



The Association Between Coping and Enhancement Motives of Buying and Four Distinct Dimensions of Pathological Buying

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Abstract

Coping and enhancement motives are theoretically implicated in the risks associated with compulsive buying, yet there is a paucity of empirical support. The current study aimed to (1) develop and validate a psychometrically sound measure of coping and enhancement buying motives and (2) assess the unique association of coping/enhancement buying motives with Yi and Baumgartner's (2023) four dimensions of compulsive buying. Two samples collected by online panel companies were used for measurement development ($N=859$) and for validity and hypothesis testing ($N=1157$). A seven-item Affective Buying Motives Questionnaire (*ABMQ*) consisting of coping and enhancement motives was supported. Path analyses identified coping motives as a stronger positive predictor of the financial and interpersonal problems dimensions of compulsive buying. However, both motives were equivalent positive predictors of the excessive buying and phenomenology of pathological buying dimensions of compulsive buying. Our findings point to the unique compulsive buying risks associated with the coping and enhancement motives of buying.

Keywords Compulsive buying · Coping motives · Enhancement motives · Affective motives · Dimensions of pathological buying

Introduction

Literature Review

Compulsive buying has long been viewed as a maladaptive form of purchasing behavior that people engage in to cope with or alleviate negative affective states (see Kellett & Bolton, 2009, and Mueller et al., 2015, for reviews). This is reflected in one of the most widely

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accepted definitions of compulsive buying as “chronic repetitive purchasing that becomes a response to negative events or feelings” (O’Guinn & Faber, 1989, p. 155). Supporting this, researchers have found that, compared to non-compulsive buyers, compulsive purchasers more often engage in buying behaviors for the purpose of receiving an emotional lift from negative mood (Faber & Christenson, 1996; McElroy et al., 1994). The “mood repair” account of compulsive buying (Faber & Christenson, 1996) was so dominant in the literature until the early 2000s that compulsive buyers were considered a homogeneous group who had a strong motive to escape chronic negative affect (Faber and O’Guinn, 1992; McElroy et al., 1994). However, due to researchers’ increased understanding of the complexity of the motives underlying compulsive buying, this view is currently being revised (See Dittmar, 2004; Mueller et al., 2011; Jung & Yi, 2014; Thornhill et al., 2012).

The motive of alleviating negative mood is widely recognized in the addiction literature, with evidence linking problematic alcohol use and gambling with this motive (i.e., coping motive: internal, negative reinforcement; Cooper et al., 1992; Stewart & Zack, 2008). However, this same literature points to another affective motive: the motive of increasing positive affect (i.e., enhancement motive: internal, positive reinforcement). Indeed, both coping and enhancement motives have been linked with alcohol and gambling problems (Birch et al., 2006; Cook et al., 2020; Cooper et al., 1992; Merrill et al., 2014; Stewart & Zack, 2008; Studer et al., 2016). Empirical evidence also indicates the link between chronic deficits in emotion regulation and frequent engagement of addictive behaviors, including drug use (Cashwell et al., 2017; Prosek et al., 2018; Stellern et al., 2023).

Inspired by this line of research on affective drinking and gambling motives, we looked to the literature for similar identification and measurement of affective buying motives. As previously noted, the mood repair account of compulsive buying is predominant in this literature (Faber & O’Guinn, 1992; Faber & Christenson, 1996; McElroy et al., 1994). The mood repair account is best exemplified by Faber’s (2004) extension of Heatherton and Baumeister’s (1991) escape theory of compulsive buying. Based on in-depth interviews with compulsive buyers, Faber (2004) argued that the frequent experience of negative self-awareness associated with not being able to meet unrealistically high expectations about oneself was typical in compulsive buyers, who use the act of buying as a way to cope. Consistent with this view, researchers have explored the link between compulsive buying and personality traits that reflect the chronic experience of negative affect and aversive self-awareness (see Moulding et al., 2017, for a review). For example, depression and the lack of self-esteem have long been found to be closely associated with compulsive buying (Claes et al., 2010; Mueller et al., 2014; Maraz et al., 2016; Yurchisin & Johnson, 2004). More recently, researchers have tested the possibility that two facets of narcissism may be associated with compulsive buying (e.g., Zerach, 2016). While overt narcissism (i.e., narcissistic grandiosity) refers to having an inflated self-image without requisite accomplishments and skills (including fantasies of omnipotence and superiority), covert narcissism (i.e., narcissistic vulnerability) is characterized by privately holding inflated and perfectionistic fantasies of what one ought to be or achieve while having self-doubt and feeling intense shame about not being able to fulfill them (Pincus & Lukowitsky, 2010). Overt narcissism was reported to be associated with compulsive buying among young adult samples (Rose, 2007; Sedikides et al., 2011). Furthermore, covert narcissism was found to be associated with compulsive buying (Jung & Yi, 2014) even when overt narcissism was controlled for (Zerach, 2016).

Another line of research relevant to buying motives conceptualizes compulsive buying as an attempt to approach one’s ideal identity by making excessive materialistic acquisitions and experiencing emotional enhancement. For example, Dittmar (2005) views compulsive buying as primarily an appetitive motivation of approaching the ideal self via

acquiring products that help compensate for the gap between one's actual and ideal self. Furthermore, Dittmar et al. (2007) found that the motive of approaching an idealistic identity, as well as enhancing positive emotions such as fun and excitement, predicted compulsive buying among young consumers. A similar view that compulsive buyers seek pleasure from materialistic acquisition has been held by other researchers as well (d'Astous, 1990; Mowen & Spears, 1999; Yurchisin & Johnson, 2004). Materialistic values, especially the tendency to seek happiness from acquiring materialistic possessions, have been repeatedly found to be positively associated with compulsive buying in empirical studies (Mueller et al., 2011, Mueller et al., 2014, Otero-Lopez et al., 2011, Rose, 2007, Ridgway et al., 2008). Furthermore, the enhancement motive of buying is buttressed by Jung and Yi (2014)'s identification of a group of compulsive buyers who reported frequently buying in excess when they experienced a lack of excitement, in addition to a group who reported frequent experiences of negative emotions prior to buying lapses.

Taken together, the extant theoretical and empirical literature points to both coping and enhancement motives as potential risk factors for compulsive buying. Although other motives such as deal proneness (Blattberg et al., 1978) and upward social comparison (Pillai & Nair, 2021) may account for occasional impulse buying, they are not as central to compulsive buying as the affective motives of buying. In contrast, the two affective motives have been known to reflect chronic deficits in emotion regulation and thus contribute to problematic engagement in other addictive behaviors (Cook et al., 2020; Studer et al., 2016). However, given that there is no validated instrument to measure both the coping and enhancement motives of compulsive buying, these risk pathways remain untested. Although two instruments have been used to assess the affective motive(s) underlying compulsive buying, they have some weaknesses. For example, Kyrios et al.'s (2004) Buying Cognitions Inventory includes a subscale for the use of buying to compensate for negative affect (i.e., coping motive), but not a subscale for seeking or enhancing positive affect. The other measure of affective motives of buying was reported in Challet-Bouju et al. (2020), who administered an online survey of various risk factors of compulsive buying. However, Challet-Bouju et al. simply changed the wording of the items from the Gambling Motive Questionnaire (GMQ: Stewart & Zack, 2008) to buying and did not develop or validate a measure of coping and enhancement motives that was specifically designed for compulsive buying. To address this gap in the literature, we therefore decided to develop and validate a new and psychometrically sound measure of the coping and enhancement motives underlying compulsive buying.

Another relevant line of research deals with the dimensionality of compulsive buying. Although compulsive buying was initially proposed as a unidimensional construct (e.g., Faber & O'Guinn, 1992), many researchers have recognized the multi-dimensionality of compulsive buying in their development of measures for compulsive buying. However, there is still substantial disagreement about the number and content of the dimensions of compulsive buying. For example, Ridgway et al.'s (2008) Richmond Compulsive Buying Scale consists of two dimensions: the buying impulsivity facet and the obsessive-compulsive facet of overbuying. Andreassen et al.'s (2015) Bergen Shopping Addiction Scale was conceptualized based on the seven dimensions considered important for (alcohol) addiction: salience, mood modification, conflict, tolerance, relapse (i.e., loss of control), withdrawal, and adverse problems. Mueller et al.'s (2015) Pathological Buying Screener consists of two facets: a dimension of impulsive buying and a complex dimension encompassing the loss of control and adverse consequences due to overbuying. Furthermore, the multidimensionality of compulsive buying has often been ignored or downplayed by the proponents of the above measures because the separate dimensions are usually aggregated when compulsive buying is related to other constructs.

Recently, these problems were addressed by a newly developed measure: the 4-Factor Pathological Buying Screener or 4FPBS (Yi & Baumgartner, 2023). The 4FPBS is a revision of the two-factor Pathological Buying Screener (Mueller et al., 2015) and consists of four dimensions that reflect distinct aspects of pathological buying: excessive buying (EB), the phenomenology associated with compulsive buying (PH; i.e., preoccupation, buying urges, and mood regulation), financial problems (FP), and interpersonal problems (IP). The authors not only recommended that the four dimensions be scored separately, but also suggested structural relationships between them, with the PH dimension serving as a partial mediator of the effects of EB on FP and IP. Also, given the emergence of a simplex pattern in the correlations among the four dimensions from their three samples, a high score on the EB dimension alone is not likely to be as important as a high score on the PH dimension for identifying compulsive buyers who require clinical intervention. As the 4FPBS is a promising measure of the multiple dimensions of compulsive buying, it is important to assess the unique contribution of coping and enhancement motives of buying to each of the four dimensions of the 4FPBS. Although coping motives have been found to be more strongly associated with problems due to alcohol and gambling addiction relative to enhancement motives (e.g., Birch et al., 2006; Stewart & Zack, 2008), these findings may not transfer to compulsive buying, and previous research in other domains is also silent about the relationship between coping and enhancement motives on the one hand and the EB and PH dimensions of compulsive buying on the other hand. This is another gap in the literature that we tried to address in the current research.

Research Aims and Predictions

The primary aim of the current research was to develop and validate a measure of coping and enhancement buying motives (i.e., Affective Buying Motives Questionnaire: ABMQ). This was done by adapting psychometrically supported measures from the drinking and gambling literature (i.e., DMQ: Cooper et al., 1992 and GMQ: Stewart & Zack, 2008) to arrive at a measure of compulsive buying motives. We predicted a two-factor structure of the ABMQ such that coping and enhancement motive subscales would be identified. Based on extant findings from compulsive buying (Jung & Yi, 2014) and other behavioral addiction research (Stewart & Zack, 2008), we hypothesized that coping and enhancement buying motives would be positive and unique predictors of compulsive buying, with coping motives emerging as the stronger predictor. We also explored the association of coping and enhancement motives with relevant trait variables, such as depressive symptoms, trait self-control, overt and covert narcissism, and materialistic values. Given the lack of previous research on this, we did not set up an a priori hypothesis as to which affective motive of buying would be more strongly associated with the trait variables.

Another aim of the current research was to assess the unique relationship of coping and enhancement motives with the separate dimensions of the 4-Factor Pathological Buying Scale (4FPBS: Yi & Baumgartner, 2023). Similar to excessive use of alcohol, excessive buying is considered a precondition of pathological buying but does not necessarily result in pathological buying. Thus, we hypothesize that the dimension of excessive buying will be positively associated with both the coping and enhancement motives of buying. In contrast, since financial problems and interpersonal problems reflect dimensions of adverse outcomes that arise due to pathological buying, we hypothesize that they will be more strongly associated with coping motives than enhancement motives. As to the phenomenology dimension, given that extant research reported a positive association between

negative affect, either experimentally induced or reported in real time, and the urge to drink or smoke (Carter & Tiffany, 2001; Waddell et al. 2021), it is reasonable to predict that the coping motive of buying will have a positive relation with the phenomenology dimension of pathological buying. Positive affect has also been positively associated with cravings to smoke or drink (Zinser et al., 1992; Leenaerts et al., 2023), although the enhancement motive does not necessarily require the acute prior experience of positive affect. However, given that earlier phenomenological studies of compulsive buyers reported unexpected buying as a way of seeking excitement (O'Guinn & Faber, 1989; Dittmar, 2005), it is plausible that the enhancement motive will be positively associated with the phenomenology dimension of pathological buying. Because of lack of prior evidence, we do not offer an a priori hypothesis as to whether the phenomenology dimension will be more or less strongly associated with coping motives than enhancement motives of buying. See Fig. 1 for the path analytic model that summarizes our hypothesis.

To achieve these research objectives, we drew two large samples. The scale for measuring coping and enhancement buying motives was developed and refined in Study 1. In Study 2, we validated the ABMQ with another sample and assessed the relationship between the coping and enhancement motives of buying on the one hand and the four dimensions of the 4FPBS on the other hand.

Method

Participants

Study 1 participants were recruited through an American research company's online panel. Given that the coping and enhancement motives of buying are not specific to compulsive

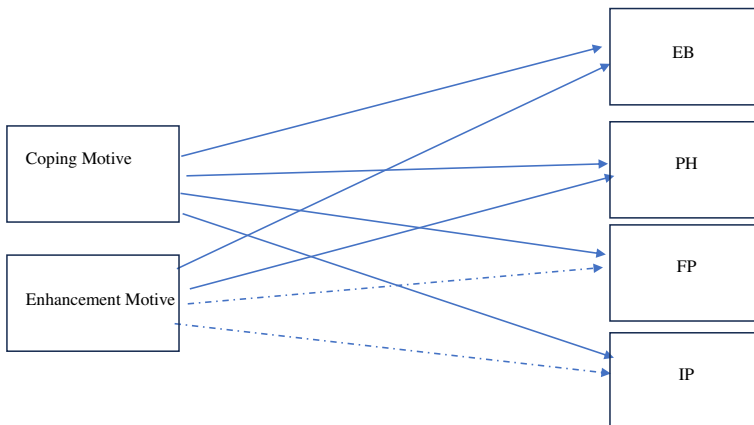


Fig. 1 Path analytic model reflecting the hypotheses. Note. EB, excessive buying; PH, phenomenology associated with compulsive buying; FP, financial problems; IP, interpersonal problems. These are the four dimensions of pathological buying as specified in the 4FPBS. The dotted paths from enhancement motives to FP and IP indicate our hypothesis that they will be less strong than the paths from coping motives to FP and IP. Thus, all the paths, solid and dotted, were estimated. All the variables were entered into a structural equation model by taking the average of the relevant items. Both the independent variables and the dependent variables were allowed to correlate freely

buyers but apply to individuals who occasionally or frequently engage in unplanned buying, we used the following eligibility criteria for Study 1: having had two or more buying lapses (i.e., spending \$100 or more on a product due to a sudden rush of desire) within the past 6 weeks and not being a full-time student. No other inclusion or exclusion criteria were applied. Overall, 900 panelists were eligible for Study 1. Data from 41 panelists were excluded due to a large number of incomplete responses. Therefore, $N=859$ for Study 1. The demographics of Study 1 sample were as follows: $M_{\text{age}}=39$ years and 54.6% female. About 40% of our participants exceeded Faber and O'Guinn's (1992) Compulsive Buying Scale (CBS) diagnostic cutoff for compulsive buyers.

Study 2 included participants recruited from a large Canadian online panel who were completing a 1-month follow-up to a larger study designed to assess the prevalence of compulsive buying among English-speaking residents in Canada. For the larger survey, stratified random sampling was used according to gender, province, and age group. Among 2056 panelists who participated in the larger study, about 56% completed the follow-up survey, which is henceforth referred to as Study 2 ($N=1157$). The demographics of Study 2 sample were as follows: $M_{\text{age}}=48$ years and 48% female. The vast majority (i.e., 94.9%) of Study 2 participants were classified as non-compulsive buyers based on the CBS cutoff.

Measures: Study 1 Survey

Affective Buying Motives Questionnaire (ABMQ)

The initial 16-item pool of affective motives was adapted from the Drinking Motive Questionnaire (DMQ; Cooper et al., 1992), the Modified Drinking Motive Questionnaire-Revised (Grant et al., 2007), and the Gambling Motive Questionnaire (GMQ; Stewart & Zack, 2008). The pool included enhancement (5 items; e.g., because it is exciting) and coping (11 items; e.g., to forget your worries) motives. The stem "I go shopping _____" preceded each item. The relative frequency of shopping for each reason was rated on a 4-point scale (1 = *almost never/never*; 2 = *sometimes*; 3 = *often*; 4 = *almost always*). See Table 1 for the pool of items used in Study 1.

Compulsive Buying Scale (CBS)

Faber and O'Guinn's (1992) CBS is the most frequently used self-report measure of compulsive buying. Responses to the 7-item CBS were made on a 5-point scale (1 = *strongly agree*; 5 = *strongly disagree*). The instrument is known to be unidimensional. Cronbach alpha of the CBS was 0.88. Developed as a clinical screener, the CBS offers a scoring algorithm with different weights for each item and a cutoff for diagnosing compulsive buyers (i.e., -1.34 or lower).

Richmond Compulsive Buying Scale (RCBS)

Ridgway et al.'s (2008) RCBS consists of six items measured on a 7-point scale (1 = *never*; 7 = *very often*). A composite sum score was derived by summing respondents' scores across the six items. The proposed diagnostic cutoff for compulsive buying is 25. Cronbach alpha for the RCBS was 0.92.

Table 1 EFA loading estimates (Study 1, Sample 1A)

Item #	Factor1	Factor2	Communality	Content
1	0.05	0.85*	0.72	Because it is exciting
2	0.02	0.87*	0.78	Because it is fun
3	-0.22	1.00*	0.78	Because it makes me feel good
4	0.52	0.35	0.60	To get high feelings
5	0.19	0.72*	0.67	Because I like the feeling
6	0.68*	0.22	0.70	Because it helps me when I feel nervous
7	0.86*	0.04	0.75	To turn off negative thoughts about myself
8	0.88*	-0.02	0.74	To stop me from feeling so hopeless about future
9	0.74*	0.08	0.64	Because it helps me when I am feeling depressed
10	0.32	0.61	0.71	To relax
11	0.37	0.62	0.63	To cheer up when I am in bad mood
12	0.95*	-0.18	0.72	To numb my pain
13	0.39	0.50	0.66	To forget my worries
14	0.58	0.32	0.69	To help me feel more positive about the future
15	0.75*	0.13	0.70	To stop dwelling on things
16	0.50	0.39	0.63	Because it helps me feel more self-confident or sure of myself

$N=430$; items with an asterisk were retained for the CFA with sample 1B

Brief Trait Self-control Scale (TSC)

Chronic ability to defer short-term temptation for long-term goals or consequences was assessed with Tangney et al.'s (2004) 11-item TSC-Brief. Responses were made on a 5-point response scale (1 = *not at all like me*; 5 = *very much like me*), and a mean score was computed across all items. Cronbach alpha for the TSC was 0.74.

Materialistic Value Scale (MVS)

Materialistic values were measured with Richins' (2004) 13-item MVS short-version. Responses were made on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*), and a mean score was computed across all items. Cronbach alpha for the MVS was 0.80.

Narcissistic Personality Inventory (NPI)

Ames et al.'s (2006) NPI-16 was administered to assess overt narcissism. Participants indicated whether each item applies to them with a binary response mode (yes/no). A score was derived from calculating the proportion of responses that are characteristic of individuals with grandiose narcissism. Cronbach alpha for the NPI was 0.71.

Hyper-Sensitive Narcissism Scale (HSNS)

Hendin and Cheek's (1997) HSNS was used to assess covert narcissism, which can be described (in contrast to overt narcissism) as more passive, such as quiet smugness,

self-absorption, and vulnerability and insecurity about the self (Hendin & Cheek, 1997). Responses to the 10-item HSNS were made on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) and a mean score was computed across all items. Cronbach alpha for the HSNS was 0.83.

Measures: Study 2 survey

In addition to the instruments used in Study 1, the following measures were included in Study 2. Measures for overt and covert narcissism were not included in Study 2.

Center for Epidemiological Studies Depression Scale (CESD)

The frequency of experiencing recent depressive symptoms was measured using the 20-item CESD (Radloff, 1977). Responses were made on a 5-point scale (0 = *rarely*; 4 = *most or all the time*) and a mean score was computed across all items. Cronbach alpha for the CESD was 0.85.

Rosenberg's Self-Esteem Scale (RSES)

Self-esteem was measured with the RSES (Rosenberg, 1965). Responses to the 10 items were made on a 5-point scale (1 = *strongly disagree*; 4 = *strongly agree*) and a mean score was computed across all items. Cronbach alpha for the RSES was 0.81.

4-Factor Pathological Buying Scale (4FPBS)

Developed by Yi and Baumgartner (2023), this scale measures four dimensions that reflect distinct aspects of pathological buying: excessive buying (EB), the phenomenology associated with compulsive buying (PH: i.e., preoccupation with buying, buying urges, and mood regulation), financial problems (FP), and interpersonal problems (IP). Responses to the 9 items were made on a 5-point frequency scale (1 = *never*; 5 = *very frequently*) with the question stem (i.e., "In the past six months, how often did it occur...?").

Ethics

All procedures were carried out in accordance with the Declaration of Helsinki. Studies 1 and 2 were approved by the research ethics board of the first author's university (#12JL003 and #17-01-023). Informed consent was obtained from all participants.

Data Analytic Plan

For the first aim of the paper, we used the standard procedure of developing and validating a scale. We conducted an exploratory factor analysis (EFA) with maximum likelihood extraction on the initial pool of 16 ABMQ items using a random split-half of the Study 1 sample (i.e., Sample 1A; $N=430$) in order to determine the number of factors to be extracted and reduce the number of items. The reduced list of ABMQ items was subjected to confirmatory factor analysis (CFA) with maximum likelihood extraction on the other half of the Study 1 sample (i.e., Sample 1B; $N=430$). The final version of the ABMQ was

validated with the Study 2 sample ($N=1167$). Next, we computed both zero-order and partial correlations between the coping and enhancement motive scores and the compulsive buying severity indices as well as the relevant trait variables. For the second aim, we tested the hypotheses regarding the relative contribution of the two motives to predict the distinct dimensions of compulsive buying by estimating a path model in which the four dimensions of the 4FPBS were simultaneously regressed on the coping and enhancement motives of buying. Given that the ABMQ and 4FPBS were previously validated, we entered all the variables into the model by taking the average of the relevant items for simplicity. To test the relative strength of the paths from coping and enhancement motives to the four dimensions of the 4FPBS, we also conducted model comparisons between models in which the relevant paths were constrained to be invariant and models in which the paths were left unconstrained. All analyses were conducted using SAS 9.3 (SAS Institute, Cary, NC).

Results

Development and Validation of the Affective Buying Motives Questionnaire (ABMQ)

First, an EFA of the initial item pool of the ABMQ with Sample 1A was conducted. Bartlett's test of sphericity indicated that an EFA was appropriate given the data ($\chi^2=11,069.08$, $p<0.001$ with $df=120$). The Kaiser–Meyer–Olkin (KMO) score was 0.95, suggesting the adequacy of sampling. Parallel analysis (Horn, 1965) as well as the MAP (minimal average partial) correlation test (Velicer, 1976) supported a two-factor solution, which was also favored by the eigenvalue rule and the scree test. The two factors accounted for 69.4% of the item variance. Since the two motives were likely correlated with each other, oblique rotation (Promax) was used to achieve a simple structure solution. Factor 1 accounted for 38.4% and factor 2 accounted for 31.0% of the item variance after the rotation. Table 1 lists the factor loadings and communalities for the rotated two-factor solution. Overall, items that had salient loadings (≥ 0.70) on factor 1 appeared to tap coping motives, whereas those with salient loadings on factor 2 referred to enhancement motives. However, six items (i.e., items 4, 10, 11, 13, 14, and 16) had relatively low loadings on the target factor (<0.70) or relatively high loadings on the non-target factor (>0.30). Since they also had substantial content overlaps with other items (i.e., items 1, 6, 9, 7, 3, and 8), we removed these items. The remaining 10 items (i.e., 6 items for coping motives and 4 items for enhancement motives) were retained for the CFA.

The 10-item, 2-factor measurement model of buying motives was tested with a CFA using Sample 1B. The model fit was mediocre at best ($\chi^2=301.19$, $p<0.001$ with $df=34$; RMSEA=0.14, CFI=0.91, TLI=0.88, SRMR=0.06). A close look at the results indicated that items 12 and 15 (i.e., to numb my pain; to stop dwelling on things) had high error covariances with other items. Furthermore, item 5 (i.e., because I like the feeling), which was rather unclear in meaning, was found to have a relatively high cross-loading on the coping factor. After these three items were removed, a CFA was conducted with Sample 1B again.

The fit of the 7-item model was much better ($\chi^2=86.94$, $p=0.000$ with $df=13$; RMSEA=0.09, CFI=0.95, TLI=0.93, SRMR=0.05). As shown in Table 2 (A), the coping motives factor consisted of 4 items (i.e., because it helps me when I feel nervous, to turn off negative thoughts about myself, to stop me from being so hopeless about the future, because it helps me when I am feeling depressed), and the enhancement motives factor

Table 2 CFA loading estimates

		Estimate	Standard error	<i>t</i>	<i>p</i>
A. Study 1, Sample 1B					
Coping motive items					
Item 6	because it helps me when I feel nervous	0.83	0.02	40.36	0
Item 7	to turn off negative thoughts about myself	0.81	0.02	38.41	0
Item 8	to stop me from feeling so hopeless about the future	0.81	0.02	38.78	0
Item 9	because it helps me when I am feeling depressed	0.70	0.03	24.32	0
Enhancement motive items					
Item 1	because it is exciting	0.77	0.03	29.02	0
Item 3	because it makes me feel good	0.84	0.02	37.74	0
Item 2	because it is fun	0.80	0.02	33.57	0
<i>Note.</i> <i>N</i> =429					
B. Study 2 sample					
Coping motive items					
Item 6	because it helps me when I feel nervous	0.89	0.01	114.16	0
Item 7	to turn off negative thoughts about myself	0.92	0.01	137.62	0
Item 8	to stop me from feeling so hopeless about the future	0.85	0.01	90.63	0
Item 9	because it helps me when I am feeling depressed	0.81	0.01	73.24	0
Enhancement motive items					
Item 1	because it is exciting	0.87	0.01	97.68	0
Item 3	because it makes me feel good	0.91	0.01	124.24	0
Item 2	because it is fun	0.90	0.01	120.89	0
<i>Note.</i> <i>N</i> =1157					

consisted of 3 items (i.e., because it is exciting, because it is fun, because it makes me feel good). Both factors had high internal reliability (coefficient alphas of 0.88 for coping and 0.87 for enhancement). The correlation between the two factors was 0.63 ($p < 0.001$). The average variance extracted (Fornell & Larcker, 1981) was acceptable (0.62 for the coping motives factor and 0.64 for the enhancement motives factor).

The factor structure of the final model was validated with the Study 2 sample. The fit of the 7-item measurement model was good ($\chi^2 = 165.53$, $p < 0.001$ with $df = 13$; RMSEA = 0.09, CFI = 0.98, TLI = 0.97, SRMR = 0.04; see Table 2 (B) for the factor loading estimates). Again, both factors had high internal reliability (coefficient alpha = 0.92 for both motives). The correlation between the two factors was 0.57 ($p < 0.001$). Based on these results, we decided to create indices of coping and enhancement motives of buying by calculating the average of the respective items for further analyses. The means of the coping and enhancement motives indices were 2.52 and 3.19 ($SD = 1.07$ and 1.00) in Study 1, and 1.28 and 1.87 ($SD = 0.60$ and 0.96) in Study 2.

Concurrent Validity of Coping and Enhancement Motives of Buying

Concurrent validity of the ABMQ was assessed by examining the correlations between the motives subscales and the compulsive buying severity indices and trait variables using the

Study 1 and Study 2 data. It should be noted that the whole Study 1 sample (i.e., samples 1A and 1B combined) was used in all subsequent analyses.

Zero-order Pearson correlation analyses showed that both coping and enhancement motives were highly correlated with CBS ($r = -0.63$ and -0.42 , p 's < 0.001 , in Study 1; $r = -0.64$ and -0.45 , p 's < 0.001 , in Study 2) and RCBS ($r = 0.71$ and 0.48 , p 's < 0.001 , in Study 1; $r = 0.55$ and 0.48 , p 's < 0.001 , in Study 2). Given the size of the correlations between the two motives, partial correlations were computed as well, and they showed more dramatic differences between the coping and enhancement motives. As shown in Table 3 (A), when the shared variance with enhancement motives was partialled out, coping motives were still moderately highly correlated with CBS and RCBS in Study 1. In contrast, the unique variance of enhancement motives (controlling for coping) was only weakly correlated with the two compulsive buying variables. This finding was replicated with the Study 2 sample as shown in Table 3 (B).

Next, partial correlations between each motive and the trait variables from both samples were computed (see Table 3). Depression, the lack of trait self-control, overt narcissism, and covert narcissism were moderately highly correlated with the unique variance of coping motives, whereas the corresponding correlations with enhancement motives were quite small. In addition, materialistic values were positively correlated with both coping and enhancement motives.

The Association between Coping and Enhancement Motives and the Four Dimensions of Pathological Buying

A saturated path model was estimated to test the predictive effects of motives on the four dimensions of pathological buying (Fig. 1). The variances accounted for in the four dependent variables were 0.31, 0.58, 0.42, and 0.45 for excess buying (EB), the phenomenology associated with pathological buying (PH), financial problems (FP), and interpersonal problems (IP), respectively. As expected, the estimated path coefficients from the two buying motives to excessive buying (EB) were both positive: 0.36 ($t = 13.61$, $p < 0.01$) for coping motives and 0.27 ($t = 9.57$, $p < 0.01$) for enhancement motives. Although the size of the

Table 3 Partial correlations between buying motives and major variables

(A) Study 1 sample (Samples 1A and 1B combined)						
	CBS	RCBS	NPI	HSNS	MVS	TSC
Coping motive	-0.53**	0.60**	0.40**	0.48**	0.28**	-0.30**
Enhancement motive	-0.01 (.74)	0.06 (.07)	0.07 (.06)	-0.08*	0.17**	0.13**
(B) Study 2 sample						
	CBS	RCBS	CESD	MVS	TSC	RSES
Coping motive	-0.52**	0.39**	0.42**	0.17**	-0.26**	-0.38**
Enhancement motive	-0.14**	0.24**	-0.06*	0.23**	0.00 (0.94)	0.10**

** denotes correlations that are significant at $p < .001$, and * denotes those that are significant at $< .05$. P -values of correlations that are not significant at $p < .05$ are shown in parentheses CBS, Compulsive Buying Scale (Faber & O'Guinn, 1992); RCBS, Richmond Compulsive Buying Scale (Ridgway et al., 2008); NPI, Narcissistic Personality Inventory (Ames et al., 2006); HSNS, Hyper-Sensitive Narcissism Scale (Hendin & Cheek, 1997); MVS, Materialistic Value Scale (Richins, 2004); TSC, Brief Trait Self-control Scale (Tangney et al., 2004); CESD, Center for Epidemiological Studies Depression Scale (Radloff, 1997); RSES, Rosenberg's Self-Esteem Scale (Rosenberg, 1965)

coefficients did not differ a lot, the test of equality of the two path coefficients indicated that the path from coping to excessive buying was significantly larger than that from enhancement to excessive buying ($\chi^2(1)=4.79, p<0.05$). Similarly, the estimated path coefficients from the two buying motives to the phenomenology (PH) dimension were also both positive: 0.57 ($t=28.23, p<0.01$) for coping motives and 0.27 ($t=12.62, p<0.01$) for enhancement motives. The test of equality of the two coefficients was rejected ($b=0.51, t=11.91, p<0.01$), indicating that the association between coping motives and phenomenology was significantly larger than the association between enhancement motives and phenomenology. Next, as hypothesized, the estimated path coefficient from motives to financial problems (FP) was substantially larger for coping ($b=0.54, t=22.96, p<0.01$) than for enhancement ($b=0.16, t=6.27, p<0.01$), and the difference between them was significant ($\chi^2(1)=11.39, p<0.01$). Lastly, the estimated path coefficient from coping motives to interpersonal problems (IP) was positive ($b=0.65, t=30.25, p<0.01$), whereas the estimate from enhancement motives was small and non-significant ($b=0.03, t=1.07, p=0.14, n.s.$). As hypothesized, the path from coping to interpersonal problem was significantly larger than the path from enhancement motives to interpersonal problems ($\chi^2(1)=16.98, p<0.01$).

Discussion

Adapted from instruments for affective motives of drinking and gambling (i.e., DMQ: Cooper et al., 1992; Grant et al., 2007; GMQ: Stewart & Zack, 2008), the ABMQ was developed and validated with two large samples. The ABMQ consists of subscales for coping and enhancement motives. Both subscales had substantial independent associations with compulsive buying. However, when shared variance between coping and enhancement motives was partialled out, coping (vs. enhancement) motives were more strongly associated with compulsive buying.

Furthermore, coping (vs. enhancement) motives were strongly correlated with trait variables that have been associated with compulsive buying in extant research. For example, consistent with the view that compulsive buying is an attempt to escape chronic negative affect (Faber & O'Guinn, 1992; McElroy et al., 1994; Claes et al., 2010; Mueller et al., 2014) and negative self-awareness (Faber, 2004; Jung & Yi, 2014; Zerach, 2016), coping (vs. enhancement) motives of buying were more strongly associated with depressive symptoms, the lack of self-esteem, and covert narcissism. In addition, coping motives were moderately correlated with the lack of trait self-control and materialistic values. These findings are consistent with the proposition that compulsive buying is an avoidant mechanism that materialistic individuals use in order to escape aversive states of self-awareness and to temporarily blunt the capacity for painful self-reflection (Donnelly et al., 2016). Also, our finding of a sizable association between coping motives and all four dimensions of the 4FPBS (i.e., EB, PH, FP, and IP) indicates that strong coping motives of buying are in operation not only during episodes of excessive buying and when people experience the phenomenological correlates of compulsive buying, but also when pathological buying leads to financial and interpersonal problems.

However, it should be noted that we found that the motive of enhancing positive affect was also positively associated with compulsive buying, albeit less strongly than the coping motive. Although the unique variance attributable to enhancement motives was minimally associated with most trait variables (e.g., depression, overt and covert narcissism), it was substantially associated with materialistic values. Furthermore, our finding about the association between enhancement motives and the 4FPBS dimensions revealed an interesting

possibility: Although enhancement motives were moderately associated with the excessive buying and phenomenology dimensions (e.g., preoccupation, buying urges), the association with adverse consequences due to pathological buying was rather small. Enhancement motives were minimally associated with interpersonal problems due to buying issues, and the association with financial problems due to buying was positive but much smaller than the association with coping motives. Echoing Dittmar et al.'s (2007) view that sub-clinical compulsive buying among young adults is motivated by the attempt to approach an ideal self-identity and enhance positive affect, this finding indicates the possibility that enhancement motives of buying alone are not likely to be a considerable risk factor for experiencing severe adverse consequences such as having problems at work, in one's family, or in other areas of life involving interpersonal relationships.

Our finding pertaining to enhancement motives is largely consistent with Dittmar, 2005 conceptualization of moderate-risk buyers who frequently reported buying when experiencing boredom, in contrast to pathological buyers who frequently reported buying when feeling self-conscious negative affect. Furthermore, considering Dittmar's (2005) notion that excessive buying is an attempt to approach one's ideal self by purchasing products that help compensate for a self-identity gap, it is possible that enhancement motives of buying may prompt individuals to selectively purchase goods deemed to offer particular symbolic meanings that are important to the self. In contrast to some pathological buyers' tendency to focus on the act of buying per se and to not even open or use purchased products (O'Guinn & Faber, 1989), this appears to be compatible with our interpretation that enhancement motives are mainly responsible for frequent excessive buying and a moderate degree of loss of control over buying, but that they do not engender more serious adverse consequences due to buying.

However, given that enhancement motives are moderately correlated with coping motives not only in our buying motives scale but also in DMQ and GMQ (Grant et al., 2007; Stewart & Zack, 2008), it is possible that both coping motives and enhancement motives may be in operation in some buyers. According to recent neurobiological studies on alcohol addiction, while the motive of positive reinforcement is predominant in the early stages of alcohol overuse, the motive of negative reinforcement gets more prevalent in the later stages of addiction, accompanied by shifts in neuro-adaptation (Gilpin & Koob, 2008). A similar shift from gratification to compensation has recently been proposed for behavioural addictions although neurological evidence for this has mostly been obtained from problem gambling and gaming (Brand et al. 2019). If the transition from positive reinforcement to negative reinforcement is confirmed to take place in the domain of compulsive buying, this is consistent with our finding that although both motives were positively correlated with the EB and PH dimensions, coping motives were more strongly associated with IP and FP than were enhancement motives. Longitudinal studies will be necessary to test this transition hypothesis by tracking buyers' coping and enhancement motives of buying over a longer period of time.

The present research is not without limitations. First, our ABMQ assumes that coping and enhancement motives of buying are the two predominant reasons for engaging in excessive buying. Therefore, the AMBQ does not assess the role of external cues for excessive purchasing, such as advertisements, a discount applied to the product, perceived scarcity of the product, and upward social comparison (Rook, 1987; Rook & Fisher, 1995; Youn & Faber, 2000). However, these other motives are likely to be less important than affect-related motives for compulsive buyers (Faber & Christenson, 1996; McElroy et al., 1994). In addition, assessing buying motives via self-report assumes that individuals are willing and able to report the affective motives that underlie their buying behavior. It may be useful to further validate the AMBQ using methods that do not rely on memory

or deliberation, such as response time (RT) methods (Wiers & Stacy, 2006) or ecological momentary assessment (EMA: Shiffman et al., 2008) techniques. Lastly, we found slight differences in some findings between our two studies. For example, the partial correlations between enhancement motives and CBS (RCBS) were significant (although small in magnitude) in Study 2 but non-significant in Study 1. In contrast, the partial correlation between enhancement motives and trait self-control was non-significant in Study 2 but significant (although small in magnitude) in Study 1. Although these differences are likely to reflect the composition of the two samples (e.g., mean age, gender mix), we recommend that future research investigate the generality of our findings.

We believe that the ABMQ offers unique advantages to researchers and practitioners in the domain of compulsive buying. By separately assessing coping and enhancement motives of buying via a brief scale, the ABMQ enables researchers and mental health professionals to efficiently identify subtypes of compulsive buyers with unique patterns of affective motives. Considering that enhancement buyers are motivated to derive enjoyment and pleasure from buying luxurious products that help them approach their ideal selves, it may be beneficial for clinicians to use approaches that reduce the expectancy of positive reinforcement from buying and suggest alternative activities that induce positive affect but do not involve buying, such as artistic, social, and physical activities (e.g., Griffiths & MacDonald, 1999). In contrast, coping buyers are likely to benefit from approaches that focus on reducing the expectancy of negative reinforcement from buying as well as alleviating chronic negative affect and aversive self-awareness. Furthermore, coping buyers are likely to benefit from cognitive behavioral therapy programs focused on monitoring the frequency and intensity of negative affect prior to buying lapses and recommendations about alternative activities that help reduce negative affect (Mitchell et al., 2006; Mueller et al., 2008).

In summary, the ABMQ is a potentially valuable addition to the literature on compulsive buying. The ABMQ allows researchers to separately assess the coping and enhancement motives of buying and thus enables them to investigate the relative contribution of positive versus negative reinforcement to compulsive buying. The separate assessment of coping and enhancement motives will be instrumental in distinguishing clinical-level pathological buyers from those who sometimes engage in excessive buying without experiencing serious financial or interpersonal problems.

Appendix

Affective Buying Motive Questionnaire (ABMQ).

There are different reasons why people may be motivated to engage in the act of buying. Please choose the response that applies to you.

“I go shopping _____”.

(1 = *almost never/never*; 2 = *sometimes*; 3 = *often*; 4 = *almost always*).

- (1) because it helps me when I feel nervous.
- (2) to turn off negative thoughts about myself.
- (3) to stop me from feeling so hopeless about the future.
- (4) to stop me from feeling so hopeless about the future.
- (5) because it is exciting.
- (6) because it makes me feel good.
- (7) because it is fun.

The index of coping motives for overbuying is calculated by taking the average of the responses to items (1), (2), (3), and (4).

The index of enhancement motives for overbuying is calculated by taking the average of the responses to the items (5), (6), and (7).

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Data Availability Data used to prepare the manuscript are available upon request.

Declarations

Ethics Approval The protocols for the studies included in the manuscript were approved by the University of Guelph Research Ethics Board (REB17-01-023).

Informed Consent All procedures followed were in accordance of the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all participants to the surveys.

Conflict of Interest The authors declare no competing interests.

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