



The need to consume: Hoarding as a shared psychological feature of compulsive buying and binge eating

Cristiana Nicoli de Mattos^{a,*}, Hyoun S. Kim^b, Emilie Lacroix^b, Marinalva Requião^a, Tatiana Zambrano Filomensky^a, David C. Hodgins^b, Hermano Tavares^a

^a Impulse Control Disorders Outpatient Unit, Institute of Psychiatry, Hospital das Clínicas HCFMUSP, Faculdade de Medicina, Universidade de São Paulo, São Paulo, Brazil

^b Department of Psychology, University of Calgary, Canada

ARTICLE INFO

Keywords:

Compulsive buying behavior
binge eating
hoarding
impulse control disorder

ABSTRACT

Introduction: Compulsive buying and binge eating are two frequently co-occurring psychiatric conditions. Hoarding, which is the psychological need to excessively gather and store items, is frequently associated with both compulsive buying severity and binge eating severity. In the present study, we explored whether different dimensions of hoarding are a shared feature of compulsive buying and binge eating.

Method: Participants consisted of 434 people seeking treatment for compulsive buying disorder. Registered psychiatrists confirmed the diagnosis of compulsive buying through semi-structured clinical interviews. Participants also completed measures to assess compulsive buying severity, binge eating severity, and dimensions of hoarding (acquisition, difficulty discarding, and clutter). Two-hundred and seven participants completed all three measures.

Results: Significant correlations were found between compulsive buying severity and the acquisition dimension of hoarding. Binge eating severity was significantly correlated with all three dimensions of hoarding. Hierarchical regression analysis found that compulsive buying severity was a significant predictor of binge eating severity. However, compulsive buying severity no longer predicted binge eating severity when the dimensions of hoarding were included simultaneously in the model. Clutter was the only subscale of hoarding to predict binge eating severity in step two of the regression analysis.

Conclusion: Our results suggest that the psychological need to excessively gather and store items may constitute a shared process that is important in understanding behaviors characterized by excessive consumption such as compulsive buying and binge eating.

© 2018 Elsevier Inc. All rights reserved.

1. Introduction

Compulsive buying behavior is defined as frequent buying episodes or impulses to buy that are experienced as irresistible or senseless [1]. Compulsive buying affects approximately 4.9% of the general population [2] and is associated with marked personal, social, and occupational impairment, as well as distress and financial difficulties [3]. Compulsive buying is also commonly associated with psychiatric comorbidity, with approximately 90% of individuals with compulsive buying reporting at least one other lifetime psychiatric disorder [4]. Of interest to the present research, binge eating is a psychiatric co-morbidity that has commonly been found to co-occur with compulsive buying [5].

Binge eating episodes are defined as episodes in which an individual consumes an objectively large amount of food within a

discrete time period, accompanied by a sense of loss of control over the binge eating behavior [6]. Recurrent binge eating is the core symptom of binge eating disorder, which is estimated to occur in 2.8% of the general population [7]. Binge eating episodes may also occur within the context of bulimia nervosa and anorexia nervosa binge/purge subtype [8]. Previous research has found that people with compulsive buying behavior are significantly more likely than those without compulsive buying behavior to report recurrent episodes of binge eating (33.3% vs 4.2%) [7]. In fact, as many as 35% of people with compulsive buying may have a co-morbid diagnosis of an eating disorder [1]. Similarly, compulsive buying is the most prevalent impulse control disorder among people with eating disorders, co-occurring in 11.8% [9] of people with eating disorders in general and in 17.6% [10] of people with bulimia nervosa. Further highlighting the association between these two psychiatric disorders, studies have found a strong bivariate relationship between compulsive buying and bulimia-related symptoms (i.e. binge eating) [11].

* Corresponding author at: Institute of Psychiatry, University of São Paulo, Brazil.
E-mail address: cristiana.mattos@usp.br (C. Nicoli de Mattos).

1.1. Hoarding: a potential shared feature of compulsive buying and binge eating

Hoarding, which is characterized by accumulation of possessions and the inability to discard objects resulting in cluttered living spaces and significant distress and/or impairment, has been found to be frequently associated with both compulsive buying [12,13,14,15,16,17] and binge eating [18,19,20]. Hoarding is conceptualized to be a multifaceted construct with several key dimensions, including the acquisition of a large number of possessions (acquisition), difficulty discarding possessions (difficulty discarding), which then precludes the use of living spaces (clutter) [13]. Indeed, people with hoarding disorder have a tendency to excessively acquire items that are not needed. The nature of the items that are acquired varies greatly, although clothes, newspapers and magazines tend to be most common [15]. Many of the items are never used, do not leave their packaging, and are often mixed with trash [21]. Once items are acquired, people with a hoarding disorder show an inability to give or throw the items away [22]. Any attempts to discard items, which do not have sentimental value and/or are worn out, are met with significant distress [22]. A potential reason for this is that people with hoarding disorder report greater emotional attachment to items and may come to anthropomorphize items [21,23]. Lastly, the inability to use living spaces for their intended purposes constitutes the hallmark consequence of excessively acquiring and storing items [21]. Cluttered living spaces is one of the most recognizable symptoms of hoarding and one that is associated with the greatest concern [21]. The cluttered living space makes it difficult to find important items and can lead to significant safety issues such as the attraction of animals that can spread diseases, living in non-sanitary conditions, as well as fire and tripping hazards [24,25,26].

In regard to the relationship between hoarding, compulsive buying and binge eating, the extant literature has found that 39% of people with compulsive buying [27] and 26.7% of people with binge eating disorder or bulimia nervosa also present with co-morbid hoarding disorder [28]. Furthermore, hoarding has been found to exacerbate the symptoms of both compulsive buying behavior [29] and binge eating behavior [18]. The association between hoarding with both compulsive buying and binge eating suggests that hoarding may constitute a shared feature between these two conditions and may partly account for the co-morbidity between compulsive buying and binge eating. This is because both compulsive buying and binge eating are characterized by the psychological need to excessively acquire and gather resources [14,29,30]. Indeed, acquisition is the dimension of hoarding most associated with compulsive buying behavior [29] and binge eating behavior [30]. However, the way in which this psychological need manifests likely differs between compulsive buying (i.e., goods, items) and binge eating (i.e., food, nutrients and calories). Consistent with this possibility, hoarding has been conceptualized as a symptom of multiple disorders across diagnostic categories [12,18,31], rather than a unique disorder despite its current status in the 5th version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) [6].

In sum, the empirical literature has demonstrated that compulsive buying behavior, binge eating behavior and hoarding frequently co-occur. However, it is unknown whether hoarding, specifically its key dimensions of acquisition, difficulty discarding and clutter constitutes a shared feature that may account for the co-occurrence of compulsive buying and binge eating. The aim of the present research was to address this empirical gap in a large sample of people seeking treatment for compulsive buying.

2. Methods

2.1. Participants and procedure

The participants were 434 consecutive patients who voluntarily sought treatment at Hospital das Clinicas of Faculdade de Medicina of

Universidade de São Paulo in Brazil from 2007 to 2017. Individuals seeking treatment for their compulsive buying were first screened using the Portuguese adapted version of the Compulsive Buying Scale [3]. Patients whose scores indicated the possible presence of compulsive buying disorder were seen by a registered psychiatrist specialized in impulse control disorders to confirm the diagnosis of compulsive buying through a semi-structured clinical interview modeled after the Structured Clinical Interview for DSM (ICD-SCID) [32]. Eligible patients were then asked whether they would be willing to participate in a research study, having clearly been informed that treatment was not contingent upon participation. A written informed consent was obtained from all patients who indicated their willingness to participate. Ethics approval was obtained from the senior author's home institution prior to data collection.

2.2. Measures

2.2.1. Compulsive buying

The validated Portuguese version of the Compulsive Buying Scale (P-CBS) [3] was used to measure the severity of compulsive buying. The CBS is a commonly used seven-item screening instrument for compulsive buying severity ($\alpha = 0.69$). It contains two items assessing emotional reactions to shopping (e.g., "felt anxious on days I didn't go shopping", "bought myself something in order to feel better") and five items asking about financial consequences of buying (e.g., "I made only the minimum payments on my credit card", "Wrote a check when I knew I didn't have enough money in the bank to cover it"). The scale is anchored from 1 (Strongly Agree) to 5 (Strongly Disagree) with total scores ranging from -7.03 to 3.61. Lower scores indicate greater severity of compulsive buying. A cut-off score of -1.34 indicates compulsive buying disorder [19].

2.2.2. Binge eating

A Portuguese validated version of the 16-item Binge Eating Scale (P-BES) provided a measure of binge eating severity ($\alpha = 0.94$). The BES assesses the presence and severity of binge-eating behaviors that may be indicative of binge eating disorder. The items include questions regarding binge eating behaviors (e.g., difficulty eating slowly). The items are scored from 0 to 3, with two items scored from 0 to 2. The total scores range from 0 to 46 [20], with a score of 18–26 indicating moderate binge eating symptoms and 27 indicating severe binge eating symptoms. The P-BES has demonstrated good psychometric properties [33].

2.2.3. Hoarding

To assess dimensions of hoarding, we used the Portuguese version of the Saving Inventory-Revised (P-SI-R) [34]. The P-SI-R contains 23 items ($\alpha = 0.93$) that assess three dimensions of hoarding: acquisition (e.g., "How much control do you have over your urges to acquire possessions?"), difficulty discarding (e.g., "To what extent do you have difficulty throwing things away?"), and clutter (e.g., "How much of the living area in your home is cluttered with possessions?") [18]. The items are scored from 0 (None/Not at all) to 4 (Almost all/Extreme). Total scores range from 0 to 92 with a clinical cutoff of 41 for the total score, 17 for cluttering, 14 for difficulty discarding and 9 for acquiring [35]. The SI-R has been found to have good test-retest reliability and strong internal consistency [18,36].

3. Preliminary analyses

Examination of the data revealed that not all of the participants completed our assessment measures of interest. Specifically, of the 434 patients, 306 completed the self-report measure of compulsive buying severity, 300 completed the measure of binge eating severity and 306 completed the measure of hoarding with 207 completing measures of all three. As such, we conducted Little's Missing Completely at Random test to determine whether the data was missing completely at random. The results indicated that the data was missing completely at random χ^2

(15) = 21.34, $p = .126$. Thus, we proceeded with our analyses using list-wise deletion. Next, we calculated bi-variate Pearson correlations between compulsive buying severity and binge eating severity and each dimension of hoarding (acquisition, difficulty discarding and clutter). Thereafter, a hierarchical regression analysis was conducted with binge eating severity as the dependent variable, compulsive buying severity entered in block 1 and the dimensions of hoarding entered simultaneously in block 2.

4. Results

4.1. Sample characteristics

The sample consisted of 56 males and 378 females with a primary diagnosis of compulsive buying disorder. The average age of the sample was 40.38 ($SD = 10.86$). The large majority of the sample identified as Caucasian (71.8%) and reported being employed (70.6%). Marital status was roughly equally split, with 48.7% of the sample reporting being single. The mean monthly household income of the sample was US \$2246.82 ($SD = \2120.33), and the mean of years of formal education was 14.81 ($SD = 3.61$). The mean Body Mass Index (BMI) of the sample was 27.34 ($SD = 5.87$).

Among participants with diagnostic information through semi-structured clinical interviews, including the SCID-ICD and the Mini-International Neuropsychiatric Interview [37] ($n = 338$), 268 (79.29%) participants exhibited at least one current psychiatric co-morbidity. Not surprisingly, the most common psychiatric disorders in the sample were mood and anxiety disorders with the most common co-morbidity being generalized anxiety disorder ($n = 190$; 56.21%), followed by major depressive disorder ($n = 171$; 50.59%) and panic disorder ($n = 85$; 25.15%). Other disorders such as agoraphobia ($n = 85$; 25.14%), social phobia ($n = 70$; 20.7%), obsessive compulsive disorder ($n = 45$; 13.3%), psychotic syndrome ($n = 26$, 7%), post-traumatic stress disorder ($n = 17$; 5%) and substance use disorder ($n = 15$, 4%) were also present. No patient met criteria for anorexia nervosa, however, 29 (8.5%) presented with bulimia nervosa and 48 (14.2%) with binge eating disorder.

All participants met criteria for compulsive buying disorder when assessed with a structured clinical interview; the mean score on the CBS was -4.59 ($SD = 1.8$). The mean score on the Binge Eating Scale was 15.34 ($SD = 11.41$) with 17.6% meeting diagnostic cut-off for mild to moderate binge eating symptoms and 18.6% meeting cut-off for severe binge eating symptoms. The mean score on the Savings Inventory-Revised was 43.59 ($SD = 17.85$) with over half ($n = 158$; 51.6%) of the participants who completed the SI-R meeting the diagnostic cut-off for hoarding. Furthermore, of those who scored above the cut-off, all 158 (100%) also scored above the cut-off on the acquisition dimension of hoarding, 130 (82.28%) scored above the cut-off on difficulty discarding, 76 (48.10%) scored above the cutoff on clutter, and 65 (41.24%) scored above the cutoff on all three.

4.2. Correlation analyses

There was a significant bivariate correlation between compulsive buying severity and binge eating severity. Compulsive buying severity was also significantly correlated with the acquisition subscale of hoarding. Specifically, greater severity of compulsive buying was associated with greater severity of binge eating and acquisition. In contrast, compulsive buying severity was not significantly associated with the difficulty discarding or the clutter subscales of hoarding. Significant bivariate correlations were also found between binge eating severity and each dimension of hoarding such that greater binge eating severity was associated with greater severity of hoarding. Not surprisingly, significant correlations were found between each of the subscales of hoarding (see Table 1 for full results).

Table 1

Correlations between binge eating severity, compulsive buying severity, and dimensions of hoarding.

Variable	BES	CBS	Acquisition	Difficulty discarding	Clutter
BES	–	–0.14*	0.21**	0.18**	0.27**
CBS	–	–	–0.43**	–0.09	–0.02
Acquisition	–	–	–	0.43**	0.37**
Difficulty discarding	–	–	–	–	0.71**
Clutter	–	–	–	–	–

Note: BES = Binge Eating Scale, CBS = Compulsive Buying Scale.

* $p < .05$.

** $p < .01$.

4.3. Hierarchical regression analysis

The results of the hierarchical regression analysis found that compulsive buying severity significantly predicted binge eating severity (Table 2). In step two, the addition of the dimensions of hoarding led to a statistically significant increase in R^2 . With the dimensions of hoarding included in the model, compulsive buying severity no longer predicted binge eating severity. Clutter was the only dimension of hoarding that significantly predicted binge eating severity in the model.

5. Discussion

It is well established that compulsive buying is related to both binge eating and hoarding [9,12,13,15,16,17]. The aim of the present research was to add to our growing understanding of the relationship between these psychiatric conditions by exploring whether dimensions of hoarding (acquisition, difficulty discarding, and clutter) represented a shared feature that may account for the relationship between compulsive buying and binge eating.

In this sample of people seeking treatment for their compulsive buying, a significant portion exhibited binge eating symptoms, almost two-fold higher than previously found in the general Brazilian population [38]. Interestingly, the mean BMI was 27.3 kg/m², which exceeded the mean BMI of that specific geographic area of Brazil (24.5) [39]. This suggests the finding that people with compulsive buying tend to be overweight [40] may be in part due to elevated rates of binge eating among this population. Furthermore, we found that a significant portion of the sample also exhibited symptoms of hoarding, with a mean score that is 2.6 times higher than the general population [34], which is in line with previous literature suggesting compulsive buying and hoarding may commonly co-occur.

There was a moderate correlation between compulsive buying severity and the acquisition dimension of hoarding, and non-significant correlations between compulsive buying severity with the difficulty discarding and clutter dimensions. In contrast, significant correlations were found between binge eating severity and all three aspects of hoarding. The hierarchical regression analysis found that compulsive buying severity significantly predicted binge eating severity – an association that has already been well documented [9]. However, compulsive buying severity did not significantly predict binge eating severity when the three dimensions of hoarding were entered in the regression analysis, suggesting that hoarding may be a shared feature between compulsive buying and binge eating. Of the three dimensions of hoarding, only the clutter dimension significantly predicted binge eating severity. A potential explanation for the relationship between clutter and binge eating is that these behaviors may be driven by shared personality features (e.g., difficulties with self-regulation and/or managing emotional states) or another third variable. However, this explanation is speculative and would need to be tested empirically. Surprisingly, the acquisition subscale was not a significant predictor of binge eating in our model. This could be due to the overlap between the compulsive buying

Table 2
Hierarchical regression analyses with binge eating severity as the dependent variable, compulsive buying severity entered in block 1 and the dimensions of hoarding entered simultaneously in block 2.

Step	Predictor	B	95% C.I.		SE	β	t	p	R ²	R ² change	F	p
		LL			UL							
1	Compulsive buying severity	−1.08	−2.03	−0.14	0.48	−0.16	−2.26	0.025*	0.02			
2	Compulsive buying severity	−0.81	−1.87	0.26	0.54	0.12	−1.49	0.138	0.08	0.08	5.63	0.001*
a.	Acquisition	0.18	−0.25	0.60	0.22	0.07	0.81	0.418				
b.	Difficulty discarding	−0.09	−0.39	0.20	0.15	−0.06	−0.63	0.530				
c.	Clutter	0.39	0.14	0.65	0.13	0.28	3.02	0.003*				

The 95% Confidence Intervals are for the unstandardized regression coefficients (B). LL = lower level, UL = upper level.

* $p < .05$.

scale and the acquisition subscale of hoarding, given that several items in the acquisition subscale directly assess compulsive buying behaviour.

Taken together, the results suggest that hoarding may constitute a shared process that may account for the relationship between compulsive buying and binge eating. The findings may potentially have important treatment implications. Specifically, the treatment of compulsive buying and binge eating, as well as the co-morbid expression of both may be enhanced by targeting the features of hoarding, rather than targeting the symptoms of compulsive buying and binge eating sequentially. Of note, a cognitive behavioral therapy model (CBT) has been developed for hoarding that specifically targets the core dimensions of hoarding [41]. In this treatment, people with hoarding are taught skills to only acquire items that are needed. To this end, they are taught to create personal rules to help them limit their acquisition, practice recognizing the emotions behind the desire to acquire, exercise skills of decision-making about whether to keep or discard items, and engage in “letting go” exercises [42]. These interventions could be tailored and evaluated for individuals with compulsive buying and binge eating. The CBT model of hoarding also teaches people to change the nature of their attachment to items. One technique that can be used to achieve this goal is to generate a list of pros and cons about accumulating items, with one important con being that the resulting cluttered living space could further exacerbate mental health and potentially trigger other maladaptive coping strategies.

6. Limitations

The present study has several limitations. First, the sample consisted of people seeking treatment for compulsive buying disorder, whose buying symptoms were more severe or distressing than their binge eating or hoarding behavior. Therefore, our conclusions may only apply to individuals for whom compulsive buying is their primary disorder. Additional research examining whether hoarding accounts for the relationship between compulsive buying severity and binge eating severity among individuals seeking treatment for binge eating would be highly informative. Second, it should be noted that not all participants completed our measures of interest, which may introduce potential systematic differences. A reason for the missing data is that our centre is first and foremost a treatment centre. Thus, while patients may provide informed consent to voluntarily participate in research, not all patients complete the research protocol. However, the finding that data was missing completely at random provides some confidence in our findings. Third, the associations we observed were based on self-report data, introducing the potential for socially desirable responding and method bias to impact our results. To minimize this possibility, we selected well-validated self-report measures, and our large sample size helps to provide some confidence in our findings. Fourth, the alpha for our measure of compulsive buying severity, although acceptable, was lower than what has been previously reported (0.69 versus 0.86) [19], which suggests some caution when interpreting our findings. Finally, the cross-sectional nature of our study precludes conclusions

about temporal relationships among compulsive buying severity, binge eating severity and hoarding. Longitudinal research is a critical next step to further explore the role of hoarding behavior in the association between compulsive buying severity and binge eating severity.

7. Conclusion

Compulsive buying is a highly prevalent and impairing disorder that is closely related to binge eating and hoarding symptoms. Our results suggest that the drive to excessively gather and store resources, either goods or calories, may constitute a shared feature between compulsive buying and binge eating. These findings may guide future longitudinal explorations of hoarding as shared processes in the manifestation of compulsive buying and binge eating, as well as the potential of targeting dimensions of hoarding in the treatment of compulsive buying and binge eating.

Acknowledgment

The authors are grateful to the staff of the Compulsive Buying Outpatient Unit of the Institute and Department of Psychiatry, Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo for their help with data collection.

References

- [1] McElroy SL, Keck PE, Pope HG, Smith JMR, Strakowski SM. Compulsive buying: a report of 20 cases. *J Clin Psychiatry* 1994;55:242–8.
- [2] Maraz A, Griffiths MD, Demetrovics Z. The prevalence of compulsive buying: a meta-analysis. *Addiction* 2016 Mar;111(3):408–19.
- [3] Faber RJ, O’Guinn TC. A clinical screener for compulsive buying. *J Consum Res* 1992; 19:459–69.
- [4] Müeller A, Mitchell JE, Black DW, Crosby RD, Berg K, de Zwaan M. Latent profile analysis and comorbidity in a sample of individuals with compulsive buying disorder. *Psychiatry Res* Jul 30 2010;178(2):348–53.
- [5] Faber RJ, Christenson GA, de Zwaan M, Mitchell J. Two forms of compulsive consumption. Comorbidity of compulsive buying and binge eating. *J Consum Res* 1995;22:296–304.
- [6] American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 5th ed. Arlington: APA; 2013.
- [7] Hudson JL, Hiripi E, Pope HG, Kessler RC. The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biol Psychiatry* 2007;61: 348–58.
- [8] Fairburn CG, Cooper Z, Doll HA, et al. The natural course of bulimia nervosa and binge eating disorder in young women. *Arch Gen Psychiatry* 2000;57:659–65.
- [9] Fernandez-Aranda F, Pinheiro AP, Thornton LM, Berrettini WH, Crow S, Fichter MM, et al. Impulse control disorders in women with eating disorders. *Psychiatry Res* 2008;157:147–57.
- [10] Fernandez-Aranda F, Jimenez-Murcia S, Alvarez E, Granero R, Vallejo J, Bulik CM. Impulse control disorders in eating disorders: clinical and therapeutic implications. *Compr Psychiatry* 2006;47:482–8.
- [11] Claes L, Bijttebier P, Mitchell JE, de Zwaan M, Mueller A. The relationship between compulsive buying, eating disorder symptoms, and temperament in a sample of female students. *Compr Psychiatry* Jan–Feb 2011;52(1):50–5.
- [12] Frost RO, Steketee G, Williams L. Compulsive buying, compulsive hoarding, and obsessive-compulsive disorder. *Behav Ther* 2002;33(2):201–14.
- [13] Frost RO, Hartl TL. A cognitive-behavioral model of compulsive hoarding. *Behav Res Ther* Apr 1996;34(4):341–50 [Review].

- [14] Filomensky TZ, Almeida KM, Castro Nogueira MC, Diniz JB, Lafer B, Borcato S, Tavares H. Neither bipolar nor obsessive-compulsive disorder: compulsive buyers are impulsive acquirers. *Compr Psychiatry* Jul 2012;53(5):554–61.
- [15] Frost RO, Gross RC. The hoarding of possessions. *Behav Res Ther* 1993;31(4):367–81.
- [16] Frost RO, Kim HJ, Morris C, Bloss C, Murray-Close M, Steketee G. Hoarding, compulsive buying and reasons for saving. *Behav Res Ther* 1998;36:657–64.
- [17] Steketee G, Frost R. Compulsive hoarding: current status of the research. *Clin Psychol Rev* 2003;23:905–27.
- [18] Wheaton M, Timpano KR, Lasalle-Ricci VH, Murphy D. Characterizing the hoarding phenotype in individuals with OCD: associations with comorbidity, severity and gender. *J Anxiety Disord* 2008;22(2):243–52 [Epub 2007 Feb 12].
- [19] Leite PL, Rangé BP, Ribas Junior RC, Filomensky TZ, Silva ACO. Tradução e adaptação semântica da Compulsive Buying Scale para o português brasileiro. *J Bras Psiquiatr* 2011;60(3):176–81.
- [20] Gormally J, Black S, Daston S, et al. The assessment of binge eating severity among obese persons. *Addict Behav* 1982;7(1):47–55.
- [21] Pertusa A, Frost RO, Fullana MA, Samuels J, Steketee G, Tolin D, ... Mataix-Cols D. Refining the diagnostic boundaries of compulsive hoarding: a critical review. *Clin Psychol Rev* 2010;30(4):371–86.
- [22] Frost RO, Steketee G, Tolin DF. Diagnosis and assessment of hoarding disorder. *Annu Rev Clin Psychol* 2012;8:219–42.
- [23] Norberg MM, Crone C, Kwok C, Grisham JR. Anxious attachment and excessive acquisition: the mediating roles of anthropomorphism and distress intolerance. *J Behav Addict* 2018:1–10.
- [24] Tolin DF, Frost RO, Steketee G, Gray KD, Fitch KE. The economic and social burden of compulsive hoarding. *Psychiatry Res* Aug 15 2008;160(2):200–11.
- [25] Frost RO, Steketee G, Williams L. Hoarding: a community health problem. *Health Soc Care Community* Jul 2000;8(4):229–34.
- [26] Bodryzlova Y, O'Connor K. Factors affecting the referral rate of the hoarding disorder at primary mental health care in Quebec. *Community Ment Health J* Jan 2018;20.
- [27] Claes L, Müller A, Luyckx K. Compulsive buying and hoarding as identity substitutes: the role of materialistic value endorsement and depression. *Compr Psychiatry* Jul 2016;68:65–71.
- [28] Fontenelle LF, Mendlowicz MV, Soares ID, Versiani M. Patients with obsessive-compulsive disorder and hoarding symptoms: a distinctive clinical subtype? *Compr Psychiatry* 2004;45:375–83.
- [29] Mueller A, Mueller U, Albert P, Mertens C, Silbermann A, Mitchell JE, et al. Hoarding in a compulsive buying sample. *Behav Res Ther* Nov 2007;45(11):2754–63.
- [30] Novara C, Bottesi G, Dorz S, Sanavio E. Hoarding symptoms are not exclusive to hoarders. *Front Psychol* Nov 10 2016;7:1742.
- [31] Frost RO, Steketee G, Grisham J. Measurement of compulsive hoarding: saving inventory-revised. *Behav Res Ther* 2004;42:1163–82.
- [32] First MB, Spitzer RL, Gibbon MS, Williams JB. Structured clinical interview for DSM-IV Axis I disorders (SCID-I). Users guide. Washington, D.C.: American Psychiatric Press; 1997.
- [33] Freitas S, Lopes CS, Coutinho W, Appolinario JC. Translation and adaptation into Portuguese of binge-eating scale [in Portuguese]. *Rev Bras Psiquiatr* 2001: 23215–20.
- [34] Fontenelle IS, Prazeres AM, Borges MC, Rangé BP, Versiani M, Fontenelle LF. The Brazilian Portuguese version of the saving inventory-revised: internal consistency, test-retest reliability, and validity of a questionnaire to assess hoarding. *Psychol Rep* 2010 Feb;106(1):279–96.
- [35] Tolin DF, Meunier SA, Frost RO, Steketee G. Hoarding among patients seeking treatment for anxiety disorders. *J Anxiety Disord* 2011 Jan;25(1):43–8.
- [36] Frost RO, Hristova V. Assessment of hoarding. *J Clin Psychol* 2011 May;67(5): 456–66. <https://doi.org/10.1002/jclp.20790> (Epub 2011 Feb 23. PubMed PMID: 21351103).
- [37] Sheehan D, Lecrubier Y, Sheehan KH, Amorim P, Janavs J, Weiller E, et al. The Mini International Neuropsychiatric Interview (MINI): The Development and Validation of a Structured Diagnostic Psychiatric Interview for DSM-IV and ICD-10. *J Clin Psychiatry* 1998;59(Suppl. 20):22–33.
- [38] Wietzikoski EC, Anelli D, Sato SW, Costa LD, França VF. Prevalência de compulsão alimentar periódica em indivíduos do sudoeste do Paraná. *Arq Cienc Saúde UNIPAR* 2014;18(3):173–9 Umuarama. (set/dez).
- [39] Lobato JC, Kale PL, Velarde LG, Szklo M, Costa AJ. Correlation between mean body mass index in the population and prevalence of obesity in Brazilian capitals: empirical evidence for a population-based approach of obesity. *BMC Public Health* Apr 2 2015;15:322.
- [40] Sansone RA, Chang J, Jewell B. Marion binge eating severity. Compulsive buying: relationship with body mass index. *Obesity (Silver Spring)* Jan 2013;21(1): E86–7.
- [41] Frost RO, Trumbo H, Goar R. Psychological treatment of hoarding disorder. *The Wiley handbook of obsessive compulsive disorders*; 2017. p. 1023–38.
- [42] Muroff J, Underwood P, Steketee G. Group treatment for hoarding disorder: therapist guide. New York, NY: Oxford University Press; 2014.

2018

The need to consume: Hoarding as a shared psychological feature of compulsive buying and binge eating

de Mattos, Cristiana Nicoli

Elsevier

<https://doi.org/10.1016/j.comppsy.2018.06.010>

© 2018 Elsevier Inc. All rights reserved.

Downloaded from UNB Scholar