

# EFFECT OF THE STORE ATMOSPHERE ON COMPULSIVE BUYING BEHAVIOR<sup>1 2</sup>



Kafkas University  
Economics and Administrative  
Sciences Faculty  
KAUEASF  
Vol. 13, Issue 25, 2022  
ISSN: 1309 – 4289  
E – ISSN: 2149-9136

Article Submission Date: 01.02.2022

Accepted Date: 22.04.2022

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**ABSTRACT** Compulsive buying is a behavioral disorder that drives consumers to buy more than they need unintentionally. Negative feelings such as depression, sorrow, denial, lack of self-esteem, Etc., are stated as the reasons for this behavior. This research aims to exert the triggering effect of store atmosphere on compulsive buying behavior. Both qualitative and quantitative methods have been applied to achieve this aim. Finally, we found that the effect of store atmosphere on compulsive buying behavior has three dimensions. These dimensions are physical environment, promotion, and conspicuous consumption. Statistical tests made by applying the Structural Equation Model show that our model has construct validity, the result of the factor analysis exerts that %73,98 of the total variance is explained, and the reliability score of our questionnaire is .929.

**Keywords:** Store atmosphere, compulsive buying, consumer behavior

**JEL Codes:** M31, D91

**Scope:** Business administration

**Type:** Research

**DOI:** 10.36543/kauiibfd.2022.009

**Atıfta bulunmak için:** Baltacı, A. & Eser, Z. (2022). Effect of the store atmosphere on compulsive buying behavior. *KAÜİİBFD*, 13(25), 181-212.

<sup>1</sup> It has been declared that the relevant study complies with the ethical rules.

<sup>2</sup> This study has been produced from the doctoral thesis prepared by the first author under the supervision of the second author.

# KOMPULSİF SATIN ALMA DAVRANIŞINDA MAĞAZA ATMOSFERİNİN ETKİSİ



Kafkas Üniversitesi  
İktisadi ve İdari Bilimler  
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KAÜİBFD  
Cilt, 13, Sayı 25, 2022  
ISSN: 1309 – 4289  
E – ISSN: 2149-9136

Makale Gönderim Tarihi:01.02.2022

Yayına Kabul Tarihi: 22.04.2022

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**ÖZ** | Kompulsif satın alma davranışı tüketicileri ihtiyaçları olandan daha fazlasını satın almaya sevk eden kontrol dışı bir davranış türüdür. Depresyon, inkar, düşük benlik saygısı, üzüntü gibi olumsuz duygular kompulsif satın alma davranışının altında yatan nedenler olarak ifade edilmektedir. Bu araştırmanın amacı, mağaza atmosferinin kompulsif satın alma davranışı üzerindeki tetikleyici etkisini irdelemektir. Araştırmanın amacına ulaşabilmesi için nitel ve nicel yöntem bir arada kullanılmıştır. Nihayetinde mağaza atmosferinin kompulsif satın alma davranışı üzerindeki etkisinin üç boyutlu bir yapıdan oluştuğu; bu yapıların fiziksel çevre, promosyon etkisi ve gösterişçi tüketim olduğu tespit edilmiştir. Yapısal eşitlik modellemesi uygulanarak yapılan istatistiksel analizler neticesinde araştırma modelinin yapı geçerliliğine sahip olduğu, soru setinin kavrama dair toplam varyansın yaklaşık %74'ünü açıklayabildiği ve .929 güvenilirlik katsayısına sahip olduğu tespit edilmiştir.

**Anahtar Kelimeler:** Mağaza atmosferi, kompulsif satın alma, tüketici davranışı

**JEL Kodları:** M31, D91

**Alan:** İşletme

**Türü:** Araştırma

## **1. INTRODUCTION**

One of the most substantial research issues in the marketing discipline is, determining the motivation under the consumer buying behavior. Theories such as; Decision, Motivation, Action, Planned Behavior, Prospect, and many others have been applied to discover that motivation. However, there are still some specific and niche consumer groups whose behavior pattern is quite different from the general population. Compulsive buyers are one of these niche groups, and the motivation behind their irrational buying behavior hasn't been discovered entirely yet.

Compulsive buying is an impulse control disorder (Adamczyk et al., 2020: p. 594) triggered by depression, anxiety, etc., and adverse feelings (Kaur et al., 2019: p. 75). That harmful behavior involves almost 10% of the population (Tamam, 1998; Koran et al., 2006; Maraz et al., 2016). According to the literature, compulsive buying behavior needs a trigger to occur (O'Guinn & Faber, 1989; McElroy et.al., 1994; Tamam et.al., 1998; Dittmar & Drury, 2000; Miltenberger et.al., 2003; Dittmar, 2004; Jalees, 2007; Mittal et.al., 2008; Ridgway et.al., 2008; Billieux et.al., 2008; Annagür, 2008).

On the other hand, store atmosphere is a set of variables that the retailer executives control to design the shopping environment to manipulate the emotional states of the consumers (Kotler, 1973; Arnould et al., 1998; Cox & Brittain, 2000; Pratminingsih et al., 2018). The store atmosphere contains unnumerable stimulants that may trigger compulsive buying behavior. It is also defined as a critical component of the store attributes (Moharana & Pattanaik, 2018).

There are a plethora of studies on compulsive buying behavior in literature. However, the literature review showed that researchers seem to focus on the psychological triggers so far. This research aimed to reveal the significant environmental stimulants that may trigger compulsive buying behavior. To achieve this aim, qualitative and quantitative methods were applied to reveal the store atmosphere variables behind that behavior. With the results of this research, practitioners may evaluate the success of their store atmosphere design more correctly by excluding the impact of the compulsive buyers. Also, theoreticians can apply the questionnaire to understand compulsive behavior deeply. On the other hand, ethical concerns should arise for the authorities to make regulations to protect the victims of compulsive buying behavior from the adverse effects of store atmosphere triggers.

## 2. THEORETICAL BACKGROUND

### 2.1. Compulsive Buying Behavior

Compulsive buying behavior has been introduced to the literature by researchers in the psychology discipline. According to Tamam et al. (1998), the concept was defined as shopping mania or oniomania at the beginning of the 1900s. However, the widely accepted name of the concept is “compulsive buying behavior”.

In the literature, the research of Edwards (1993) and O’Guinn and Faber (1989) are the most cited ones. Edwards (1993) defines the compulsive buying concept as an addictive process and experience. Some researchers also equated compulsive buying with alcohol and gambling addictions (Glatt, 1987; Krysc, 1989; Cited by: Özkorumak & Tiryaki, 2011, p. 15). On the other hand, O’Guinn and Faber (1989) assert that compulsive buying is an inconvenient instinct that drives an individual to buy irrationally. According to Deserbo and Edwards (1996), the reason for compulsive buying behavior is “*dependence, denial, depression, lack of impulsive control, low self-esteem, approval-seeking, anxiety, escape coping tendencies, general compulsiveness, materialism (envy), isolation, excitement seeking, and perfectionism*” (Desarbo & Edwards, 1996, p. 232). Since people can do online shopping even from their cell phones, compulsive buying behavior has become a concern for online channels too (Günüç & Keskin, 2016, p. 342).

Even though there are many different definitions in the literature for compulsive buying behavior, the intersection of all is:

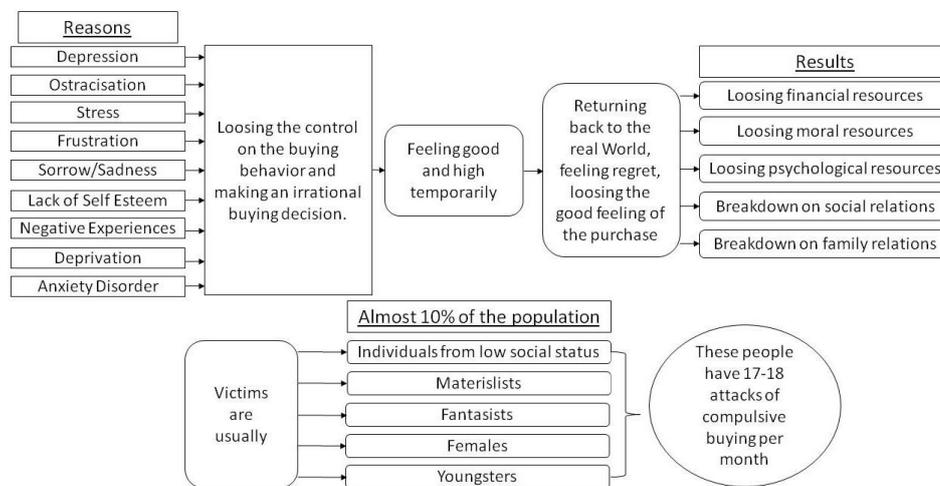
- Losing control on the buying behavior,
- Having financial and emotional damage because of these irrational buying decisions (O’Guinn & Faber, 1989; McElroy et al., 1994; Dittmar & Drury, 2000; Miltenberger et al., 2003; Dittmar, 2004; Jalees, 2007; Mittal et al., 2008; Ridgway et al., 2008; Billieux et al., 2008).

Compulsive buying is an irrational, uncontrollable, and repetitive behavior that occurs with the consumer's loss of control over the buying decision because of negative feelings (Dostanić & Mirković, 2019; Samo et al., 2019; Adamczyk et al., 2020). Many researchers took compulsive buying as an unconscious behavior as a means of running away from negative emotions (O’Guinn & Faber, 1989; Scherhorn, 1990; Faber & O’Guinn, 1992; Hassay & Smith, 1996; Samo et al., 2019). Contrary to this, some other research indicates that it might be a purposive planned behavior applied for achieving personal goals by increasing self-respect and the presented social status (Kasser & Ryan, 1996; Roberts & Pirog, 2004). On the other hand, Lo and Harvey (2014) indicate that

compulsive buying behavior differs from hoarding behavior since compulsive buyers are obsessive in buying specific types of products rather than stocking anything as much as they can. That might be the reason behind their status-seeking and brand engagement (Goldsmith et al., 2015; Mrad & Cui, 2019; Gunawan & Bernarto, 2020).

Compulsive buying behavior causes social negativities for the victims as excluding from the society or problems in family relations since they spend more money than they have (Billieux et al., 2008; Dittmar, 2004). Also, it is hard to convince the compulsive buyers about the negative results of their behavior because they do not take that behavior as a problem (Harnish & Bridges, 2015).

Figure 1 shows and summarizes the general frame of compulsive buying behavior.



**Figure 1: The General Frame of Compulsive Buying**

References: O’Guinn & Faber, 1989; McElroy et.al., 1994; Tamam et.al., 1998; Dittmar & Drury, 2000; Miltenberger et.al., 2003; Dittmar, 2004; Jalees, 2007; Mittal et.al., 2008; Ridgway et.al., 2008; Billieux et.al., 2008; Annagür, 2008.

Research shows that compulsive buyers have some common characteristics. From the consumer behavior perspective, individuals who tend to buy compulsively are;

- Buying more than they need although they do not have enough financial resources (Hoyer & MacInnis, 2007),
- Usually, young people in their early 20s and women (Shoham & Brencic, 2003; Korur & Kimzan, 2016),

- Having 17-18 compulsive buying attacks on averagely per month (McElroy et al., 1994; Black, 1996; Cited by: Tamam et al., 1998),
- More tend to materialism, stargazing, depression, obsession, anxiety disorders, and acting under the influence of stress, disappointment, guilt, and sorrow (O'Guinn & Faber, 1989; Scherhorn, 1990; Roberts & Jones, 2001; Shoham & Brencic, 2003; Mittenberger et al., 2003; Koran et al., 2006),
- Tend to buy apparel products more because of perceived low social status and in need of acceptance (Lafferty & Dickey, 1980; Solomon & Douglas, 1987; Valence et al., 1988; Yurchisin & Johnson, 2004; Roberts & Pirog, 2004, Neuner et al., 2005),
- Not concerned about the results of their buying decisions when they are under the influence of a compulsive buying attack, but even in that unconscious state, they may still look for a product return policy (Hassay & Smith, 1996; Rao, 2003; Cited by: Devrani, 2018, p. 157).

Roberts and Jones (2001) assert that compulsive buyers usually have problems paying their debts which may drive them to a financial crisis.

### **2.2. Store Atmosphere**

The service environment was called servicescapes until the beginning of the 1990s. Kotler (1973) asserts the concept as a set of emotional effects applied to designing the shopping places to increase the buying tendency of the consumers (Kotler, 1973, p. 50). According to Bittner (1992), servicescape is "the dimensions of the physical surroundings include all of the objective physical factors that the firm can control to enhance (or constrain) employee and customer actions" (Bittner, 1992, p. 65). This definition leads to the concept known as store atmosphere. Arnould et al. (1998) defined the concept as deliberately designed places to produce commercially significant actions. This definition broadened the scope, and the concept has begun to involve the employees with consumers.

Cox and Brittain (2000) define store atmosphere as "*the dominant sensory effect created by the store design, physical characteristics, and merchandise activities*" (Cox & Brittain, 2000, p. 203). According to Levy and Weitz (2011), visual communication, scents, store design, music, store layout, lighting, and scents are the store atmosphere components, and these components have a significant effect on the consumer buying decision (Singh et al., 2014). On the other hand, Berman and Evans (2010) make a broad definition as "store physical character that projects the image and draws customer". A similar definition is made by Akram et al. (2016) as designing the retail store's physical environment to increase consumers' purchasing possibility.

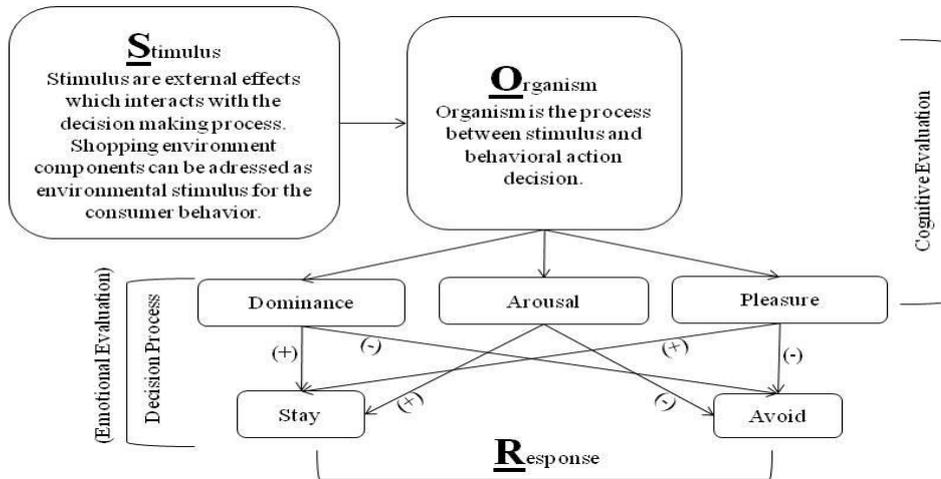
According to Ghosh (1990), retailers are applying design tools for building a proper store atmosphere that expresses the value of their consumers. So, it can be said that every physical and non-physical component of the shopping environment is under the control of retailers (Eroglu & Machleit, 1990). Store atmosphere plays a substantial role in transforming customers into loyal ones (Baker et al., 1994). That makes the shopping atmosphere a tool that ensures a competitive advantage. Store atmosphere has a significant impact on consumer revisit intention when it is designed satisfactorily for consumers (Novendra et al., 2020).

There are many components of the store atmosphere. However, literature shows that researchers mostly discoursed on interior design, in-store layout, heat, colors, scents, music, other people in the place, mood, in-store stimulus, time constraint, and salesperson as the components of the store atmosphere (Iyer, 1989; Abratt & Goodey, 1990; Bittner, 1992; Rook & Gardner, 1993; Herrington & Capella, 1995; Hart & Davies, 1996; Nicholls et al., 1997; Beatty & Ferrell, 1998; Vohs & Faber, 2003; Parsons, 2003; Coloma & Kleiner, 2005; Shuman, 2006; Mihic & Kursan, 2010).

Applebaum (1951) is conceivably the first researcher who expressed that consumers may make irrational buying decisions because of the shopping environment. Parallel to this, Rook (1987) contended that visual stimulus received from the shopping environment might provoke impulse buying behavior. Widyastuti (2018) asserts that the in-store displaying methods can trigger impulsive buying behavior. Also, Akram et al. (2016) indicate that an attractive store atmosphere design can boost impulsive buying behavior. Parallel to Widyastuti (2018) and Akram et al. (2016), Dostanic and Mirkovic (2019) express that the store atmosphere can evoke the hedonic feelings of the consumers and drive them to show a compulsive buying behavior. Different components of the store atmosphere have various impacts on the consumers' emotional state (Donovan & Rossiter, 1982; Hui & Bateson, 1991; Donovan et al., 1994; Tai & Fung, 1997).

### **2.3. Stimulus Organism Response Model**

The SOR model of Mehrabian and Russel (1974) is a helpful model for understanding the impact of the environment on consumer behavior (Goi et al., 2014). According to this theory, environmental stimulus affect the mood of consumers. While their mood changes because of the environmental stimulus, people may keep staying or leaving the environment as a reaction.



**Figure 2: SOR Model for Shopping Environment**

References: Belk, 1975; Bagozzi, 1980; Donovan & Rossiter, 1982; Bagozzi, 1986; Hart & Davies, 1996; Sherman et al., 1997; Oakes, 2000; Bennett, 2005

The cognitive evaluation process is the consumer's perception of processed information and conclusion (Bettman, 1979; Zeithaml, 1988). Stimuli are the external signs that draw consumers' (the organism) attention for a positive response (Li & Chau, 2019). For example, the perceived stimulus of the shopping environment like price, product, service quality, etc. offers a set of information about the retailer.

Emotional evaluation is an opinion but not a desirable target (Russell & Snodgrass, 1987). Mehrabian and Russell (1974) mention that every environment has different emotional effects on people. They also indicate three dimensions for these emotional effects: pleasure, arousal, and dominance. These emotional conditions guide people in the leave (avoid) or stay decisions for the shopping environment (Bennett, 2005).

**Table 1: Three Dimensions of Emotional Effect**

| Pleasure   | Arousal  | Dominance   |
|--|--|---|
| Level of contentment from the shopping environment | Level of arousal from the shopping environment | Level of the feeling of control on the shopping environment |

References: Resource: Mehrabian & Russel, 1974; Ward & Russell, 1981; Donovan & Rositter, 1982; Baker et al., 1992; Bennet, 2005.

The response is the consumer's physiological output like attitude and behavior (Bagozzi, 1986). Behavioral intents such as; total money spent at a

specific time or the pleasure level of customers are proper parameters for measuring the response to the shopping environment (Sherman & Smith, 1986). For the shopping environment, response means avoiding or reacting. While react means stay, keep shopping; avoid means not buying or leaving the place (Mehrabian & Russell, 1974).

When applying the SOR model to the shopping environment, atmospheric variables can be used as stimulus factors. According to Bitner (1992), atmospherics are artificially constituted by retailers that include messages, recommendations, signs, etc., which are the main components of the retailer's image. These stimulants can affect the consumers' emotional state, buying decisions, and repurchase intentions (Madjid, 2014; Tulipa et al., 2014).

This research applies the store atmosphere components as situational factors of the shopping environment. According to Belk (1975), situational factors are the sum of observable effects that are bound to time and place that have a systematic impact on an individual's behaviors by the stimulus characteristics. Belk's (1975) situational factors have five components; physical environment, social environment, time, buying duty, and the different conditions between the shopping environment and the outer environment.

According to Youn (2000), situational factors are external effects that impulsively manipulate consumers' buying decisions. Odabasi and Baris (2005) defined situational factors as temporary pressures related to the shopping atmosphere.

**Table 2:** Components of Store Atmosphere

|                              |  |
|------------------------------|--|
| <b>Perceived Environment</b> | <p><b>*Existence Of Other People:</b> Rook and Fisher (1995) assert that people tend to make irrational buying decisions while they are alone. Nicholls et al. (1997) emphasize that people's buying decisions may get affected by the presence of the people who are together in the shopping environment.</p> <p><b>*Time Pressure:</b> Time pressure is the opposite of sufficient time for shopping activity (Howard, 1969). Iyer (1989) says that time pressure may cause failures to perceive the environmental components for customers. Nicholls et al. (1997) retain that the customers who spent more than 30 minutes to arrive at the shopping place are intended to spend more than other customers who spent less than 30 minutes for arriving.</p> <p><b>*Perceived Crowd:</b> Consumer's evaluation of people density in a shopping environment is called the perceived crowd. Some research shows that perceived pressure and the perceived crowd are statistically correlated positively (Stokols, 1972; Machleit et al., 2000; Eroglu et al., 2005).</p>   |
| <b>Physical</b>              | <p><b>*Music:</b> Music is directly associated with the time spent in the shopping place, the amount of shopping, and the arousal level (Baker et al., 1992; Kellaris &amp; Kent, 1992; Grewal et al., 2003; Wilson, 2003; Vida, 2008).</p> <p><b>*Colors:</b> Customers may prefer shopping places which differentiated by using colors. Males tend to like blue and hues, and females tend to like pink, purple, and hues of these two colors (Bellizi et al., 1983; Ellis &amp; Ficek, 2001). Also, warm colors can trigger impulse buying behavior (Ayad et al., 2016).</p> <p><b>*Scents:</b> The scent of the shopping environment affects customer responses. Pleasant odors have an invitatory impact on customers even though the customer is not aware of that. The scent must match up with the concept of the shopping place. If not, customers may respond negatively (Bone &amp; Ellen, 1994; Ward et al., 2007; Bradford &amp; Desrochers, 2009; Parsons, 2009). Spangenberg et al. (2006) found that male customers preferred the rose essence while females preferred the vanilla essence as a scent of the shopping environment in their research.</p> <p><b>*Lightening:</b> Lighting is perceived as a sign of coziness, detachment, tenseness, and liveliness by the consumers (Schielke &amp; Leudesdorff, 2015).</p> <p><b>*Heat:</b> Wakefield and Baker (1998) say that literature has no evidence for a significant correlation between the time spent in the shopping place and heat. Contrary to this, Baker (1987) indicates that consumers may intend to leave the shopping environment if the heat is higher or lower than the acceptable limits.</p> <p><b>*Displaying methods:</b> The product should be displayed widely, at the eye level, and with the required information; to affect the consumer buying decision positively (Curhan, 1973; Patton III, 1981; Inman et al., 1990).</p> |
| <b>Individual</b>            | <p><b>*Gender:</b> Parameters such as; the size of the shopping environment, inconvenient heat, and the perceived crowd distract women more than men (d'Astous, 2000). Raajpoot et al. (2008) state that men are getting more impressed by salespeople than women. The shopping environment's stimulus affects women's unplanned shopping behavior more than men's (Inman et al., 2009).</p> <p><b>*Age:</b> Cheating by the seller, dirty shopping environment, and bad scents affect older consumers more than younger ones (d'Astous, 2000).</p> <p><b>*Education level:</b> According to Loudon and Bitta (1993), there is a positive correlation between the quality of buying decisions and education level.</p> <p><b>*Marital status:</b> According to Mitchel (1999), married and single people have different mindsets and decision processes for buying decisions.</p>  |

As the literature indicates, various environmental and individual factors in the store atmosphere may affect consumer buying decisions. To reveal the impact of these variables on the compulsive buying decision, participants have answered both qualitatively and quantitatively questions.

### **3. METHODOLOGY**

This study aims to understand the effect of situational factors on compulsive buying behavior. For achieving the most reliable outcome, qualitative and quantitative analysis methods have been applied together.

In the beginning, a careful literature review was made to determine the situational factors that may affect compulsive buying. As a result, a total of 52 people (Average age: 34; 19 female and 33 male) have participated in qualitative data collection. During this data collection phase, participants answered the questions about their opinions on the situational factors of shopping places by depth interview technique. The interviews were prepared according to the Mehrabian-Russel (1974) stimulus-organism-response (SOR) model. First, the answers were decoded, and then the frequencies of each issue were analyzed by QDA Miner qualitative data analysis software.

After decoding the qualitative data, a quantitative questionnaire has prepared, and a total of 776 participants filled the questionnaire form online. 5-point Likert scale (1: Totally agree; 5: Totally disagree) was applied for data collection. The collected data was analyzed with SPSS quantitative data analysis software. Frequency analysis, reliability analysis, and factor analysis were applied to the collected data. Then confirmatory factor analysis was made by using AMOS.

Qualitative data was collected between 1 October 2017 and 1 November 2017; the quantitative data was collected between 1 July 2018 and 1 September 2018.

All the participants of the qualitative and quantitative data collection phases have taken part in the research by convenience sampling method, and they are all residents of Ankara/Turkey.

#### **3.1. Ethical Issues**

In this study, all rules stated to be followed within the scope of the “Higher Education Institutions Scientific Research and Publication Ethics Directive” were followed. In addition, actions stated under “Actions Against Scientific Research and Publication Ethics” were not applied in this research.

**4. FINDINGS**

**4.1. Analysis of the Qualitative Data**

Qualitative data has been collected from a total of 52 participants. The general demography of the participants is:

- 33 males,
- 19 females,
- The average age is 34.

After the frequency analysis made by QDA Miner, 34 parameters of situational factors that may affect compulsive buying were detected. The frequency table of the parameters is below.

**Table 3:** Frequency Table of the Quantitative Parameters

|     |        |     |        |     |        |
|-----|--------|-----|--------|-----|--------|
| P1  | %56,30 | P13 | %31,30 | P24 | %18,80 |
| P2  | %50    | P14 | %25,00 | P25 | %18,80 |
| P3  | %50    | P15 | %25,00 | P26 | %18,80 |
| P4  | %50    | P16 | %25,00 | P27 | %18,80 |
| P5  | %50    | P17 | %25,00 | P28 | %18,80 |
| P6  | %43,80 | P18 | %25,00 | P29 | %18,80 |
| P7  | %37,50 | P19 | %18,80 | P30 | %18,80 |
| P8  | %37,50 | P20 | %18,80 | P31 | %18,80 |
| P9  | %7,50  | P21 | %18,80 | P32 | %18,80 |
| P10 | %31,30 | P22 | %18,80 | P33 | %18,80 |
| P11 | %31,30 | P23 | %18,80 | P34 | %18,80 |
| P12 | %31,30 |     |        |     |        |

**4.2. Analysis of the Quantitative Data**

After the frequency analysis made by QDA Miner, 34 parameters of situational factors that may affect compulsive buying were detected. The frequency table of the parameters is below.

After composing the 5 Likert scales for 18 questions, the questionnaire has delivered. The general demographic composition of the participants is below.

**Table 4:** The General Composition of the Participants

| <b>Gender</b>          |     | <b>Marital Status</b>    |     |
|------------------------|-----|--------------------------|-----|
| Male                   | 415 | Married                  | 496 |
| Female                 | 361 | Single                   | 280 |
| <b>Age</b>             |     | <b>Monthly Income</b>    |     |
| Between 18-28          | 119 | 1603 TL or less          | 62  |
| Between 29-39          | 428 | Between 1604-2800 TL     | 85  |
| Between 40-50          | 80  | Between 2801-3800 TL     | 135 |
| Between 51-61          | 59  | Between 3801-4800 TL     | 123 |
| 62 or above            | 90  | Between 4801-5800 TL     | 97  |
| <b>Education Level</b> |     | Between 5801-6800 TL     | 69  |
| High School            | 61  | Between 6801-7800 TL     | 77  |
| Associate Degree       | 94  | Between 7801-8800 TL     | 50  |
| Bachelors Degree       | 525 | Between 8801-9800 TL     | 21  |
| Master or Doctorate    | 96  | Between 9801 TL or above | 57  |

The first testing step of the quantitative questionnaire is reliability analysis. The Cronbach's Alpha value of the questionnaire is .929, which is higher than the generally accepted lower limit of .6. Therefore, according to this value, it can be said that this questionnaire is reliable. The results of the reliability analyses are given in the table below:

**Table 5:** Reliability Statistics

| Number of Questions | Cronbach Alpha Value | Convenience   | Reference          |
|---------------------|----------------------|---------------|--------------------|
| 18                  | .929                 | $\alpha > .6$ | Hair et.all (2010) |

After achieving an acceptable Cronbach's Alpha Value, factor analysis was applied to the questionnaire, and three questions were eliminated.

**Table 6:** Factor Analysis

| Dimension   | Question   | Factor Load | Exp. Var. |
|---|--|-------------|-----------|
| Dimension-1<br>Physical Environment                             | I may get distracted and make an unnecessary buying because of the type of music played in the shopping place.                         | .907        | 36,31%    |
|   | I may get distracted and make an unnecessary buying because of the music's volume level in the shopping place.                         | .876        |           |
|   | I may get distracted and make an unnecessary buying because of the high heat level in the shopping place.                              | .853        |           |
|   | I may get distracted and make an unnecessary buying because of the scents in the shopping place.                                       | .844        |           |
|   | I may get distracted and make an unnecessary buying because of the colors applied to the design of the shopping place.                 | .837        |           |
|   | I may get distracted and make an unnecessary buying because of the crowd in the shopping place.  | .809        |           |
|   | When it takes so much time for me to arrive at the shopping place, I may make an unnecessary buying to make it worth the time I waste. | .634        |           |
| Dimension-2<br>Conspicuous Consumption (Effect of Other People) | I may make an unnecessary buying to look different to the people with me in the shopping place.  | .877        | 24,69%    |
|   | One of the reasons for me to buy like a possessed person is my desire to make a show up to other people around me.                     | .854        |           |
|   | I may make an unnecessary buying for just getting praised by the people around me in the shopping place.                               | .823        |           |
|   | When I go to a shopping place with my friends, the possibility of buying something I do not need increases.                            | .620        |           |
|   | I would like to have the things that are newly introduced to the market before everyone else.  | .588        |           |
| Dimension-3<br>Effect of the Promotion                          | When there is a discount on a product, even though I do not need it, the possibility of buying this product increases for me.          | .848        | 13,20%    |
|   | When there is a promotion activity in the shopping place, I may make an unnecessary buying just because of this.                       | .801        |           |
|   | The product return policy of the places I am shopping is quite an important issue for me.  | .619        |           |
| Total Variance Explained  |  |             | 73,98%    |

According to the factor analysis, the questionnaire has three dimensions and 15 items that can explain almost 74% of the total variance.

**Table 7:** Results of Confirmatory Factor Analysis for the Situational Factors

| Value Name | Model Result | Acceptable Model Fit Interval    | Reference                            |
|------------|--------------|----------------------------------|--------------------------------------|
| (CMIN/DF)  | 2,495        | $2 \leq \text{CMIN/DF} \leq 5$   | (Marsh & Hocevar, 1985; Awang, 2012) |
| (CFI)      | .961         | $.90 \leq \text{CFI}$            | (Noudoostbeni et al., 2008)          |
| (GFI)      | .913         | $.90 \leq \text{GFI} \leq .95$   | (Hooper et al., 2008)                |
| RMSEA      | .077         | $.05 \leq \text{RMSEA} \leq .08$ | (Noudoostbeni et al., 2008)          |

According to the AMOS output; CMIN/DF value is 2.543, the RMSEA value is 0.077, CFI and GFI values are .938 and .917, which are all between the acceptable limits.

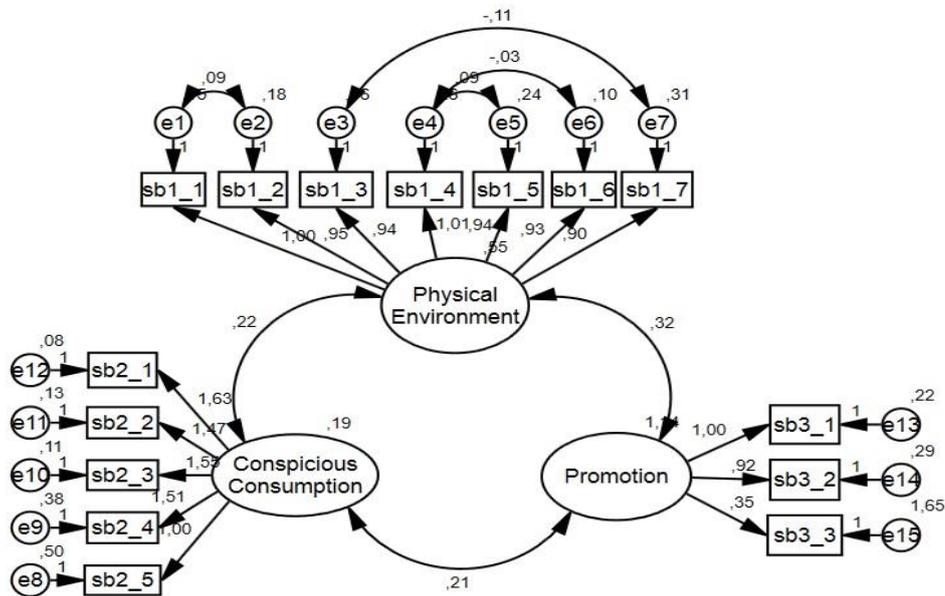


Figure 3: Structural Equation Model

Table 8: Construct Validity Statistics

| Dimension |     | Std.Er. | Crit.Value | P   |
|-----------|-----|---------|------------|-----|
| D-1       | D-2 | .035    | 6,304      | *** |
| D-1       | D-3 | .059    | 5,438      | *** |
| D-2       | D-3 | .041    | 5,011      | *** |

As seen in the confirmatory factor analysis table, all the P values are lower than .05, which means the questionnaire has construct validity.

## 5. DISCUSSION AND CONCLUSION

The applied questionnaire form has produced an agreeable Cronbach's Alpha value of .929. The total variance explained ratio of factor analysis is 73,98%, which is convincing. The factor analysis also revealed that the concept has three dimensions. These dimensions were named as; physical environment, conspicuous consumption (effect of other people), and the effect of the promotion. The confirmatory factor analysis's values demonstrated that the model also has construct validity. We have used the information from the qualitative research to interpret this structure.

Colors, scents, music, heat, the time for arriving at the place, and the perceived crowd of the shopping environment might cause a handicap for the people who have compulsive buying tendencies by distracting them. According to the literature, different environmental parameters like these may have various stimulant effects on the consumers' mood and buying decisions (Donovan & Rositter, 1982; Hart & Davies, 1996; Tai & Fung, 1997; Oakes, 2000). Some research shows a significant effect of the music's genre, tempo, and volume on the consumers' arousal level (Milliman, 1982; Yalch & Spangenberg, 1988; Oakes & North, 2008). Milliman (1982) compared the situations between with and without music and found that consumers spent 38% more when music was in the shopping environment. Consumers tend to stay more in the shopping environment when the physical components are coherent with the background music (Baker et al., 1992; Grewal et al., 2003). Exposure to the stimulants of the shopping environment increases as the consumer stays in the shopping environment. That may cause an irrational buying decision for those with compulsive buying tendencies. No research was found in the literature review about the relationship between compulsive buying behavior and the effect of music in the shopping environment. However, Ma et al. (2017) assert that high-tempo-fast music may trigger buying decisions. Opposite to this, Milliman (1982; 1986) indicates low tempo-slow music makes people stay more in the shopping

environment, and while the time they spend increases, they buy more. The findings of the qualitative phase are pretty parallel to this. A participant said, *“while they play the songs I like, I cannot move or leave. While listening to the songs, time flows like a river. But then I feel like everyone around stares at me like he is just sitting in this place without buying anything. I feel like they are condemning me as if I am a freeloader. So that pushes me to order something. You know what? If I could only stand up to leave, I could get rid of that, but the music keeps me sitting. I am not always like that; probably this is something about my mood at that very moment”*. He was asked about his mood at that very moment, and he said, *“I can say depressed, I guess music casts a cloud on that feeling”*; he was also asked about his opinions about the money he spends on such situations *“Feel like, well.. Take my money and leave me alone!”* (Male, Age: 40; got CB tendency)

Researchers mentioned the heat of shopping places as a substantial environmental component (Bardzil & Rosenberger III, 1996; Juhari et al., 2002; Bäckström & Johansson, 2006; Berman & Evans, 2010), but there is no discernable information about that issue in the literature. On the other hand, Baker (1987) emphasizes that overheated or cold shopping places may cause customer avoidance. According to the participants, a high heat level in the shopping environment has a forceful impact on their avoidance decisions. They also mentioned that when the shopping environment is cold, they prefer to withstand as much as possible if they enjoy being there.

Even if they cannot notice, consumers may react to the scents of the shopping environment (Ward et al., 2007; Bradford & Desrochers, 2009). Consumers tend to spend more time in the shopping environment when they appreciate the scent of the place (Spangenberg et al., 2006). Consumer reactions against the scent are similar to the ones about the heat. According to the participant statements, they tend to stay if they like the scent and try to withstand otherwise. Participants indicated that they would trace the scents like fresh food if they are hungry. The scent of their favorite foods also prompts them to trace and find the source of the scent. A participant said that *“sometimes it is coffee or bread. These scents provoke me a lot. Whenever I follow the scent, I have the same fate. After I passed the payment point, all I have is a plate, towel, or whatever but no bread or coffee”* (Female, 32). So it can be said that stores that sell both fresh food and non-food are the more risky places for people who suffer from compulsive buying disorder. After reacting to the smell of fresh food and following it, the consumer may also confront many additional situational factors (music, colors, sales personnel, etc.). That situation may distort the cognitive

balance of the consumer. This situation may lead to a compulsive buying decision.

Findings show that when the perceived crowd level increases, that causes a distraction on the consumer, and an avoidance tendency arises. Bateson and Hui (1987) mention that when the level of the perceived crowd increases, that may cause a disappointment for the consumers. These may lead to an avoidance decision from the shopping place. Researchers base this situation on the increasing pressure since those limitations the motion (Machleit et al., 2000; Bell et al., 2001; Lee et al., 2011). A participant in the qualitative research process mentions that *"I cannot do shopping in crowded places. Sometimes I feel that everyone around stare and condemn me because of what I am doing. That makes me feel bad"* (Female, Age: 28, got CB tendency). It can be said that when the person experiences an unacceptable level of a crowd in a shopping environment, that may lead this person not to visit the mentioned place again as a result of total avoidance.

Sales promotions (buy one get one free, giving shopping checks for spending a certain amount of money, etc.) or sales discounts may cause irrational buying decisions for consumers with compulsive buying tendencies. Retailers apply these practices to convince consumers to buy more (Obeid, 2014). Such tactics are more successful when the brand awareness level is low (Alnazer, 2013). Prasad (1975) determines that 39% of the consumers who visit the department stores and 62% of those who visit the discount stores make an unplanned buying. However, Prasad (1975) did not mention the rate of compulsive buyers in his research. According to Ratih and Rahanatha (2020), sales promotion is a significant trigger for impulsive buying behavior. Based on the participant statements, consumers who have compulsive buying tendencies convince themselves to shop when they confront sales promotions. They mention that they are stocking up on such products. Because they believe that they will use them in the future, this perspective makes them feel more comfortable when making the buying decision since they are eliminating a future need. The level of regret decreases with this thought. A participant said, *"Discounts may make me buy some products which I do not need. In this case, the important thing for me is admiring the product. I feel like sooner or later I will use it, or at worst I can give it someone as a favor or gift"* (Female, Age: 32, got CB tendency). Another one said, *"I lose my mind when I see discounts or promotions. This shoe store.. They have opened their third branch by investing the money I spent there!!"* (Female, Age: 24, got CB tendency).

Some participants stated that they might be affected by the appearance and-or persuasive abilities of the salesperson. In other words, the features of the

salesperson may trigger compulsive buying behavior. On the other hand, some participants mentioned that they had already got convinced to make an irrational buying, but they needed one last touch to take action. In this case, the salesperson is just the final point of the decision as a trigger. Some researchers present the effect of the salesperson as a determinant for the consumer buying decision (Bagozzi, 1978; Babin et al., 1995). According to Raajpoot et al. (2008), men are more affected by sales personnel than women. In this research, there is no significant differentiation found based on sex for this subject. According to the answers from face-to-face interviews, consumers with compulsive buying tendencies are more open to any external stimulus to getting convinced to make a compulsive buying decision. So, the encouraging attitude of the salesperson may affect compulsive buyers as an external approval mechanism. A participant of this phase said, *“When I want to get convinced to buy something, surely the dialogue with the salesperson might work on me”* (Female, Age: 32, got CB tendency).

Another finding of this research is; that those compulsive buyers may get triggered if someone they know accompanies them in the shopping environment. Nicholls et al. (1997) assert that companions would have a critical effect on consumer buying decisions. The reason for this trigger is conspicuous consumption. Since compulsive buyers are trying to escape reality, they may also want to look different than whom they really are, and shopping is a way for this. This issue refers to the need for acceptance and approval by the community. Also, it can be said that compulsive buyers take pleasure in manipulating other people's perceptions about them. Participants mentioned that if they go shopping with their family, their compulsive buying decision possibility decreases since their family members prevent them. A participant says, *“I hate going shopping with my mother. She always stops me while I decide to buy something”* (Female, Age: 28, got CB tendency). Rook and Fisher (1995) indicate that consumers' possibility of making an irrational buying decision increases when they go shopping alone. Undehill (2000; Cited by: Odabasi & Baris, 2005:259) researched the time women spend in the shopping environment and founds average times according to whom they came with:

- If they are with another woman: 8 mins 15 secs
- If they are with their children: 7 mins 19 secs
- If they are alone: 5 mins 2 secs
- If they are with a man: 4 mins 41 secs

So, it can be said that the amount of money and time spent relates to who the consumer is together in the shopping environment.

As a result of this research, it can be said that the design elements like colors, music, scents, heat, etc. used by the retailers for the shopping environment affect consumers who have compulsive buying disorder. These consumers should determine the environmental components which drive them to make a compulsive buying decisions. Victims of compulsive buying behavior have better keep themselves away from those triggers of shopping environment components to not suffer from the results of their irrational buying behaviors.

Executives of the retailers should consider the results of this research on an ethical basis for public welfare because not only compulsive buyers but also their social environment suffers from the consequences of compulsive buying disorder. Therefore, they can decide to design store atmosphere components as triggers or inhibitors for compulsive buyers.

The economic aspect of compulsive buying behavior is another substantial issue. The alternative cost of compulsive buying is high for both victims. They may lose the opportunity to buy their real needs and/or make savings because of a lack of financial resources.

According to our findings, compulsive buying tendency is highest between 18-28 years and the lowest for 62 years and older ones, and the components of the store atmosphere are triggering that harmful behavior. Literature also confirms that younger ones have the highest compulsive buying behavior tendency (Shoham & Brencic, 2003; Saleem & Salaria, 2010). That means the compulsive buying behavior could be detected and taken under control at an early stage. Vickers (2004) considers consumer policy a "fundamental problem to prevent, cure or remedy." We are thinking in the same way as Vickers (2004) and believe that the state should take youngsters' compulsive buying behavior as a serious public health issue and apply preventive healthcare services and awareness programs to save them, their families, and their social environment. Considering there is no evidence-based pharmacologic treatment for compulsive buying behavior (Black, 2007; Lejoyeux & Weinstein, 2010; Soares et al., 2016), the importance of awareness arises for the potential compulsive buyers. Awareness programs could be applied to increase the individuals' information level and teach them how to avoid that state of mood. The state can combine primary healthcare services for preventive actions and schools for awareness activities. Since Self-Completion Theory asserts that consumption is a way for reducing the gap between the ideal-self and actual-self (Wicklund & Gollwitzer, 1981), that impulse may drive people to be more materialistic as a result of low self-esteem and or inferiority complex (Yurchisin et al., 2004). Therefore, preventive and awareness programs may have better work on these issues first. Scales of self-esteem and inferiority complex can be

applied to the youngsters to confirm the possible compulsive buyers and prevent them from that behavior. The programs' content must contain the impact of store atmosphere components on compulsive buying behavior and raise awareness for the target audience. The programs' results should be evaluated periodically to measure the effectiveness and benefits of the implementations for solid evidence not to waste public resources.

For further research, we believe our questionnaire could be used with various scales for explaining and understanding the different sights of the subject. Some of our suggestions are; Attitude Toward the Act (Ajzen & Fishbein, 1980), Materialism (Richins, 1987), Attitude Toward the Product (Bosmans & Baumgartner, 2005), and various personality scales (such as The Five-Factor Personality Inventory).

#### **6. CONFLICT OF INTEREST STATEMENT**

There is no conflict of interest between the authors.

#### **7. FUNDING ACKNOWLEDGEMENTS**

No funding was received from any institution for his study.

#### **8. AUTHOR CONTRIBUTIONS**

AB, ZE: Idea;

AB, ZE: Design;

ZE: Inspection;

ZE: Data collection;

AB: Analysis;

AB: Literature review;

ZE: Critical review.

#### **9. ETHICS COMMITTEE STATEMENT AND INTELLECTUAL PROPERTY COPYRIGHTS**

Ethical principles were followed in the study, and necessary permissions were obtained following the intellectual property and copyright principles.

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