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"I fear, therefore, I shop!" exploring anxiety sensitivity in relation to compulsive buying

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ABSTRACT

Compulsive buying involves a preoccupation with, or urges to, buy, that are experienced as intrusive and uncontrollable. Compulsive buying is associated with impaired functioning and serves to alleviate negative emotional arousal. Anxiety sensitivity (AS: fear of arousal-related somatic sensations) is a known risk factor for negative emotional arousal. The present study investigated whether AS was linked to compulsive buying, over and above negative affect (depression, anxiety, stress), in a sample of Canadian undergraduates. Results showed that females (vs. males) were more likely to report spending in the moment and experiencing guilt after shopping. Males were more apt to report experiencing negative feelings about shopping. Anxiety predicted the tendency to spend in the moment and to buy compulsively, while stress and depression predicted post-purchase guilt. AS-Physical and AS-Cognitive concerns predicted compulsive buying over and above negative affect. No role was found for AS-Social concerns. The findings are discussed in terms of clinical implications and directions for future research.

1. Introduction

Shopping is a necessary part of modern life, and an activity that many consider harmless. In 2015, however, the average Canadian was carrying nearly $21,000 in consumer debt (Luciw, 2015). This level of debt carries serious implications for individuals (e.g., risk for bankruptcy) and may involve some measure of compulsive buying (Black, 2010). Compulsive buying involves a preoccupation with buying, or urges to buy, that are experienced as intrusive and uncontrollable (McElroy, Keck, Pope, & Smith, 1994).

1.1. Conceptualization of compulsive buying

Although not an officially recognized psychological disorder, compulsive buying can lead to marked distress and impaired personal, financial, and social functioning (Black, Shaw, McCormick, Bayless, & Allen, 2012). Researchers have variously argued that compulsive buying is most closely related to obsessive-compulsive spectrum disorders (Frost, Steketee, & Williams, 2002), impulse control disorders (Black et al., 2012), and behavioural addiction (Lejoyeux & Weinstein, 2010). Given this conceptual heterogeneity, numerous instruments have been developed to measure compulsive buying.

The Compulsive Buying Scale was developed to measure thoughts, feelings, and behaviours associated with compulsive buying (Faber & O'Guinn, 1992). Subsequently, the Edwards Compulsive Buying Scale (ECBS; Edwards, 1993) identified five factors associated with compulsive buying: (1) tendency to spend, (2) impulsivity while shopping, (3) dysfunctions pertaining to shopping, (4) feelings while shopping, and (5) post-purchase guilt. Validation studies, however, have only found support for three factors for the 13-item measure (Tommasi & Busonera, 2012) and four factors when utilizing the initial 29-item pool (Maraz et al., 2015). These factor differences may reflect methodological and/or cultural differences. To date, no research has examined the factor structure of the 13-item ECBS with a Canadian sample.

The estimated prevalence of compulsive buying is 6% (Müeller, Mitchell, & de Swaan, 2015) with some finding a higher prevalence among females than males (Harvanko et al., 2013), and others finding no sex differences (Müeller et al., 2010). Sex differences have been found within undergraduate, but not community-based, samples. Among undergraduate students, compulsive buying has been linked to lower academic performance, increased stress levels, somatic complaints, and suicidal behaviours (Harvanko et al., 2013). Compulsive buying has been linked to psychopathology, including mood and anxiety disorders (Black et al., 2012), with compulsive buying behaviours

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most likely to occur in response to negative mood states (e.g., stress, anxiety; Billieux, Rochat, Rebetez, & Van der Linden, 2008). The relief of negative affect experienced as a result of a buying episode is brief and often followed by feelings of guilt, shame, and anxiety (Williams & Grisham, 2012).

1.2. Role of anxiety sensitivity

High anxiety sensitivity (AS: fear of arousal-related somatic sensations; Reiss, 1991) is a known risk factor for psychopathology characterized by negative affect (e.g., anxiety, depression, substance use; Conrod, Pihl, Stewart, & Dongier, 2000). AS is conceptualized as a hierarchical, multidimensional construct comprised of three lower order factors: (1) Cognitive concerns (e.g., fear of losing control); (2) Physical concerns (e.g., fear of having a heart attack); and (3) Social concerns (e.g., fear of public ridicule; Taylor et al., 2007). It has a subordinate relationship with negative affect, accounting for incremental variance over and above negative affect when predicting psychopathology (Sexton, Norton, Walker, & Norton, 2003). People with high AS tend to avoid situations that elicit the feared physiological sensations, such as physical and sexual activity (Sabourin, Hilchey, Lefaivre, Watt, & Stewart, 2011; Gerrior, Watt, Weaver, & Gallagher, 2015) and/or escape the sensations (e.g., substance use; Conrod et al., 2000). Compulsive buying may be another way to escape the aversive sensations associated with negative affect.

Recent research has linked AS-Physical concerns to compulsive hoarding behaviour after controlling for depressive symptoms (Medley, Capron, Korte, & Schmidt, 2013). AS dimensions have been found to differentially predict specific obsessive-compulsive symptoms, even when controlling for comorbid depression and anxiety (Raines, Oglesby, Capron, & Schmidt, 2014), with AS-Cognitive concerns predicting neutralizing and obsessing symptoms, and AS-Social concerns predicting ordering symptoms.

1.3. Current study

The primary objective of the present study was to examine the potential role of the AS dimensions among the relationship between negative affect and compulsive buying. Given that negative affect has been found to be associated with compulsive buying and is superordinate to AS, it was hypothesized that negative affect (depression, anxiety, stress), AS, and compulsive buying would be positively correlated. Moreover, given that compulsive buying is associated with obsessive-compulsive symptoms and AS has been found to predict other obsessive-compulsive symptoms over and above negative affect (Raines et al., 2014), it was hypothesized that AS would predict compulsive buying behaviour over and above negative affect. Finally, it was predicted that females would report higher levels of compulsive buying than males.

Prior to testing the primary objective, we submitted the ECBS to factor analysis given the conflicting results of validation studies and the noted redundancy across items (Tommasi & Busonera, 2012). As with other studies conducted in developed countries (i.e., US, Italy), it was hypothesized that a three-factor structure would emerge in a Canadian sample.

2. Method

2.1. Participants

Participants in the current study were 437 undergraduate students (78% females) enrolled in introductory psychology at a Canadian university. Participants received course credit for their participation. Participants ranged in age from 17 to 41 years ($M = 18.39$, $SD = 1.52$), and identified primarily as Euro-Canadian (86.2%).

2.2. Measures

2.2.1. Compulsive Buying Scale (CBS; Faber & O'Guinn, 1992)

The CBS is a 7-item self-report measure designed as a screener for compulsive buying behaviour. Items describe thoughts, feelings, and behaviours associated with compulsive buying (e.g., "I have bought something in order to make myself feel better"). Respondents indicate how often each statement describes their behaviour using a 5-point Likert scale ranging from 1 (*never*) to 5 (*very often*). The CBS has demonstrated good reliability and validity (Tommasi & Busonera, 2012; $\alpha = 0.95$ in the current study).

2.2.2. Edwards Compulsive Buying Scale (ECBS; Edwards, 1993)

The ECBS is a 13-item questionnaire assessing various aspects of compulsive buying. Each item is rated on a 5-point scale ranging from 1 (*never*) to 5 (*very often*), and include items such as "I feel anxious after I go on a buying binge." The ECBS has demonstrated good construct validity and reliability (Edwards, 1993; $\alpha = 0.89$ in the current study).

2.2.3. Depression Anxiety Stress Scale-21 (DASS-21; Lovibond & Lovibond, 1995)

The DASS-21 is a self-report measure comprised of three 7-item subscales that measure symptoms of depression (e.g., "I felt that I had nothing to look forward to"), anxiety (e.g., "I felt I was close to panic"), and stress (e.g., "I found it difficult to relax"). Respondents rate their experience over the past week using a scale ranging from 0 (*did not apply*) to 3 (*applied to me much*). The internal reliabilities for the DASS-21 subscales in the present study were found to be good (Depression: $\alpha = 0.89$; Anxiety: $\alpha = 0.79$; Stress: $\alpha = 0.81$).

2.2.4. Anxiety Sensitivity Index-3 (ASI-3, Taylor et al., 2007)

The ASI-3 is an 18-item self-report questionnaire assessing individual's fear of arousal-related sensations. The scale measures global AS levels, comprised of the three AS dimensions: (1) Cognitive concerns (e.g., "When my thoughts seem to speed up, I worry that I may be going crazy); (2) Physical concerns (e.g., "It scares me when my heart beats rapidly"); and (3) Social concerns (e.g., "I worry that other people will notice my anxiety"). Respondents rate their own experience using a Likert scale ranging from 0 (*very little*) to 4 (*very much*). Internal consistency for the ASI-3 in the present study was excellent ($\alpha = 0.90$), and was good for Cognitive ($\alpha = 0.87$), Physical ($\alpha = 0.84$), and Social ($\alpha = 0.75$) subscales.

2.3. Procedure

Following institutional ethics approval, all study measures were embedded in an online questionnaire package administered to students in Introductory Psychology. Students were able to access the questionnaires using a secure web-based participant pool management system. Participants were asked to read an invitation to participate and acknowledge consent prior to completing the questionnaires in a counterbalanced order.

3. Results

There were no cases with excessive missing data (i.e., ≥10% missing); cases with missing data points were imputed via mean substitution. Three univariate outliers were identified, as determined by *z*-scores, and their scores were winsorized. No multivariate outliers were identified (Mahalanobis distance, $p < 0.001$). No assumptions of normality were violated when assessing skewness and kurtosis. Results of the data screening process resulted in a final sample of 437 participants (95 males, 339 females). Three participants did not indicate sex and were only excluded from analyses examining sex differences.