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Development and validation of the compulsive-buying follow-up scale: A measure to assess treatment improvements in compulsive buying disorder

Cristiana Nicoli de Mattos[a,*], Hyoun S Kim[b], Tatiana Zambrano Filomensky[a], Hermano Tavares[a]

[a] Impulse Control Disorders Outpatient Unit, Institute of Psychiatry, Hospital das Clinicas HCFMUSP, Faculdade de Medicina da Universidade de Sao Paulo, Sao Paulo (SP). Brazil

[b] Addictive Behaviors Laboratory, University of Calgary, Calgary (AB), Canada

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ABSTRACT

The aim of the present research was to develop a scale to assess treatment improvements for compulsive buying disorder (CBD), adapted from the Gambling Follow-up Scale Self-Report Version. The Compulsive Buying Follow-up Scale (CBFS) contains six self-report multiple-choice items assessing different aspects of compulsive buying in the past four weeks. Forty-eight treatment-seeking patients with CBD were evaluated, with 39 patients completing the 12-week follow-up. The scale's global alpha was high as well as the item-total correlations per item. The estimations of alpha if-item-deleted were all under the global alpha value, indicating that all items provided relevant contribution within the scale. The CBFS demonstrated significant correlations with previously developed scales of CBD and other measures of psychopathology, with the exception of a non-significant association with the Beck Depression Inventory at pre-treatment. The CBFS correlated significantly with all reference scales at post-treatment. The CBFS also demonstrated strong sensitivity to change and recovery status. The cutoff for the CBFS that provided the greatest sensitivity (0.93) and specificity (0.82) was 22. The results provide support that CBFS is a reliable and valid instrument to measure treatment outcomes over time for CBD.

1. Introduction

Compulsive buying disorder (CBD) is a maladaptive and repetitive buying behavior that results in marked personal, social and occupational impairment as well as financial difficulties and distress (Faber and O'Guinn, 1992; McElroy et al., 1994). The prevalence of CBD varies widely, ranging from 0.4% (Bohne, 2010) to 36.8% (Phau and Woo, 2008) with a recent meta-analysis finding a prevalence of 4.9% in the general population (Maraz et al., 2016). The large heterogeneity in prevalence may be related to diversity in samples as well as the use of different instruments to assess CBD, which vary widely in regard to the duration and cut-off scores (Maraz et al., 2016).

The onset of CBD usually occurs during the end of adolescence and early 20 s and may be related to leaving the nuclear family and obtaining access to credit (Black, 2001). Unfortunately, people with CBD usually seek treatment in their 30 s, well after the consequences associated with compulsive buying start to accumulate and their life becomes dysfunctional (Black, 1996; Christenson et al., 1994; McElroy et al., 1994). Although several cross-sectional studies propose that CBD follows a chronic course, a naturalistic follow up study of 5 years found that 47% of patients with CBD reported a reduction in symptoms over time, whereas 29% were unchanged and 24% worsened (Black et al., 2016).

Compulsive buying as a psychiatric disorder is not new but only recently CBD has gained considerable empirical attention. Interestingly, the extant literature has conceptualized CBD as an impulse control disorder (McElroy et al., 1995), a mood disorder (Lejoyeux et al., 1996), or an obsessive-compulsive disorder (Black et al., 2010; Hollander et al., 1996). However, CBD is now widely conceptualized as an addiction, specifically as a behavioral addiction (Granero et al., 2016a). Indeed, CBD shares considerable similarities in clinical presentation to other addictive disorders, including for example, alcohol (Di Nicola et al., 2015), gambling disorder (Black et al., 2010; Granero et al., 2016b) and problematic internet use (Claes et al., 2012; Kuss and Lopez-Fernandez, 2016). Providing further support for the conceptualization of CBD as a behavioral addiction, the treatment model that has shown the most promise in the treatment of CBD was adapted from cognitive behavioral therapy and motivational enhancement therapy for the treatment of addictions (Granero et al., 2017; Hodgins and Peden, 2008; Kellett and Bolton 2009).

Empirical studies on compulsive buying have grown exponentially in the past several decades (Tavares et al., 2008), including treatment

* Corresponding author at: Institute of Psychiatry, Hospital das Clinicas HCFMUSP, R. Ovídio Pires de Campos 785, Cerqueira César, CEP: 05403-010 - Sao Paulo, SP - Brazil.

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studies of CBD. A recent meta-analysis identified 29 treatment studies of CBD, with over 40% having just been conducted in the past 10 years (Hague et al., 2016), which may speak to the rising interest in this relatively common psychiatric disorder. However, the current literature is limited by the lack of a standard measure to indicate severity of CBD and improvements in treatment response (Soares et al., 2016). Moreover, to date, studies examining treatment response in CBD have used separate measures to assess the severity of CBD and treatment outcome, which limits our understanding of the efficacy for treatments of CBD. Thus, the development of a standardized scale created specifically to measure treatment improvements in CBD may help in synthesizing future treatment studies and ultimately aid in the development of efficacious treatments for CBD.

1.1. Current scales for CBD

The Compulsive Buying Scale (CBS) (Faber and O'Guinn, 1989) is the most widely used instrument for CBD and is considered the gold standard for screening of CBD (Faber and O'Guinn, 1992). The CBS was designed by Faber and O'Guinn in 1989 to measure the prevalence of CBD in the general population (Cole and Sherrell, 1995; Leite et al., 2013). The authors concluded that a score of two standard deviations below the mean score of the general population may indicate CBD. A limitation of the CBS is that it contains several culture-related and outdated items, such as the use of checks as a payment method. Therefore, the CBS may be less reliable when used in different contexts of banking and payment culture (Quinn and Roberds, 2008), specifically in countries where credit is difficult and/or checks are considered an outdated method of payment. More importantly, the reliability of the CBS in assessing improvements in treatment outcomes for CBD is unknown.

The Richmond Compulsive Buying Scale (RCBS) (Ridgway et al., 2008) was developed as an attempt to avoid the use of the financial criteria in the diagnostic of CBD. As such, the RCBS focuses on buying behaviors rather than its financial consequences. The strength of the RCBS is the inclusion of both the impulsive and obsessive-compulsive dimensions of CBD (Ridgway et al., 2008). However, similarly to the CBS, no empirical data exists that assess the utility of the RCBS in measuring treatment response.

To assess severity and changes of CBD over time, the Yale-Brown Compulsive-Obsessive Scale - Shopping Version (YBOCS-SV) (Monahan et al., 1996) was developed in 1996 as a tool to measure thoughts and behaviors associated with CBD. The YBOCS-SV was adapted from the Yale-Brown Obsessive-Compulsive Scale (YBOCS) (Goodman et al., 1989), a scale created to determine severity and improvement in obsessive compulsive disorder (OCD). The YBOCS-SV is currently the most commonly used measure to assess treatment response and outcomes of CBD (Leite et al., 2014a). However, the YBOCS-SV conceptualizes CBD as an OCD related disorder and as a result, assesses obsessions and compulsions related to CBD. Although a valid and reliable instrument in assessing treatment improvements from CBD, the YBOCS-SV does not assess key characteristics of addictions nor does it assess the financial consequences of CBD, which is one of the most common impairments associated with CBD (Koran et al., 2006). Given that CBD is most commonly conceptualized as a behavioral addiction, a measure which assesses the addictive nature of CBD such as craving and emotional distress may be particularly beneficial (Lejoyeux and Weinstein, 2010; Weinstein et al., 2016), especially in light of the findings that the most promising treatments for CBD are based on treatments for addictive disorders (Leite et al., 2014b; Lejoyeux and Weinstein, 2010; Weinstein et al., 2016).

Furthermore, studies with alcohol (Rehm et al., 2017) and gambling disorder (Rockloff, 2012) have suggested that consumption-based measurements accurately identify people who are likely to be experiencing addiction related problems. However, the YBOCS-SV contains only a single item assessing time spent buying, while items addressing frequency and money spent on compulsive buying episodes are missing. Although the most obvious symptom of CBD is financial consequences, no CBD scale to date provides a reliable measurement of financial spending in relation to the individual's income. This is a significant gap as financial consequences may be the most reliable indicator of CBD severity. Indeed, a study conducted with disordered gamblers found that monetary spending in relation to a person's income demonstrated the strongest associations with gambling severity and psychosocial distress (Medeiros et al., 2017).

Generally, similar criticisms as described above apply to less often used scales of CBD, such as the Compulsive Buying Measurement Scale (Valence et al., 1988), Questionnaire About Buying Behavior Scale (Lejoyeux and Weinstein, 2010) and Edwards Compulsive Buying Scale (Edwards, 1993). The usual strategy to overcome these limitations has been to use a combination of scales in empirical studies. However, the use of large number of scales increases the risk of inattention and measurement error due to patient fatigue (Süss and Schmiedek, 2000).

The creation of a short and reliable scale to measure improvements over time in patients with CBD is necessary to provide an overall assessment of outcomes from different treatments of CBD. At the same time, the scale needs to be able to be adapt to different cultural environments. With these challenges in mind, we set out to develop the Compulsive Buying Follow-up Scale (CBFS) to assess improvements of CBD following treatment. The intent was to develop a brief scale that assesses both objective and subjective features of CBD. The items were adapted from the Gambling Follow-up Scale Self-Report Version (GFS-SR) (Galetti and Tavares, 2017). The GFS-SR was used as a model given the conceptualization of CBD as a behavioral addiction and as gambling disorder is the only behavioral addiction included in the DSM-5 (American Psychiatric Association, 2013). Furthermore, the GFS-SR presents a balanced distribution between items assessing objective and subjective measures of gambling disorder. Similarly, the CBFS includes items assessing objective measures of CBD (frequency, time and money spent on compulsive buying in relation to one's income) as well as subjective experiences of CBD (craving, emotional distress and concerns about debt). The aim of the present study was to assess the internal consistency, convergent validity, sensitivity to change, and ability to identify clinical response of the CBFS in patients undergoing treatment for CBD.

2. Methods

2.1. Participants and procedure

Participants consisted of 48 patients with CBD who voluntarily sought treatment at a specialized Health Service in São Paulo, Brazil from 2015 to 2016 and agreed to participate in a 12 weeks double-blind clinical trial testing the effectiveness of topiramate in the treatment of CBD. A total of 39 patients completed the trial and 12-week follow-up.

A registered psychiatrist specializing in impulse control disorders confirmed a diagnosis of CBD through an Impulse Control Disorder Structured Clinical Interview modeled after the Structured Clinical Interview for DSM-5 (ICD-SCID-5) (First et al., 1997). Thereafter, a registered psychologist collected information regarding participants' compulsive buying behaviors. Participants also completed a battery of self-report questionnaires. Informed consent was obtained from all participants prior to data collection. Ethics approval was obtained from the Faculty of Medicine, University of Sao Paulo, and all the procedures followed the principles expressed in the Declaration of Helsinki.

2.2. Scoring and scale structure of the CBFS

The CBFS consists of six multiple-choice questions assessing compulsive buying in the past four weeks. The items are anchored from 1 (most severe) to 5 (least severe) (see Appendix for the original Brazilian-Portuguese and the translated English versions). An exception

was made for item 5, which addresses urges and was anchored from 1 to 4, following our previous experience with the GFS-SR that indicated a better performance of this item with 4 rather than a 5 point scale. The items are summed to create a composite score. Lower scores indicate greater compulsive buying severity.

The first item explores the frequency of compulsive buying episodes and the second item assesses the time spent during buying episodes. The remaining items assess, in sequence, the amount of money spent in proportion to monthly income, the urge to buy, distress caused by debt (as well as the tendency to buy in response to this distress), and psychological impairments caused by the compulsive buying behavior. Participants completed the CBFS at three different time points: at baseline, at 6 weeks and at 12 weeks following the completion of treatment.

2.3. Measurements

Clinician's Global Impression (CGI) (Guy, 1976)**:** is a clinician-rated measure designed to assess severity of global illness. It is amongst the most widely used brief assessment tools in psychiatry. Test-retest reliability ranges from .78 to .81 (Dahlke et al., 1992). The GCI consists of one item scored from 1 to 7, where 1 = very much improved and 7 = much worse, based on the clinicians' experience with other patients with the same psychiatric diagnosis.

Compulsive Buying Scale (CBS) (Faber and O'Guinn, 1992): is a well-validated seven-item screening instrument and has been validated in Brazilian Portuguese (Leite et al., 2011). The scale contains two items exploring emotional reactions to shopping and five items assessing financial consequences of buying. Lower scores indicate higher levels of compulsive buying, with a cut-off score of −1.34 indicating the potential presence of CBD

Yale-Brown Obsessive-Compulsive Scale Shopping Version (Y-BOCS-SV) (Monahan et al., 1996**):** is a 10-item scale, with the total score comprising of the sum of the 10 items. The mean score of individuals with CBD is 21 (*SD* = 18–25) whereas the mean score of individuals without CBD is 4 (*SD* = 1–7)3 **(**Monahan et al., 1996). The validated Brazilian Portuguese version was used in the present research (Leite et al., 2014a).

Richmond Compulsive Buying Scale (Ridgway et al., 2008): This scale is composed of six items, anchored from 1 to 7. The score is comprised of sum of the items, with a score over 25 suggesting the presence CBD. The scale has been validated to Brazilian Portuguese and demonstrates good reliability (Leite et al., 2013).

Social Adjustment Scale Self-Report Version (SAS) (Weissman and Bothwell, 1976). The Social Adjustment Scale Self-Report Version is a widely used scale to measure social adjustment in a variety of populations. It consists of 54 self-report items assessing seven areas of life: work or study, social life, leisure, family relationship, marital relationship, relationship with children, domestic life and financial situation. The Brazilian-Portuguese version, which has demonstrated good validity and reliability was used in the present research (Gorenstein et al., 2002).

Beck Depression Inventory (BDI) (Beck et al., 1988; Gorenstein and Andrade, 1998): was used to evaluate depressive symptoms. The BDI contains 21 items scored from 0–3 assessing symptoms of depression in the past week. The items are summed to create a composite score. Scores over 30 indicate severe depression, 19–29 indicates moderate depression, 10–18 mild depression and 0–9 minimal depression.

2.4. Statistical analyses

First, we divided the sample between treatment responders - those who completed the treatment and were considered clinically recovered according to the CGI assessment (a score of 1-``very much improved" or 2-``moderately improved", $n = 15$) or non-responder (those who did not complete treatment or had a score above 2 at the CGI at treatment endpoint, $n = 33$). We then compared the demographic characteristics and responses to the clinical scales for descriptive purposes.

The CBFS reliability was determined using Cronbach's alpha using the individuals' scores at baseline ($N = 48$). The same procedure was conducted with scores following treatment. However, as the results between baseline and post-treatment were similar, we only report the results from the full sample of participants at baseline.

The convergent validity of the CBFS was tested using Spearman's correlations between the CBFS score and the other compulsive buying scale scores at pre-treatment ($N = 48$) and post-treatment ($n = 43$). Cohen's *d* index (Cohen, 1992) for the CBFS and the other reference scales was calculated, with values up to 0.2 considered small effect-size, 0.5 medium and above 0.8 a large effect-size (Cohen, 1988). The Wilcoxon's test was used to verify sensitivity to change over time for the 39 individuals who completed the trial.

Finally, a ROC-curve analysis was used to determine the sensitivity, specificity, and a cut-off point for the identification of clinical recovery for patients who completed treatment ($n = 39$) by comparing the CBFS score to the CGI at post-treatment (Robin et al., 2011; Zhou et al., 2002).

Statistical analyses were conducted using either R Statistical (R Core Team, 2015) or SPSS software.

3. Results

Table 1 provides the socio-demographic characteristics of the sample. Generally, no differences were found at the baseline between the group of responders and non-responders, with the exception of higher rate of depressive symptoms in the group of non-responders.

Table 2 provides the results of the CBFS reliability analysis. The scale's global alpha was high as well as the item-total correlations per item. The exception to this was item 5, which showed a slightly lower item-total correlation. The estimations of alpha if-item-delete were all under the global alpha value, indicating that all items provided relevant contributions to the scale.

Table 3 provides the results of the convergent validity for the CBFS. The CBFS demonstrated strong correlations with previous developed scales for CBD and other measures of psychopathology, except for a weak correlation, although statistically significant, with the CBS and a non-significant correlation with the BDI at pre-treatment. The CBFS correlated significantly with all the reference scales at post treatment. Overall the post-treatment correlation coefficients were stronger than the correlations at pre-treatment. Regarding the subscale of the YBCOS-SV, the correlations were slightly stronger for the compulsion subscale than the obsession scale, both at pre- (rho = −0.519, $p = < 0.001$; rho = −0.430, $p = 0.002$, $n = 48$, respectively) and post-treatment (rho = −0.787, $p = < 0.001$; rho = −0.765, $p = < 0.001$, $n = 43$, respectively).

Table 4 shows the sensitivity to change pre and post-treatment. Significant changes were observed for all our variables overtime, including the CBFS with large effect sizes, except for the SAS, which fell in the range between low and medium effect-size.

Fig. 1 shows the ROC analysis. The accuracy of CBFS in predicting CBD recovery was strong. The cutoff of the scale that provides the greatest sensitivity (0.93) and specificity (0.82) was 22, indicating that a score > 22 provides a measure of recovery and treatment response in CBD patients.

4. Discussion

The CBFS displayed strong reliability and internal consistency with relevant contributions from all six items. Particularly, item 3 (which assesses money spent on compulsive buying relative to personal income) demonstrated the strongest item-total correlation coefficient, providing support for investigating buying expenditures in relation to an individual's income, rather than in absolute values. This item may provide a more reliable estimate of the financial impact of CBD, similar to that seen in gambling disorder (Medeiros et al., 2017), and may also generalize to patients of different socioeconomic status.

The CBFS also exhibited excellent convergent validity with the most widely used scales of CBD, as well as statistically significant and robust

Table 1
Demographic characteristics of our sample at baseline.

Characteristics	Treatment responders (n = 15)	Treatment non responders (n = 33)	Total (N = 48)	Test	p
Age	40.13 ± 9.51	35.97 ± 9.48	37.27 ± 9.59	t = - 1.40	0.166
Sex				χ^2 = 1.24	0.266
Male	1 (6.6%)	6 (18.2%)	7 (14.6%)		
Female	14 (93.3%)	27 (81.8%)	41 (85.4%)		
Ethnic group				χ^2 = 1.36	0.714
Whites	12 (80%)	23 (69.7%)	35 (72.9%)		
African	1 (6.6%)	4 (12.1%)	5 (10.4%)		
African-White	1 (6.6%)	5 (15.1%)	6 (12.5%)		
Asian	1 (6.6%)	1 (3%)	2 (4.2%)		
Marital Status				χ^2 = 6.11	0.047
Married	4 (26.6%)	17 (51.5%)	21 (43.8%)		
Single	9 (60%)	16 (48.5%)	27 (56.2%)		
Employment Status				χ^2 = 3.77	0.438
Employed	14 (93.3%)	27 (81.8%)	37 (77.1%)		
Unemployed or other	1 (6.6%)	6 (18.2%)	11 (22.9%)		
Monthly Income (US$)					
Median (range)	3642.85 ± 2766.25	2474.02 ± 1739.66	2331.37 ± 1770.42	U = 184.5	0.160
Years of Formal Education					
Mean (SD)	16.2 ± 2.4	14.6 ± 2.5	15.1 ± 2.6	t = - 2.04	0047
Religion					
Catholic	5 (33.3%)	12 (36.4%)	17 (35.4%)	χ^2 = 3.24	0.197
Protestant	5 (33.3%)	4 (12.1%)	9 (18.8%)		
Other	5 (33.3%)	17 (51.5%)	22 (45.8%)		
CBS					
Mean (SD)	−4.43 ± 1.64	−4.94 ± 1.38	−4.78 ± 1.47	t = - 1.12	0.266
YBOCS-SV					
Mean (SD)	20.27 ± 4.26	22.4 ± 6.62	21.75 ± 6.03	t = 1.15	0.255
RCBS					
Mean (SD)	34.87 ± 5.63	34.27 ± 5.53	34.46 ± 5.50	t = 0.73	1.732
SAS					
Mean (SD)	2.45 ± 0.60	2.50 ± 0.64	2.49 ± 0.62	t = 0.25	0.802
BDI					
Mean (SD)	12 ± 7.76	16.94 ± 7.71	15.40 ± 7.98	t = 2.05	0.046

CBS, Compulsive Buying Scale; Y-BOCS-SV, Yale-Brown Obsessive-Compulsive Scale Shopping Version; RCBS, Richmond Compulsive Buying Scale; SAS, Social Adjustment Scale; BDI, Beck Depression Inventory.

Table 2
Internal consistency of the Compulsive-Buying Follow-up Scale (N = 48).

Compulsive-Buying Follow-up Scale items	Item-total correlation	Alpha if item deleted
1. Compulsive buying frequency	0.651	0.833
2. Time spent buying	0.697	0.825
3. Money spent in compulsive buying	0.727	0.822
4. Craving for shopping	0.695	0.828
5. Debt	0.559	0.849
6. Emotional problems	0.611	0.840

Global Alpha: 0.857.

sensitivity to change. An advantage of the CBFS is its flexibility to the cultural background of patients and the conceptualization of CBD as a behavioral addiction. Interestingly, there was a trend for stronger correlations at post-treatment than pre-treatment for the CBFS and other measures of CBD and psychopathology. This could be due to a ceiling effect with patients presenting with severe CBD at pre-treatment, whereas at post-treatment there was an increase in the variability of CBD severity, which may have allowed for increased statistical discrimination.

Finally, perhaps one of the biggest advantages of the CBFS is its

Table 4
Sensitivity to change, pre and post treatment scores (n = 43).

Variable	Pre-treatment score	Post-treatment score	Cohen's d	Z	p^*
CBFS	15.8 ± 4.7	21.3 ± 5.1	0.979	4.772	<0.001
CBS	−4.8 ± 1.4	−1.3 ± 2.8	1.347	5.633	<0.001
YBOCS-SV	21.6 ± 5.9	12.5 ± 7.7	−1.267	−5.185	<0.001
RCBS	34.5 ± 5.4	21.5 ± 9.8	−1.278	−5.490	<0.001
SAS	2.5 ± 0.7	2.3 ± 0.8	−0.259	−2.094	0.036
BDI	16.2 ± 8.1	9.5 ± 8.9	−0.837	−4.417	<0.001
CGI	4.1 ± 1.1	2.3 ± 1.1	−1.129	−4.971	<0.001

CBFS, Compulsive Buying Follow-up Scale; CBS, Compulsive Buying Scale; Y-BOCS-SV, Yale-Brown Obsessive-Compulsive Scale Shopping Version; RCBS, Richmond Compulsive Buying Scale; SAS, Social Adjustment Scale; BDI, Beck Depression Inventory; CGI, Clinician's Global Impression.

* Wilcoxon test

Table 3
Spearman`s correlations between the Compulsive-Buying Follow-up Scale and reference scales.

CBFS		CBS	YBOCS-SV	RCBS	SAS	BDI	CGI
Pre Treatment (N = 48)	rho	0.296	−0.504	−0.474	−0.514	−0.179	−0.454
	(p)	0.041	<0.001	0.001	<0.001	0.223	0.001
Post Treatment (n = 43)	rho	0.684	−0.798	−0.726	−0.549	−0.478	−0.741
	(p)	<0.001	<0.001	<0.001	<0.001	0.001	<0.001

CBFS, Compulsive Buying Follow-up Scale; CBS, Compulsive Buying Scale; Y-BOCS-SV, Yale-Brown Obsessive-Compulsive Scale Shopping Version; RCBS, Richmond Compulsive Buying Scale; SAS, Social Adjustment Scale; BDI, Beck Depression Inventory; CGI, Clinician's Global Impression.

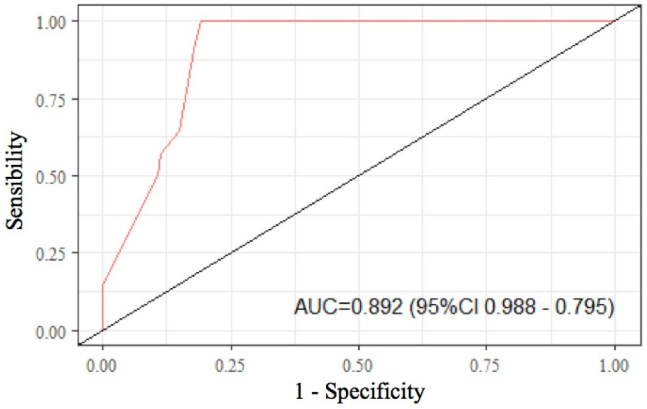

Fig. 1. Graph of ROC curve for compulsive buying follow-up scale.

simple scoring method, which provides a single, reliable, and accurate measure of treatment improvement. Indeed, the CBFS demonstrated 93% sensitivity (less than 10% false negatives) and 80% specificity (less than 20% false positives), with a fair AUC value; almost 90%, at the ROC curve analysis to ensure the cut-off > 22 for clinical recovery. Other advantages of the CBFS are its brevity (it takes no longer than three minutes to complete) and that the questions are easy to understand. Moreover, the CBFS demonstrated good convergent validity with the SAS, thus providing a reliable indication of impairments caused by compulsive buying. Conversely, the SAS showed the least improvement overtime, but this was expected given that improvements of the target behavior usually must precede improvement in global functioning.

Of note, the CBFS was significantly associated with depression symptoms at post-treatment, despite the non-significant association between CBFS and BDI at pre-treatment. This could point to a partial dependence between compulsive buying behavior and depression. Indeed, it has been proposed that compulsive buying could be used as a coping mechanism among depressed patients (Lejoyeux et al., 1996; Miltenberger et al., 2003). However, it is worth noting that participants in our sample identified compulsive buying as their primary concern given that they were seeking treatment for their CBD rather than depression.

A limitation of the present research was that the CBFS was not tested beyond the period of 12 weeks. However, 12 weeks allowed us to assess the most acute and severe moment of CBD (i.e., start of treatment) as well as post treatment when a proportion of the patients experienced clinical improvements. Thus, the CBFS appears capable of capturing different stages of patients undergoing CBD treatment. Second, the relatively small sample size and lack of normative sample may preclude the generalization of the psychometric properties of the CBFS to other CBD populations and non-clinical samples. Third, the analysis was conducted using the original version in Brazilian-Portuguese (Appendix A). A free English translation of the scale is provided in Appendix B, but this version has yet to be validated. Thus further research will be required if researchers and clinicians wish to use the English version of the CBFS to measure treatments improvements for CBD.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.psychres.2018.12.078.

Appendix A

Portuguese Version of the Compulsive-Buying Follow-up Scale

As questões abaixo se referem às compras compulsivas, ou outras áreas de sua vida que tenham sido afetadas por ela. Um episódio de compra compulsiva é definido como um momento em que você comprou sem planejar, ou comprou mais do que o planejado, gastou mais tempo ou dinheiro do que planejava.

1 Com que frequência você teve episódios de compras compulsivas nas últimas 4 semanas?
   1 Comprei de forma compulsiva diariamente
   2 Comprei compulsivamente em média mais de uma vez por semana
   3 Comprei compulsivamente em média uma vez por semana
   4 Comprei compulsivamente em média menos de uma vez por semana
   5 Não tive episódios de compra compulsiva
2 Nas últimas 4 semanas, da vez em que comprou compulsivamente por mais tempo, foi por quanto tempo?
   1 Comprei por mais de 8 h seguidas
   2 Comprei entre 3 e 8 h seguidas
   3 Comprei entre 1 e 3 h seguidas
   4 Comprei por menos de 1 h seguida
   5 Não tive episódios de compra compulsiva
3 Nas últimas 4 semanas, quanto dinheiro você gastou em compras compulsivas em relação à sua renda?
   1 Comprei sem ter renda, OU fiz empréstimos, desfiz-me de bem pessoal, economias, OU roubei (passei cheques sem fundos, falsifiquei cheques) para comprar ou pagar dívidas de compras.
   2 Gastei mais que o equivalente à minha renda
   3 Gastei o equivalente a minha renda ou mais que a metade desse valor
   4 Gastei menos que a metade da minha renda
   5 Não gastei dinheiro em compras compulsivas
4 Nas últimas 4 semanas, como esteve a sua vontade de comprar?
   1 Senti uma vontade irresistível de comprar
   2 Senti uma forte vontade de comprar, algumas vezes resistível, outras não
   3 Senti uma forte vontade de comprar, porém resistível na maior parte do tempo
   4 Senti uma leve vontade de comprar
   5 Não tive vontade de comprar
5 Como você tem se sentido em relação a suas dívidas nas últimas 4 semanas?
   1 Sinto-me extremamente pressionado, tenho comprado como forma de tentar aliviar as preocupações com as dívidas ou emoções negativas
   2 Sinto-me extremamente pressionado, porém não comprei, ou se comprei não foi motivado pela tentativa de aliviar as preocupações com as dívidas ou emoções negativas
   3 Tenho dívidas, mas elas não me preocupam no momento
   4 Não tenho dívidas
6 Nas últimas 4 semanas, quanto problema emocional as compras lhe causaram (sofrimento, angústia, culpa, vergonha, constrangimento)?
   1 Extremo
   2 Muito
   3 Moderado
   4 Leve
   5 Nenhum

Appendix B

English Version of the Compulsive-Buying Follow-up Scale (free translation)

The questions above refer to compulsive buying or other areas in your life that may have been affected by them. One episode of compulsive buying is defined as a moment that you bought stuff without planning, bought more than you planned, or spent more time or money than you intended.

1 In the last 4 weeks, what was the frequency of your compulsive buying episodes?
   1 I bought compulsively every day
   2 I bought compulsively more than once a week
   3 I bought compulsively once a week
   4 I bought compulsively less than once a week
   5 I had no episodes of compulsive buying
2 In the last 4 weeks, what was the longest period in which you bought compulsively?
   1 I bought for more than 8 h continuously
   2 I bought for 3 to 8 h continuously
   3 I bought for 1 to 3 h continuously
   4 I bought for less than 1 h continuously
   5 I had no episodes of compulsive buying
3 In the last 4 weeks, how much money did you spend buying compulsively in relation to your income?
   1 I bought without income, OR sold personal stuff, used savings OR stole (for example. used bounced checks, falsified checks, etc.) to buy or pay off debt.
   2 I spent more than my monthly income
   3 I spent the equivalent of my monthly income or more than half of its value
   4 I spent less than half of my monthly income
   5 I spent no money in compulsive buying episodes
4 In the last 4 weeks, how strong was your urge to shop?
   1 I felt an irresistible urge to shop
   2 I felt a strong urge to shop, sometimes resistible, sometimes not.
   3 I felt a strong urge to shop, but resistible most of the time
   4 I had a weak urge to shop
   5 I had no desire to shop
5 In the last 4 weeks, how have you felt in relation to your debt?
   1 I feel extremely pressured, and I have bought as a way to release my concern about my debt or negative emotions
   2 I feel extremely pressured, but I haven't bought as a way to alleviate these concerns about debt or negative emotions
   3 I have debt but it doesn't bother me
   4 I don't have debt
6 In the last 4 weeks, how intense was the emotional problem caused by your buying behavior (suffering, anguish, guilt, shame, embarrassment)?
   1 Extreme
   2 Heavy
   3 Moderate
   4 Light
   5 None

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