M. D. (2007). Utilization of EMDR in the treatment of sexual addiction: A case study. *Sexual Addiction & Compulsivity*, 12, 1-20.
- viii. Dittmar, H. (2004). *Understanding and diagnosing compulsive buying*. In R. H. Coombs (Ed.), *Handbook of addictive disorders: A practical guide to diagnosis and treatment* (pp. 411-450). Hoboken, NJ: Wiley.
- ix. Fossati, A., Somma, A., Karyadi K.A., Cyders, M.A., Bortolla, R., Borroni, S., (2015). “Reliability and validity of the Italian translation of the UPPS-P Impulsive Behavior Scale in a sample of consecutively admitted psychotherapy patients”, *Personality and Individual Differences*, 91(2016), 1-6
- x. Gödelek, E., Akalın, F. (2018) “Anlık Alışveriş Ölçeği” Geliştirmeye İlişkin Ön Çalışma, 13. Ulusal Pazarlama Kongresi, 25-29 Ekim 2008, Nevşehir.
- xi. Hase, M., Schallmayer, S., & Sack, M. (2008). EMDR reprocessing of and addiction memory: Pretreatment, posttreatment, and 1-month follow-up. *Journal of EMDR Practice and Research*, 2, 170-179.
- xii. Heinz, A.J., de Wit H., Lilje, T.C., Kassel, J.D. (2013) *The Combined Effect of Alcohol, Caffeine, and Expectancies on Subjective Experience, Impulsivity, and Risk-Taking*, *Experimental and Clinical Psychopharmacology*, Vol.21, No.3, 222-234.
- xiii. Herabadi, A.G., Verplanken, B., & Knippenberg, A. (2009). “Consumption experience of impulse buying in Indonesia: Emotional arousal and hedonistic considerations”, *Asian Journal of Social Psychology*, 12, 20–31.
- xiv. Kastenmuller A., Fischer, P., Fischer J (2014) *Video Racing Games Increase Actual Health-Related Risk-Taking Behavior*, *Psychology of Popular Media Culture*, Vol.3, No.4, 190-194.
- xv. Kollat, D. T., Willett R.P. (1967). “Consumer Impulse Purchasing Behavior,”. *Journal of Marketing Research*, 4 (2), 21-31.
- xvi. Lam S.C., Chan Z.S., Chong A.C., Wong W.W., Ye J.W. (2018) “Adaptation and validation of Richmond Compulsive Buying Scale in Chinese population”, *Journal of Behavioral Addictions*, 7(3), 760-769
- xvii. Lambert, W., Levy, L.H. (1972). *Sensation Seeking and Short-Term Sensory Isolation*, *Journal of Personality and Social Psychology*, Vol. 24, No. 1, 46-52.
- xviii. Miller, K.E., Demen K.H., Lueke J.F. (2018) *Caffeinated Energy Drink Use by U.S. Adolescents Age 13-17: A National Profile*, *Psychology of Addictive Behavior*, Vol.32, No.6, 647-659
- xix. Miller, R., (2010). *The Feeling-State Theory of Impulse-Control Disorders and the Impulse-Control Disorder Protocol*, *Traumatology*, 16(3), 2-10, SAGE.
- xx. Müftüoğlu, D. (2004). *Ekonomik Kriz Dönemlerinde Anlık Alışveriş Yapan Tüketicileri Diğer Tüketicilerden Ayıran Özellikleri Belirlemeye Yönelik Bir Uygulama*. Yayımlanmamış Yüksek lisans tezi, Çukurova Üniversitesi, Adana.
- xxi. Odabaşı, Y. (2010) *Küresel kriz ortamında tüketici davranışları, Tüketici Yazıları II* (Editörler: Babaoğlu M., Şener A.), H.Ü. TÜPADEM, 67-84, Ankara
- xxii. Piron, D. (1991). “Defining impulse purchasing”. *Advances in Consumer Research*, 18, 509-513
- xxiii. Ridgeway, D., Russel, J.A. (1980) *Reliability and Validity of the Sensation-Seeking Scale: Psychometric Problems in Form V*, *Journal of Consulting and Clinical Psychology*, Vol. 48, No. 5, 662-664.
- xxiv. Rook, D. W. (1987). “The buying impulse,” *Journal of Consumer Research*, 14, 189–199.
- xxv. Rook, D.W., Hoch, S. J. (1985). “Consuming impulses,” In Morris Holbrook and Elizabeth Hirschman (Eds.), *Advances in Consumer Research* (Vol. 12, pp. 23–27).
- xxvi. Rook, Dennis W., & Fisher, Robert J. (1995). *Normative influences on impulsive buying behavior*. *Journal of Consumer Research*, 22, 305–313.
- xxvii. Scherrer, J. F., Xian, H., Kapp, J. M. K., Waterman, M. P. H., Shah, M. H. S., Volberg, R., & Eisen, S. A. (2007). Association between exposure to childhood and lifetime traumatic events and lifetime pathological gambling in a twin cohort. *Journal of Nervous and Mental Disease*, 195, 72-78.
- xxviii. Shanks, D.R., Vadillo, M.A., Riedel, B., Clymo, A., Govind, S., Hickin, N., Tamman, A.J.F., Puhlmann M.C. (2015) *Romance, Risk, and Replication: Can Consumer Choices and Risk-taking Be Primed by Mating Motives*, *Journal of Experimental Psychology: General*, Vol.144, No.6, 142-158.
- xxix. Stern, H. (1962). “The Significance of Impulse Buying Today,” *Journal of Marketing*, 26 (4), 59-62.
- xxx. Swami, V., Pietschnig, J., Stieger S., Nader, I.W., Voracek M. (2012) *Beautiful as the Chance Meeting on a Dissecting Table of a Sewing Machine and Umbrella! Individual Differences and Preference for Surrealist Literature*, *Psychology of Aesthetics, Creativity, and the Arts*, Vol.6, No.1, 35-42

- xxxvi. Thorne, G.,L. 1971. *Sensation seeking scale with deviant populations*, *Journal of Consulting and Clinical Psychology*, Vol. 37. No. 1, 106-110
- xxxvii. United Nations. (2008). *International Standard Industrial Classification of all economic activities (ISIC)*, Rev. 4. New York.
- xxxviii. Visser, B.A., Pozzebon, J.A., Reina-Tamayo, A.M. (2014) *Status-Driven Risk Taking: Another “Dark” Personality?* *Canadian Journal of Behavioral Science*, Vol.46, No.4, 485-496
- xxxiv. Voss, A.T., Soltis, K.E., Dennhardt A., Martens M.P., Murphy J.G. (2018) *Protective Behavioral Strategies Mediate the Relationship Between Behavioral Economic Risk Factors and Alcohol Related Problems*, *Experimental and Clinical Psychopharmacology*, vol.26, No.1, 58-64
- xxxv. Verplanken, B., &Herabadi, A. (2001). *Individual differences in impulse buying tendency: Feeling and no thinking*. *European Journal of Personality*, 15, S71–S83.
- xxxvi. Verplanken, B.,Herabadi,A.G., Perry, J.A., Silvera, D.H. (2005). “*Consumer style and health: The role of impulsive buying in unhealthy eating*”, *Psychology and Health*, 20, 429–441.
- xxxvii. Verplanken, B., Sato, A. (2011). “*The psychology of impulse buying: An integrative self-regulation approach*”, *Journal of Consumer Policy*, 34, 197–210.
- xxxviii. Zuckerman, M. (1971) *Dimensions of Sensation Seeking*, *Journal of Consulting and Clinical Psychology*, Vol. 36, No. 1, 45-52.
- xxxix. Zuckerman, M., Eysenck, S., Eysenck, H.E. (1978) *Sensation Seeking in England and America; Cross-cultural, Age, and Sex Comparisons*, *Journal of Consulting and Clinical Psychology*, Vol. 46, No. 1, 139-149.
- xl. Zuckerman, M., Bone, R.N., Neary, R., Mangelsdorf, D., Brustman, B. (1972) *What is the Sensation Seeker? Personality Trait and Experience Correlates of the Sensation-Seeking Scales*, *Journal of Consulting and Clinical Psychology*, Vol. 39, No. 2, 308-321.
- xli. Zuckerman, M., Link, K. (1968). *Construct Validity for the Sensation-Seeking Scale*, *Journal of Consulting and Clinical Psychology*, Vol. 32, No. 4, 420-426.
- xlii. Zuckerman, M., Kolin E.A., Price L., Zoob I, (1964) *Development of sensation-seeking scale* , *Journal of Consulting Psychology*, Vol. 28, No. 6, 477-482