

ORIGINAL RESEARCH

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A study of compulsive buying disorder comorbidity in psychiatric outpatients attending a foundation university outpatient clinic

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Abstract

The aim of this study was to screen for the comorbidity of compulsive buying disorder with psychiatric disorders and associated sociodemographic variables. One hundred and ninety-six volunteering psychiatric patients attending Üsküdar University Outpatient Psychiatry Clinic formed the study sample. Compulsive buying disorder (CBD) was screened with Compulsive Buying Scale (CBS). CBD was found among 17 people (8.67%) in this sample of 196 patients (female n= 127, 67.4%; male n=69, 32.6%). Psychiatric diagnosis of patients with CBD were as follows: major depressive disorder (n=3,1.5%), cyclothymic disorder (n=2,1%), mood disorder not otherwise specified (NOS) (n=2, 1%), bipolar disorder (n=2, 1%), anxiety disorder NOS (n=2, 1%), obsessive compulsive disorder (n=2,1%), substance dependence (n=1, 0.5%), Tourette disorder (n=1, 0.5%) and generalized anxiety disorder (n=1,0.5%). In this cross-sectional screening study there seems to be a remarkable comorbidity of CBD and mood disorders. CBD may not be an independent entity but a symptom of mood disorders. In all patients with a mood disorder buying behavior should be evaluated routinely. In those with a problematic buying behavior, any mood disorder should be examined.

Keywords: Compulsive buying disorder, shopping addiction, mood disorder, problematic buying behavior

Introduction

Abnormal shopping behavior has drawn the attention of clinicians for more than 100 years, but this has not been a topic that is sufficiently focused on until 30 years ago [1]. In the beginning of the 20th century E. Kraepelin and E. Bleuler classified compulsive buying disorder (CBD) under the name of oniomania among impulse control disorders in their textbooks. Kraepelin mentioned oniomania as mania of buying and considered this situation as a type of pathological impulse [2]. Bleuler defined oniomania as a reactive impulse or impulsive insanity as in the cases of pyromania and kleptomania [2].

In addition to “compulsive buying disorder”, the literature contains different denominations about the topic which include compulsive buying, impulsive buying, shopping addiction / addictive shopping behavior and buying addiction / addictive buying. DSM-III-R includes CBD among impulse control disorders that cannot be named otherwise [3]. On the other hand, CBD was not included as a separate diagnosis in DSM-IV-TR, DSM-5 and ICD-10.

Some authors considered CBD to be included in behavioral addictions [4-8]. According to Lejoyeux and Weinstein who defined shopping addiction, buying behavior emerges in an uncontrollable and repetitive fashion, the individual spends most of their time by shopping or thinking of shopping, always buys more than they have planned to, and keeps shopping despite the negative outcomes of it [9]. On the other hand, it was also argued that there are not enough data to classify this concept as addiction [10]. Some cases with CBD diagnosis have similar clinical pictures as those of OCD, impulse control disorder or behavioral addiction [11,12].

As the diagnostic criteria of CBD are not clear, epidemiology studies found the prevalence of CBD as 1.1-16% [13-17]. Clinical and field studies reported that 80-95% CBD cases were women [9,12,18-21]. While men are more interested than women in electronics, automotive or hardware, women's interest towards clothes, shoes and CDs is higher than men's [2]. A study on differentiation of hedonic shopping based on sex in Turkey found that female consumers gained more pleasure from shopping than male consumers [22]. Various studies reported that CBD starts towards the end of adolescence and becomes a noticeable issue in 30s [9,12,17,18,20,23].

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Alain d'Astous likened the relationship between CBD and income to a bell curve and stated that CBD is more likely to be seen among middle-income individuals in comparison to low-income and high-income individuals [24]. Lejoyeux et al. found that the ratio women with CBD who were married (66%) was lower than that of the control group (85%) [25]. Two other studies did not find a significant relationship between marital status, education levels or employment [17,26].

As there are not enough studies on CBD and its clinical picture could not be defined clearly, its etiology is not completely known [2]. CBD's increased presence in developed country may be explained by cultural mechanisms. Free market economy, breadth of product ranges and being able to access these, having a disposable income and having enough time for these activities may be influential in CBD development. This is why CBD prevalence is low in underdeveloped countries (except among the wealthy).

CBD may be evaluated with a neuropsychiatric approach that focuses on inhibition, self-control and rule-based behaviors. While the effectiveness of antidepressants in treatment indicates serotonergic dysfunction, Devor et al. could not find an association between CBD and two serotonin transporter genes [11,27]. It was also proposed that the DRD1 receptor gene and opioid receptors have role in the etiology of CBD [28-30].

Compulsive buying is founded on negative moods, lack of self-esteem, perfectionism, the exclusivity and opportunities of buying something, difficulties in making decisions and incorrect beliefs about the emotional outcomes of buying [31]. Tamam et al. argued that individuals with low self-esteem increase their self-esteem by buying, and this way, they cope with stress, rejection and depression [32]. In this case, compulsive shoppers see the act of shopping as a way to escape from depressive thoughts. It was reported that CBD cases have higher levels of negative feelings such as depression, anxiety, boredom, self-criticizing thought or anger before the act of shopping [33]. Individuals with depressive moods tend to associate objects of consumption with emotional concepts rather than their functions [34].

Cross-sectional studies reported that while fluctuations are seen in the severity and intensity of CBD, it is chronic [18,20]. While the picture is continuous, and improvements longer than a month are not seen in some CBD cases, the disorder is periodic in others [13]. While these episodes are encountered hourly in some cases, they emerge one a month in others. While CBD signs are encountered along the years, holidays, birthdays and special days like the New Year's Eve carry more risks for the progress of the disease [2,18].

CBD may be seen in combination with axis-1 and axis-2 disorders. It is known that especially mood, anxiety, eating, impulse control and substance abuse disorders accompany CBD cases [12,20]. The literature reported that CBD is accompanied by a mood disorder by 21-100% [2,12,23]. CBD and impulse control disorders are seen together by 21-46% [12,18,20]. While a study suggested that there was CBD diagnoses in 17.6% of cases of bulimia nervosa, another study did not find any relationship [35,36]. CBD accompaniment was reported in 45.6% of women with nicotine addiction [37]. Güngör et al. reported that they found CBD in 3.7% of 81 alcohol addicts [38].

Turkey is a developing country. As a result of the increasing number of shopping malls, online shopping websites and easily accessible credit cards, there is a risk for the buying behavior in Turkey to become problematic. The data on CBD prevalence in Turkey is limited to a small number of studies. This study aimed to investigate the prevalence of compulsive buying behavior in outpatients with a psychiatric disorder based on the DSM-IV-TR criteria who visited a private psychiatry clinic and the relationship of this prevalence with sociodemographic variables.

Material and Methods

The design and the sample

The sample of the study consisted of 196 adult volunteers who visited the Üsküdar University Neuropsychiatry Medical Research and Training Center between the dates of 2.11.2016 and 07.12.2016 with diagnoses of psychiatric disorders based on DSM-IV-TR diagnostic criteria. All the participants signed informed consent forms. During the five months period of the study, some patients had visited the clinic more than once for their follow-up appointments. After the exclusion of the repeated visits, 1210 individuals in total visited the clinic. The authors contacted all the participants personally, explained the procedure and handed the questionnaires. Most of the cases refused to fill out the questionnaires due to lack of time. 35 people including those who filled out the questions incompletely (n=18), those who were younger than 18 years old (n=7), those whose responses were lost (n=4) and those without an axis-1 diagnosis (n=6) were excluded. As a result, the questionnaires of 196 people were accepted to be valid and analyzed.

Data collection tools

Sociodemographic Information Form: Contains questions related to age, sex, marital status, socioeconomic status, place of growing up.

Compulsive Buying Scale (CBS): Yüncü and Kesebir conducted the Turkish validity and reliability study of the scale which was developed by Valence et al. [39,40] It is a 5-point Likert-type scale filled out by the participant and contains 12 statements about the buying behavior of the person. In the ROC (Receiver Operating Characteristic) curve, its scale sensitivity was 0.790, specificity was 0.995, and prevalence was calculated as 9.6% in a 95% confidence interval. Internal consistency of the scale is 0.80, and its cutoff point was 42.

Determination of psychiatric diagnoses: In this study which is the master's thesis of the second author, the supervising faculty member retrospectively examined the files of the participants, contacted the physicians/psychiatrists of the patients, and determined the diagnoses based on DSM-IV-TR. No structured diagnostic tool such as SCID or MINI were used, because of time constraints. Each patient file includes 8 pages of information regarding the patient's sociodemographics, main complaints, history of the current problems, previous psychiatric history, mental status examination, vital signs knowledge, medical history and a formulation section where the treatment aims are summarized and the patient's psychiatric status is formulated according to the 5 axis approach of DSM-IV-TR. Each patient fills out psychiatric self-report scales SCL-90, Beck Anxiety Inventory and Beck Depression Inventory before their psychiatric examination. All this information was

reviewed daily by the first and third authors and if there was a difficulty of giving a diagnosis then the primary psychiatrist or psychologist of the patient was consulted. The diagnosis that was made according to the presenting symptoms on the day of filling out the test was accepted as the primary psychiatric diagnosis and was included in the analysis.

Statistical analysis

The data that were obtained in the study were analyzed using the SPSS 20.0 software. While the psychiatric diagnoses and sociodemographic variables of the participants were analyzed with CBS scores, tables of frequencies (percentages), cross-tabulations and chi-squared tests were used.

RESULTS

Among the 196 individuals (female n=127, 67.4%; male n=69, 32.6%), CBD was determined based on CBS in 17 individuals (8.67%). Among those with CBD, 76.5% (n=13) were female and 23.5% (n=4) were male. Among those without CBD, 63.7% (n=114) were female and 36.3% (n=65) were male. The mean ages were 31.3 for women with CBD (n=13), 34.5 for women without CBD (n=114), 24 for men with CBD (n=4) and 27.9 for men without CBD (n=65). Table 1 shows the sociodemographic findings.

Table 1. Sociodemographic findings

		CBD (+) N	CBD (-) N	p *
Gender	Women	13	114	p=0.292
	Men	4	65	
Age	18-30	11	93	p=0.517
	31-40	3	50	
	41-50	3	25	
	>50	0	11	
Education	8 years of basic education	4	8	p=0.017
	high-school	3	2	
	high-school	6	65	
	university	5	83	
	masters degree	2	23	
Marital status	single	10	103	p=0.597
	married	7	66	
	divorced	0	10	
Monthly income	0-1000 tl/month	3	28	p=0.555
	1001-3000 tl/month	3	58	
	3001-5000 tl/month	6	44	
	5001-10000 tl/month	5	40	
	>10000 tl/month	0	9	
Place of residence	metropole	7	58	p=0.762
	city	9	108	
	province	1	13	

*p values reflect chi-squared analysis results

Among the cases diagnosed with CBD, the diagnoses were major depressive disorder (MDD) in four (2%), cyclothymia in two (1%),

mood disorder not otherwise specified (NOS) in three (1.5%), bipolar affective disorder (BD) in two (1%), anxiety disorder NOS in two (1%), obsessive compulsive disorder (OCD) in one (0.5%), substance addiction in one (0.5%), Tourette's disorder in one (0.5%) and generalized anxiety disorder for one (0.5%). Table 2 shows the distribution of the psychiatric diagnoses of the cases with and without CBD diagnosis. Regardless of CBD diagnosis, 76 individuals (38.7%) in the sample were diagnosed with a mood disorder. 11 of these cases (5.6%) satisfied the criteria for CBD diagnosis. 64.7 % of the cases that were diagnosed with CBD satisfied the criteria for a mood disorder diagnosis.

Table 2. Distribution of the psychiatric diagnoses and compulsive buying disorder comorbidity

Psychiatric diagnosis	CBD (+) N	CBD (+) %	CBD (-) N	CBD (-) %
Major Depressive Disorder	4	2.0	35 (4 of them were comorbid with other diagnoses)	17.8
Bipolar Affective Disorder	2	1.0	17 (1 of them were comorbid with other diagnoses)	8.7
Mood Disorder Not otherwise specified	3 (1 of them was comorbid with other diagnoses)	1.5	11 (1 of them was comorbid with other diagnoses)	5.6
Cyclothymia	2	1.0	2	1.0
Dysthymia	0	0	3	1.5
Obsessive compulsive disorder	1	0.5	37 (4 of them were comorbid with other diagnoses)	18.9
Panic Disorder	0	0	9 (1 of them were comorbid with other diagnoses)	4.6
Social Anxiety Disorder	0	0	12 (5 of them were comorbid with other diagnoses)	6.1
Generalized Anxiety Disorder	1	0.5	14 (2 of them were comorbid with other diagnoses)	7.1
Anxiety Disorder not otherwise specified	2	1.0	10	5.1
Posttraumatic Stress Disorder	0	0	2	1.0
Adjustment Disorder	0	0	4	2.0
Hypochondriasis	0	0	1	0.5
Somatiform Disorder	0	0	3	1.5
Body Dysmorphic Disorder	0	0	1	0.5
Dissociative Amnesia	0	0	4	2.0
Schizophrenia	0	0	4	2.0
Schizoaffective Disorder	0	0	7	3.6
Delusional disorder	0	0	1	0.5
Attention Deficit Hyperactivity Disorder	0	0	10 (6 of them were comorbid with other diagnoses)	5.1
Tourette's Disorder	1	0.5	0	0
Addictive Disorder	1	0.5	1	0.5
Disomnia	0	0	1	0.5

Discussion

This study used cross-sectional surveying to present the distribution of the cases diagnosed with CBD based on their CBS scores among 196 volunteering participants who attended the psychiatry clinic of a foundation university in Turkey, as well as accompanying psychiatric diagnoses. CBD was found in 8.67% (n=17) of the sample. This ratio, which seems low in comparison to those in the previous CBD and psychiatric comorbidity studies, may be explained by the small sample size and that a structured clinical interview which directly targeted compulsive buying was not conducted. Participants might not have considered their shopping behaviors as problematic, paid attention to their shopping tendencies, or they might have had a tendency to hide their shopping problems. This may have affected their responses to CBS and led the CBD comorbidity rates to come out low. In line with the literature, our study found CBD to be more prevalent in women (76.5% women, 23.5% men) [9,12,19-21]. According to the CBS results, the mean ages were 31.3 for women with CBD (n=13) and 24 for men with CBD (n=4), and this result was in compliance with the literature which reported that CBD starts in late adolescence and becomes a noticeable problem in early 30s [9,12,13,18,20,23]. However, our cross-sectional study did not provide information on the onset age of CBD. 58.8% (n=10) of the CBD cases were single, while 41.2% (n=7) were married. In a study conducted only with women which reported marital status, 66% of the CBD cases were married [25]. It is not possible to compare the data as Lejoyeux et al.'s study only included women. Being single might be making shopping easier by reducing financial responsibility.

While no association could be made between education levels and CBD prevalence in the literature, 10 CBD cases in our study had at least associate degrees [18,26]. Increased education level may be in parallel with purchasing power. However, the size of the sample is not sufficient for us to comment on education. 35.3% (n=6) of the CBD cases had a monthly income of 3001-5000 TL and 29.4% (n=5) had a monthly income of 5001-10000 TL. Based on our study, it may be stated that CBD is seen more frequently among individuals who are accepted to have a medium-level income status. The study by d'Astous also reported that CBD is seen more in individuals with medium-level income in comparison to those with low-level and high-level incomes [24]. As opposed to these, in a study with 44 cases, the income levels of the CBD cases were found to be lower than the mean income [41].

Among the entire sample 76 individuals (38.7%) satisfied the criteria for a mood disorder. Among those with mood disorders, 11 individuals (14.5%) were diagnosed with CBD. In other words, 64.7% (n=11) of those who were diagnosed with CBD based on CBS were also diagnosed with a mood disorder. Depressive disorder is one of the diagnoses that accompany CBD frequently [16,18,43,44]. CBD is common in depressed patients [16,18,44, 45]. According to McElroy et al.'s study, patients stated that only shopping made them feel good when they were depressed [18]. Kesebir et al. applied CBS on 100 outpatient patients who were diagnosed with bipolar affective disorder and found that compulsive buying behaviors were more frequent in these patients in comparison to the control group. Cyclothymic and irritable (changeable, volatile) traits were seen more frequently in CBD

cases [46]. In another study of 150 patients with depression, CBD rate was 14% [47]. During manic episodes, frequency of shopping may increase as a result of impulsivity. Depressive individuals may shop in order to increase their mood. Therefore, our findings regarding the relationship between mood disorders and CBD is in line with previous literature. This common co-occurrence of CBD and mood disorders may draw the attention to the question of whether CBD is a separate category of diagnosis, or is the disruption of buying behavior one of the signs that is observed in mood disorders. As stated in the introduction CBD is regarded by some authors as a behavioral addiction [4-9]. Buying behavior or preoccupation with shopping may have mood enhancing effects and the inability to shop may have mood depressing effects. People with mild or moderate depressive disorder might benefit from this rewarding effect of shopping which might result in the cycle of a behavioral addiction. So, compulsive shopping disorder may be an outcome of untreated or mismanaged mood disorder. It may be possible to understand whether CBD is a separate diagnosis that accompanies mood disorders, or it is only a sign, by longitudinally monitoring cases of mood disorders and observing their buying behaviors in remission periods.

Only one (5.8% among CBD) among the 38 OCD patients in our sample satisfied CBD criteria based on CBS. While older studies reported CBD and OCD comorbidity as 10-35%, later studies showed these ratios as 2-6% [12,14,18,20]. Our findings were partly in compliance with the literature.

Conclusion

Our study had some limitations. Psychopathology diagnosis was not made by a structured diagnosis tool due to the operational conditions of the study, and this may explain the low rates of comorbidity in the general sample [48]. Psychiatric diagnosis was made by reviewing the psychiatric examination findings stated in the participant's examination file on the day that the CBS questionnaire was applied. Psychiatric file notes may not have reflected psychiatric comorbidities sufficiently due to the lack of a structured interview.

During this examination, CBD diagnosis was made by CBS, which is a surveying tool. Diagnosis could be clarified more by noting the detailed history of the forms of shopping behavior through face-to-face interviews. The relatively small size of the sample reduced the diversity of diagnoses. Such that, the distribution of the CBD cases outside the cases of mood disorders was too rare to allow any interpretation. The power of the study may be increased by broadening the sample. Axis-2 diagnoses were also not evaluated in our study. Problems in personality structuring may lead to various behavioral disorders, as well as disorders in shopping behaviors. Future studies should investigate axis-2 characteristics in people with problematic shopping behavior. Consequently, this study which was conducted with cases that were admitted to a private psychiatry center observed a noticeable association between CBD and mood disorders. In all mood disorder cases, shopping behavior should be routinely monitored in clinical interviews. Mood disorders should be investigated in cases that show problematic shopping behaviors. Despite its limitations, our study has the qualities to add onto the low number of studies on this topic in Turkey and act as a source for future research.

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Competing interests

The authors declare that they have no competing interest

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Ethical approval

Approval for conducting the study was received from the Üsküdar University Noninvasive Research Ethics Board

Reference

- Tamam L. Kompulsif satın alma. Türkiye Klinikleri Psikiyatri Özel Dergisi 2009; 2 (Ek 1):66-74.
- Black DW. A review of compulsive buying disorder. World Psychiatry. 2007;6:14-8.
- American Psychiatric Association. Diagnostic and statistical manual of Mental Disorders (3rd ed. revised). Washington D.C: American Psychiatric Association, 1987.
- Davenport K, Houston EJ, Griffiths MD. Excessive eating and compulsive buying behaviors in women: an empirical pilot study examining reward sensitivity, anxiety, impulsivity, self-esteem and social desirability. Int J Ment Health Addict. 2012;10:474-89.
- Demetrovics Z, Griffiths MD. Behavioral addictions: past, present and future. J Behav Addict. 2012;1:1-2.
- Lo H, Harvey N. Effects of shopping addiction on consumer decision-making: web-based studies in real time. J Behav Addict. 2012;1:162-70.
- Starcke K, Schlereth B, Domass D, et al. Cue reactivity towards shopping cues in female participants. J Behav Addict. 2013;2:17-22.
- Rose S, Dhandayudham A. Towards an understanding of internet-based problem shopping behaviour: the concept of online shopping addiction and its proposed predictors. J Behav Addict. 2014;3:83-89.
- Miller P (Ed). Principles of Addiction: Comprehensive Addictive Behaviors and Disorders. First Ed. San Diego: Elsevier Inc. 2013:847-53.
- Piquet-Pessôa M, Ferreira GM, Melca IA, et al. DSM-5 and the decision not to include sex, shopping or stealing as addictions. Curr Addict Rep. 2014;1:172-6.
- McElroy S, Satlin A, Pope HG, et al. Treatment of compulsive shopping with antidepressants: a report of three cases. Ann Clin Psychiatry. 1991;3:199-204.
- Christenson GA, Faber RJ, de Zwaan M, et al. Compulsive buying: descriptive characteristics and psychiatric comorbidity. J Clin Psychiatry. 1994;55:5-11.
- Lejoyeux M, Adès J, Tassain V, et al. Phenomenology and psychopathology of uncontrolled buying. Am J Psychiatry. 1996;153:1524-9.
- Faber RJ, O'Guinn TC. Classifying compulsive consumers: advances in the development of a diagnostic tool. Adv Consum Res. 1989;16:738-44.
- Koran LM, Faber RJ, Aboujaoude E, et al. Estimated prevalence of compulsive buying behavior in the United States. Am J Psychiatry. 2006;163:1806-12.
- Mueller A, Mitchell JE, Crosby RD, et al. Estimated prevalence of compulsive buying in Germany and its association with sociodemographic characteristics and depressive symptoms. Psychiatry Res. 2010;180:137-42.
- Otero-López JM, Villardefrancos E. Prevalence, sociodemographic factors, psychological distress, and coping strategies related to compulsive buying: a cross sectional study in Galicia, Spain. BMC Psychiatry. 2014;14:101-13.
- McElroy SL, Keck PE, Pope HG, et al. Compulsive buying: a report of 20 cases. J Clin Psychiatry. 1994;55:242-8.
- Faber RJ, O'Guinn TC. A clinical screener for compulsive buying. J Consumer Res. 1992;19:459-69.
- Schlosser S, Black DW, Repertinger S, et al. Freet D. Compulsive buying: demography, phenomenology, and comorbidity in 46 subjects. Gen Hosp Psychiatry. 1994;16:205-12.
- Cooms RH (Ed). Handbook of Addictive Disorders: A Practical Guide to Diagnosis and Treatment. Hoboken, New Jersey: John Wiley & Sons Inc. 2004;411-50.
- Özdemir Ş, Yaman F. Hedonik alışverişin cinsiyete göre farklılaşması üzerine bir araştırma. Eskişehir Osmangazi Üniversitesi İ.İ.B.F. Dergisi. 2007;2:81-91.
- Koran LM, Bullock KD, Hartston HJ, et al. Citalopram treatment of compulsive shopping: an openlabel study. J Clin Psychiatry. 2002;63:704-8.
- A d'Astous. An inquiry into the compulsive side of 'normal' consumers. Journal of Consumer Policy. 1990;13:15-31.
- Lejoyeux M, Mathieu K, Embouazza H, et al. Prevalence of compulsive buying among customers of a parisian general store. Compr Psychiatry. 2007;48:42-6.
- Kukar-Kinney M, Ridgway NM, Monroe KB. The relationship between consumers' tendencies to buy compulsively and their motivation to shop and buy on the internet. J Retailing 2009;85:298-307.
- Devor EJ, Magee HJ, Dill-Devor RM, et al. Serotonin transporter gene (5HTT) polymorphisms and compulsive buying. Am J Med Genet. 1999;88:123-5.
- Comings DE. The molecular genetics of pathological gambling. CNS Spectrums 1998;3:20-37.
- Kim SW. Opioid antagonists in the treatment of impulse-control disorders. J Clin Psychiatry. 1998;59:159-64.
- Grant JE. Three cases of compulsive buying treated with naltrexone. Int J Psychiatry Clin Pract. 2003;7:223-5.
- Kyrios M, Frost RO, Steketee G. Cognitions in compulsive buying and acquisition. Cognit Ther Res. 2004;28:241-58.
- Tamam L, Diler RS, Özpoyraz N. Kompulsif satın alma: bir gözden geçirme. Türk Psikiyatri Derg. 1998;9:224-30.
- Miltenberger RG, Redlin J, Crosby R, et al. Direct and retrospective assessment of factors contributing to compulsive buying. J Behav Ther Exp Psychiatry. 2003;34:1-9.
- Kyrios M, McQueen P, Moulding R. Experimental analysis of the relationship between depressed mood and compulsive buying. J Behav Ther Exp Psychiatry. 2013;44:194-200.
- Black DW, Repertinger S, Gaffney GR, et al. Family history and psychiatric comorbidity in persons with compulsive buying: preliminary findings. Am J Psychiatry. 1998;155:960-3.
- Mitchell JE, Redlin J, Wonderlich S, et al. The relationship between compulsive buying and eating disorders. Int J Eating Disorders. 2002;32:107-11.
- Lejoyeux M, Kerner L, Thauvin I, et al. Study of impulse control disorders among women presenting nicotine dependence. Int J Psychiatry Clin Pract. 2006;10:241-6.
- Güngör BB, Aşkın R, Taymur İ, et al. Alkol bağımlılığında obsesif kompulsif bozukluk ve dürtü kontrol bozukluğu ek tanısı ile dürtüsellik, kompulsivitenin değerlendirilmesi. Düşünen Adam J Psychiatry Neurolog Sci. 2014;27:233-41.
- Valence G, d'Astous A, Fortier L. Compulsive buying: concept and measurement. J Consumer Policy. 1988;11:419-33.
- Yuncu Z, Kesebir S. Compulsive buying scale: validity, reliability and its psychometric characteristics in our society. J Dependence. 2014;15:142-9.
- Black DW, Monahan P, Schlosser S, et al. Compulsive buying severity: an analysis of compulsive buying scale results in 44 subjects. J Nerv Ment Dis. 2001;189:123-6.

42. Preedy VR (Ed). Neuropathology of Drug Addictions and Substance Misuse: Volume 3. First Ed. London: Academic Press. 2016;993-1007.
43. Williams AD. Quality of life and psychiatric work impairment in compulsive buying: increased symptom severity as a function of acquisition behaviors. *Compr Psychiatry*. 2012;53:822-8.
44. Lejoyeux M, Tassain V, Solomon J, et al. Study of compulsive buying in depressed patients. *J Clin Psychiatry*. 1997;58:169-73.
45. Kesebir S, İřitmez S, Gündoğar D. Compulsive buying in bipolar disorder: is it a comorbidity or a complication? *J Affect Disord* 2012; 136(3):797-802.
46. Annagür BB, Tamam L. Depresyon hastalarında dürtü kontrol bozuklukları eş tanıları. *Arch Neuropsychiatry*.2011;48:22-30.
47. Annagür BB, Tamam L. Depresyon hastalarında dürtü kontrol bozuklukları eş tanıları. *Arch Neuropsychiatry*.2011;48:22-30.