

Compulsive buying: a field study of mood variability during acquisition episodes

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Abstract. Empirical investigations of mood variability during actual and ‘real time’ shopping episodes are absent from the compulsive-buying (CB) literature. A field experiment was therefore conducted with a participant meeting desired clinical and research requirements for identifying CB and a control subject for comparison purposes. Each participant went on four shopping trips and rated various parameters of mood and self-perception prior to, during and after each shopping trip. Each phase (i.e. pre-shop, shop and post-shop) lasted for 1.5 h, with ratings of mood and self-evaluation taken every 10 min. Results indicate that, although shopping was a guilty pleasure for the CB participant, there were more similarities than differences apparent in terms of mood and self-evaluation between the CB and control participant. The CB participant experienced significant levels of self-dislike during the shopping episodes. In terms of the comparisons between the pre-, during and post-shopping phases, the first 40 minutes of actual shopping seemed to be particularly arousing/exciting for the CB participant. The study is discussed in terms of key methodological requirements for increased validity and reliability in studying CB phenomena and the range of indicated possible cognitive and behavioural interventions.

Key words: Compulsive buying, mood variability.

Introduction

O’Guinn & Faber (1989) provided an enduring definition of compulsive buying (CB) as ‘chronic repetitive purchasing that becomes a response to negative events or feelings’, with such retail behaviour tending to result in substantial debt, potential legal problems, personal distress, relational difficulties (Black, 1996) and associated guilt (Faber & Vohs, 2004). Akin to other impulse control disorders, CB is believed to be a behavioural response to negative affectivity (Faber *et al.* 1987); but unlike these other disorders, the affective antecedents and consequences of CB are yet to be clearly identified (Miltenberger *et al.* 2003). The need to study mood and CB, is due to evidence that mood states relate to the behavioural intent of consumers (Gardner & Rook, 1988), that impulse purchasing can extend or change mood (Rook, 1987)

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and that consumers recall or evaluate marketing prompts differently according to mood state (Gardner, 1985). Once engaged in the act of shopping, some compulsive buyers anecdotally report experiencing extreme positive feelings, described as such as a 'high' (Elliott, 1994). Approximately one in four general consumers reports some mood change during shopping trips (Faber & Vohs, 2004).

CB is under-researched and clinically misunderstood, despite estimates that between 2% and 8% of the population engage in CB (McElroy *et al.* 1995; Koran *et al.* 2006). Perhaps this reflects that CB, unlike other impulse control disorders, is both tolerated and somewhat indulged by society (Catalano & Sonenberg, 1993), as opposed to being considered as the genesis of often chronic and grave psychological distress (Hollander & Allen, 2006). Psychological service providers have been cautioned that they may well be faced with increasing numbers of clients seeking help with CB in the coming years (Roberts, 1998; Koran *et al.* 2006) and therefore cognitive behavioural therapists need to be aware of the disorder and the possible means of intervening therapeutically. Kellett & Bolton (in press) synthesized extant evidence from the CB literature into a four-stage cognitive-behavioural model: (1) antecedent factors, including early life experiences, (2) internal emotional and external environmental triggers; (3) the act of buying and (4) post-purchase emotional, behavioural and financial factors. Elliott *et al.* (1996) noted that CB can be easily masked from attention, as 'shopping' is socially acceptable, there are no physical indicative signs of any addiction and CB behaviours, in isolation, are not apparently or immediately bizarre or obvious to others.

Perceptions of self have been implicated in CB, as Pooler (2003) suggests that shopping enables sufferers to imagine or feel that they are effectively competing with envied 'up rank' others, with retailers also tending to place great emphasis on the social rank and rivalry aspects of owning particular types of product (Droge & Mackoy, 1995). In an experiment with a student sample (Yurchisin & Johnson, 2004), the perceived social status associated with acquisitions tended to strongly predict CB behaviours. Belk (1991) noted that products for CB sufferers, rather than functioning purely as products, tend to be seen as mechanisms for changing fragile and vulnerable perceptions of self and therefore seem to be craved as 'necessities' as opposed to luxuries or practical concerns (Boundy, 2000). Perhaps unsurprisingly, therefore, a consistent finding is that CB sufferers have lower self-esteem than control consumers (Scherhorn *et al.* 1990; Hanley & Wilhelm, 1992), with self-regulation failures being assumed to play a significant role (Faber & Vohs, 2004; Kellett & Bolton, in press).

A problem with the research conducted on mood, self-evaluation and CB is that methodologies have tended to rely on retrospective recall (via either interview or questionnaire) to identify the role of self- and mood-management difficulties in CB. Such methodologies suffer from the fact that they rely on CB participants recalling and reporting on what they believe happens prior to, during or subsequent to shopping, rather than being able to report on mood or self-perception change as it occurs (Stone *et al.* 2000). For example, Christenson *et al.* (1994) and McElroy *et al.* (1994) interviewed CB participants and identified 'pre-buying' themes of anger/loneliness/frustration/hurt/irritability and 'during buying' themes of relief/pleasure/positive affectivity. Faber & Christenson (1996) asked CB participants and controls to report on their typical mood states prior to and during imagined shopping trips. CB participants reported more extreme positive and negative moods during imagined shopping trips, than the control participants. Miltenberger *et al.* (2003) requested CB participants to rate their moods immediately following shopping trips and found that participants reported negative moods as the common antecedent to purchasing episodes, with euphoria or relief as common

Table 1. Screening information on study participants

	Compulsive- buying participant	Control participant	Clinical mean (S.D.)	Community mean (S.D.)
Compulsive Buying Scale	-4.58	0.74	-4.2 (1.5) (Miltenberger <i>et al.</i> 2003)	
Compulsive Acquisition Scale (buying scale)	58	22	61.4 (12.3) (Frost <i>et al.</i> 2002)	28.5 (12.6) (Frost <i>et al.</i> 2002)
Compulsive Acquisition Scale (free items scale)	15	18	24.2 (9.1) (Frost <i>et al.</i> 2002)	15.7 (7.4) (Frost <i>et al.</i> 2002)
YBOCS – Shopping version	14	1	21.1 (2.5) (Monahan <i>et al.</i> 1996)	2.9 (1.8) (Monahan <i>et al.</i> 1996)

YBOCS, Yale–Brown Obsessive Compulsive Scale.

consequences. The CB literature therefore tends to assume that mood variability plays a pivotal role in CB, whilst no studies have actually accessed direct measures of mood across the span of shopping trips, in order to critically examine for evidence of mood variability. Indeed Kellett & Bolton (in press) noted that ‘CB appears a “fluid” phenomena, that empirically will require time sampling approaches to truly capture the evident state shifts that occur prior to, during and following acts of CB’. The present paper therefore describes the first examination of direct mood and self-evaluation variability in CB in real-time shopping episodes.

Method

Participants

Two women participated in the study, one who met the criteria for CB and one who did not and therefore acted as a control subject. Adverts were placed in local health centres in order to recruit participants; the adverts did not mention CB and merely informed potential recruits that researchers were interested in people’s experience of shopping, as they shopped. The recruitment process identified a single compulsive shopper and therefore the decision was made to have a single control participant for comparison purposes. The control participant was randomly selected from three potential participants. Each participant completed screening measures for CB, in order to be recruited into the study, but did not complete or engage in any other screening/assessment procedures in relation to mental health. The screening measures used in the study were the Compulsive Buying Scale (CBS; Faber & O’Guinn, 1992 – a clinical screen for CB), the Compulsive Acquisition Scale (CAS; Frost *et al.* 1998 – a measure containing two scales concerning CB and acquisition of free items, e.g. flyers and generally discarded junk) and the Yale–Brown Obsessive–Compulsive Scale – Shopping version (YBOCS-SV; Goodman *et al.* 1989 – a scale measuring cognitive aspects of CB). The results for the screening measures for the two participants are given in Table 1, with published clinical and community norms included for the measures for context and comparison purposes. The CBS score for the CB participant was -4.58, a score that is markedly below the cut-off

of -1.34 , which has been illustrated to differentiate compulsive from non-compulsive buyers (Faber & O'Guinn, 1989, 1992).

The CB participant was 25 years old, she stated that she had engaged in problematic shopping for all of her life, was prone to experiencing depressive episodes and that she was not on any medication at the time of the field study. The CB participant had never sought any psychological or psychiatric help for her CB. She stated that the CB had detrimental effects on her relationships and caused her chronic financial difficulties, due to her inability to control her impulses. She stated that she compulsively shopped, as buying possessions tended to boost her sense of self-esteem, gave her a sense of purpose, achievement and control and that she was particularly likely to shop (predominantly for items related to personal appearance), when she had access to money or credit. Her income was £21971 per annum. The control participant was aged 52 years, denied any problematic shopping behaviours and was not on any medication at the time of the field study. Her income was £13446. Both participants were in long-term relationships.

Procedure

Each participant was provided with mood diary with an associated rating schedule. Data collection took place prior to, during and following four separate shopping trips, which the participants completed at the same time in the same shopping precinct. Participants were requested to shop as they normally would. Participants were requested to rate themselves on mood rating scales every 10 min, with each phase (i.e. pre-shop, shop and post-shop) lasting for 1.5 h. The total time for each trip was therefore 4.5 h; $1.5 \text{ h} \times 3 \text{ phases}$ (pre, during and post). The pre-shop period was 10:30 to 12:00 hours, the shopping phase 12:00 to 13:30 hours and the post-shopping phase 13:30 to 15:00 hours. Four pre-, during and post-shopping trips were sufficient to enable a time-series analysis of the data. The four trips were conducted over a period of 4 months (one recorded shopping trip per month for each participant). The participants each provided ten data-points in each phase on each trip, with the exception of the CB participant who omitted the final pre-shopping data-point on one trip.

Measures

Mood

Current mood was measured using four bipolar rating scales. The scales had a mood adjective at each end, and a 9-point likert response format. The scales measured the four main dimensions of the circumplex model of affect (Watson & Tellegen, 1985; Remington *et al.* 2000): pleasure (*gloomy–happy*), arousal (*sluggish–energetic*), positive affect (*bored–buzzing*), and negative affect (*calm–tense*). An additional affect scale to measure feelings of guilt (*guilt-free–guilty*) was also included, due to potential relevance to CB (Faber & Vohs, 2004). Negative affect and guilt were reverse-scored, and all the variables were labelled using the positive adjectives of the scales.

Self-evaluation

Three bipolar rating scales were included to assess how participants' perceptions of themselves varied during the shopping episodes. The scales measured self-achievement

(*failing–achieving*), self-awareness (*cut off from self–aware of self*), and self-regard (*dislike self–like self*). Ratings were made using a 9-point likert response format.

Financial activity

During each trip, each participant kept a record of the type and number of items bought, the cost of each item and rated every purchase in terms of pleasure on a 9-point likert scale. The shops from which the products were purchased was not recorded.

Analyses

Data were analysed using analysis of covariance (ANCOVA) with the mood and self-evaluation ratings as dependent variables. In each analysis, the first-order lag (previous value) of the dependent variable was used as a covariate to remove serial dependency in the time-series for each participant, in order to meet the assumption of independence between observations (West & Hepworth, 1991). The two factors in each analysis were participant (with control participant and CB participant as the two levels) and shopping phase (with pre-shop, shop, and post-shop as the three levels). Main effects involving participants could not be interpreted (because they involved multiple observations from the same individuals), but their interactions with phase were interpretable (Alliger & Williams, 1993). Dummy variables for the first three shopping trips were also included as covariates in each analysis, to control for any differences between trips.

Results

Over the four shopping trips, the CB participant rated her pleasure from the items she purchased more highly [values are mean (standard deviation)] [7.82 (1.49)] than the control participant [7.02 (1.37)]. Over the four trips, the CB participant spent less [£69.13 (£53.85)] than the control participant [£92.12 (£81.89)], and purchased fewer items [4 items (1.83)] than the control participant [10.25 (11.47)]. However, such differences were created by the control participant's behaviour on the final shopping trip, during which she bought 66% of her items and spent 54% of her financial total; a shopping episode that she stated was performed on an irregular basis, but one in which she tended to purchase multiple items. The CB participant solely bought items for her own use, with such items tending to be related to personal appearance; clothes and make-up constituted 75% of her purchases. The control tended to buy items unrelated to personal appearance (such a food items, pet-care items, cleaning products and magazines), but on the final trip additionally bought clothes for herself and clothes/possessions for her partner.

Table 2 shows the unadjusted means (and standard deviations) in each shopping phase and the within-person correlations of the mood and self-evaluation variables for each participant. Of note among the correlations was that the CB participant felt guiltier when happy and liked herself less when experiencing positive affect, in contrast to the control participant who felt less guilty when happy and liked herself more when experiencing positive affect.

ANCOVA showed an interaction effect between participant and shopping phase for self-liking [$F(2, 220) = 4.58, p < 0.05$], in which the CB participant disliked herself more whilst shopping. The interaction between participant and phase for energetic mood was marginally

Table 2. Means, standard deviations, and within-person correlations for compulsive-buying (CB) participant and control participant

	Pre-shop		Post-shop		1	2	3	4	5	6	7
	(S.D.)	Shop (S.D.)	(S.D.)								
CB											
1. Happy	6.33 (1.53)	7.00 (1.01)	6.40 (0.81)	–							
2. Energetic	5.97 (1.37)	7.18 (1.01)	6.13 (0.91)	0.86**	–						
3. Buzzing	6.00 (1.52)	7.22 (1.14)	6.13 (0.97)	0.84**	0.95**	–					
4. Calm	8.51 (0.60)	7.50 (1.16)	8.85 (0.43)	–0.04	–0.15	–0.15	–				
5. Guiltless	9.00 (0)	8.70 (0.52)	8.62 (0.87)	–0.33**	–0.35**	–0.32**	–0.01	–			
6. Achieving	5.46 (1.59)	6.55 (1.40)	5.93 (1.05)	0.77**	0.086**	0.85**	–0.10	–0.42**	–		
7. Self-aware	8.90 (0.64)	8.79 (0.41)	9.00 (0)	–0.02	–0.03	–0.05	0.31**	–0.09	0.20*	–	
8. Self-liking	8.97 (0.16)	8.62 (0.67)	9.00 (0)	–0.03	–0.16	–0.22*	0.50**	–0.12	–0.03	0.43**	
Control											
1. Happy	6.23 (0.66)	6.63 (1.03)	6.37 (0.63)	–							
2. Energetic	6.08 (0.47)	6.40 (1.06)	5.88 (0.85)	0.65**	–						
3. Buzzing	5.68 (0.53)	6.28 (0.99)	5.75 (0.71)	0.51**	0.72**	–					
4. Calm	7.50 (0.85)	6.67 (1.21)	7.92 (0.80)	0.20*	–0.03	–0.18	–				
5. Guiltless	8.27 (0.72)	8.00 (1.04)	8.13 (0.91)	0.29**	0.16	0.03	0.56**	–			
6. Achieving	6.00 (0.45)	6.63 (0.77)	6.05 (0.39)	0.53**	0.55**	0.53**	–0.17	0.01	–		
7. Self-aware	7.92 (0.47)	8.00 (0.39)	8.15 (0.36)	0.19*	0.16	0.23*	0.31**	0.33**	0.17	–	
8. Self-liking	8.05 (0.39)	8.13 (0.34)	8.02 (0.16)	0.26**	0.23*	0.26**	0.25**	0.18	0.14	0.18*	

$n = 120$ time-points (40 per shopping phase) per participant, except for CB participant who omitted one pre-shopping data-point.

* $p < 0.05$, ** $p < 0.01$.

significant [$F(2, 220) = 2.41, p < 0.1$], with the CB participant reporting feeling more energetic during shopping. The other ANCOVAs showed main effects of shopping phase for happy mood [$F(2, 220) = 5.29, p < 0.01$], energetic mood [$F(2, 220) = 8.10, p < 0.01$], buzzing mood [$F(2, 220) = 5.58, p < 0.01$], calm mood [$F(2, 220) = 17.53, p < 0.01$], self-achieving [$F(2, 220) = 2.59, p < 0.01$], and self-awareness [$F(2, 218) = 3.13, p < 0.05$]. Simple contrast tests showed that the participants were happier ($p < 0.05$), more energetic ($p < 0.01$), less calm ($p < 0.01$), and more self-achieving ($p < 0.01$) during shopping compared to pre-shopping, but more calm ($p < 0.05$) and self-aware post-shopping ($p < 0.05$) compared to pre-shopping. ANCOVA did not show any significant effects for guilt. Supplementary ANCOVAs of the mood variables using time-into-shopping phase as an additional factor produced a significant interaction between shopping phase and time-into-shopping phase for buzzing mood [$F(17, 168) = 2.26, p < 0.01$]. Fig. 1 shows that the CB participant reported elevated feelings of positive affect (buzzing) during the first half of the shopping phase.

Discussion

This is the first known study conducted regarding CB that has actually sampled mood and self-perception *in situ* prior to, during and following shopping trips. The CB literature is overly reliant upon studies which are dependent upon the accurate and non-biased recall of psychological CB phenomena. However, such a reliance on recall inevitably creates problems with the reliability and validity of such self-evaluations, e.g. due to the effects of memory distortion (Wells & Horwood, 2004; Loftus, 2005; Cowley, 2006). However, a methodological concern in the present study is that although participants were requested to shop as they normally would, participants were required to complete mood diaries as they shopped and this may have altered the manner in which they shopped. This study has revealed more similarities

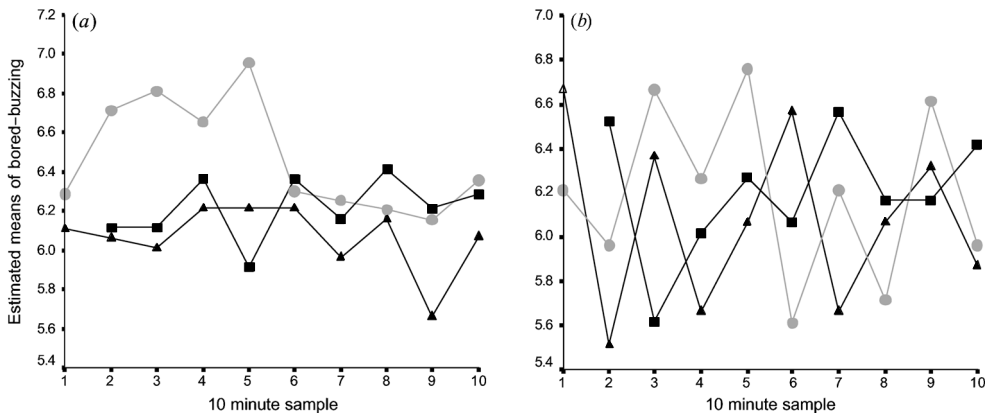


Fig. 1. Positive affect during each shopping phase for (a) compulsive-buying (CB) participant and (b) control participant. ■—■, Pre-shop; ●—●, shop; ▲—▲, post-shop.

than differences between the control and the CB data in relation to changes in mood and self-evaluation during shopping trips. Indeed, previous research has illustrated that one in four consumers experience mood change during shopping trips (Faber & Vohs, 2004), which appears to have occurred for the control participant in the present research.

A methodological weakness in the present study was that the time of the shopping trip for each participant was prescribed and therefore the CB participant may not have been responding to any internal negative emotional prompts at the time. The issue of guilt in the present study was interesting in that the correlational analysis revealed a significant positive association between happiness and guilt for the CB participant, but a significant negative association for the control. As such, shopping and CB appeared to function as a *guilty pleasure*. The investigation of the guilty-pleasure concept in samples of non-help-seeking and help-seeking CB participants is a future research requirement, because it has not been previously identified in the CB literature. The study was limited by only having one CB participant and one control participant, yet the methodology created a time-series of mood data sufficient for a valid time-series analysis. In retrospect it may have been useful to recruit all the potential controls, but the recruitment process only identified the single compulsive buyer and a decision was made to mirror this in the control condition. One of the shopping trips by the control participant did significantly skew the overall means for the four control trips. Finding from the ANCOVA in the time-series illustrated that the CB participant liked herself less (reduced self-esteem), during the actual shopping phases. The previous research concerning self-esteem and CB has tended to assume that the two factors are related in a global and static manner (Scherhorn *et al.* 1990; Hanley & Wilhelm, 1992), whereas the present research suggests that the self-esteem of compulsive buyers is much more malleable and prone to negative disruption during the act of shopping itself. In future CB research where self-evaluations are sampled in real time, it would be useful to measure self-esteem more directly. As self-regulation failures have been shown to be related to CB (Faber & Vohs, 2004), this research indicates that self-evaluations appear prone to alteration and change in CB, and may be a risk factor for the characteristic self-regulation failures (Faber & Vohs, 2004).

Prior CB research studies, as previously noted, have relied on retrospective recall to describe the act of shopping upon arousal levels, but nevertheless have similarly described the act of purchase as producing euphoria (Miltenberger *et al.* 2003), a sense of accomplishment (Pooler, 2003) and a surge in well-being/self-esteem (Faber & Christenson, 1996). The present study attempted to capture the experience of euphoric positive affect through the mood bipolar rating scale of bored–buzzing. A significant effect of shopping phase was found for positive affect. The CB participant in particular appeared to find the first 40 min of the shopping phase as a particularly arousing period, with levels of arousal then levelling off to pre-shopping phase levels and subsequently being sustained across the post-shopping phase period. In terms of learning theory, the positively reinforcing effect of mood alteration in the form of positive affect therefore appeared evident in the early periods of the shopping phase (Falk, 1981), which is a new finding requiring replication in the CB literature. The extent to which the activity of purchasing items can achieve and maintain arousal levels and for how long is a potent CB research question. Future research could also make use of psychophysiological indices of arousal in similar time-series designs, e.g. as applied to the study of gambling (Griffiths, 1993).

In terms of cognitive-behavioural treatment, the study does emphasize the need to provide clients with skills to cope with mood variability as it occurs in shopping environments – particularly as such environments have been explicitly designed to psychologically enhance motivations to purchase (Gilboa & Rafaeli, 2003). As with any behavioural addiction (Marks, 1990), the aim of cognitive behavioural intervention is the management, as opposed to complete abstinence from, the addictive behaviour (Kellett & Bolton, *in press*). Therefore, cognitive behavioural therapy should target the schemas driving CB, facilitate hierarchies of exposure to ‘non-shopping’ (Burgard & Mitchell, 2000) and also provide clients with skills for coping in shopping environments, such as response prevention, cognitive restructuring and grounding. It is likely that the cognitive behavioural therapist needs to consider accompanying clients on treatment non-shopping trips and in the active *in vivo* coaching of the techniques suggested. Despite these suggestions for intervention, the CB treatment literature is not yet at a level to provide guidelines on evidence-based practice, due to the current paucity of outcome studies of sufficient methodological rigour (Benson & Gengler, 2004).

In conclusion, this study has been the first of its kind to investigate mood variability and CB employing a methodology not dependent on recall and therefore one that sampled mood in real time and in a real retail situation. The study does appear to have thrown up more questions than answers, although methodologically the study provides two important lessons to researchers aiming at more scientific examination of CB. First, more sophisticated methods of sampling of CB experiences are required and second, the employment of control participants appears vital, so that the true differences that demarcate and define CB can be identified, rather than simply assumed.

Summary

- Compulsive buying is an impulse control disorder that appears to involve mood variability as part of the cognitive behavioural cycle.
- Cognitive and behavioural interventions can target purchase-driven mood variability as a treatment strategy.

- Cognitive behavioural therapists may well need to conduct therapy sessions in shopping situations, in order to truly capture and change shopping-associated cognitions and emotions.

Declaration of Interest

None.

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Learning objectives

- to be aware of compulsive buying as an impulse control disorder and failure in self-regulation;
- to be aware of the cognitive behavioural model of compulsive buying;
- to be aware of the role of mood alteration in compulsive buying;
- to be aware of methodological issues in the study of compulsive buying.