



ELSEVIER

Contents lists available at ScienceDirect

Appetite

journal homepage: [www.elsevier.com/locate/appet](http://www.elsevier.com/locate/appet)

## Research report

# Binge eating in bariatric surgery candidates: The role of insecure attachment and emotion regulation <sup>☆</sup>



Sharry Shakory <sup>a</sup>, Jessica Van Exan <sup>b,\*</sup>, Jennifer S. Mills <sup>a</sup>, Sanjeev Sockalingam <sup>b,c</sup>, Leah Keating <sup>a</sup>, Marlene Taube-Schiff <sup>b,c</sup>

<sup>a</sup> Department of Psychology, York University, 4700 Keele St, Toronto, ON M3J 1P3, Canada

<sup>b</sup> Psychosocial Bariatric Surgery Program, Toronto Western Hospital, 399 Bathurst St., Toronto, ON M5T 2S8, Canada

<sup>c</sup> Department of Psychiatry, University of Toronto, 250 College St., Toronto, ON, M5T 1R8, Canada

## ARTICLE INFO

## Article history:

Received 2 December 2014

Received in revised form 21 March 2015

Accepted 24 March 2015

Available online 28 March 2015

## Keywords:

Insecure attachment

Binge eating

Emotion regulation

Bariatric surgery

## ABSTRACT

Binge eating has a high prevalence among bariatric patients and is associated with post-surgical weight gain. This study examined the potential mediating role of emotion regulation difficulties in the relation between attachment insecurity and binge eating among this population. Participants were 1388 adult pre-bariatric surgery candidates from an accredited bariatric surgery assessment centre in Toronto, Ontario. Participants completed measures of psychological functioning, including attachment style and emotion regulation. Mediation analyses revealed that difficulties with emotion regulation mediated a positive association between insecure-anxious attachment and binge eating. An insecure-avoidant attachment was found to have a non-significant association with binge eating when examining the total effect. However, when difficulties with emotion regulation were controlled for in the model to examine its role as a mediator, this association became significant, and emotion regulation difficulties also mediated the relationship between attachment avoidance and binge eating. These findings suggest that difficulties in emotion regulation may be an important clinical issue to address in order to reduce binge eating in adult bariatric surgery candidates.

© 2015 Elsevier Ltd. All rights reserved.

## Introduction

Bariatric surgery is considered the most effective means for substantial and sustained weight loss and resolution of medical comorbidities (Buchwald et al., 2004) for morbidly obese individuals (BMI  $\geq$  40; Maggard et al., 2005). Adherence to a calorie-restricted and healthy post-surgical diet is required to maintain weight loss, and disordered eating (e.g., binge eating) can interfere with maintaining dietary recommendations long-term (Saunders, Johnson, & Teschner, 1998). Post-surgical binge eating has significantly predicted weight loss failure (Hsu, Sullivan, & Benotti, 1997; Livhits et al., 2010; Meany, Conceicao, & Mitchell, 2014) in terms of less excess weight loss (Kofman, Lent, & Swencionis, 2010) and greater weight regain (Colles, Dixon, & O'Brien, 2008; Hsu et al., 1997; Kofman et al., 2010; Mitchell et al., 2001). Binge eating is frequently reported among bariatric surgery candidates, and binge eating prior to surgery

is a risk factor for binge eating following surgery, which can emerge as late as two or more years post-surgery (Hsu et al., 1997; Niego, Kofman, Weiss, & Geliebter, 2007). Given that the reoccurrence of binge eating can undermine weight loss, delineating the psychological mechanisms involved in the development and maintenance of binge eating in bariatric candidates is necessary to better understand the aspects that need to be addressed to improve post-surgery outcomes. Insecure attachment styles have been found to be associated with both disordered eating (e.g., Tasca & Balfour, 2014) and emotion regulation difficulties (e.g., Han & Pistole, 2014). Thus, the current study examined whether the relationship between attachment insecurity and binge eating is mediated by emotion regulation difficulties in bariatric candidates.

## Emotion regulation and binge eating

The negative affect model has received much support and suggests that binge eating is a maladaptive emotion regulation strategy that is triggered by negative emotions (Wiser & Telch, 1999). Negative affect has been found to precede binge eating episodes (e.g., Haedt-Matt & Keel, 2011; Stein et al., 2007), and negative emotional states have been found to be associated with higher rates of binge eating in binge-eating disorder (BED; Zeck, Stelzer, Linster, Joos, & Hartmann, 2011). Support has also been shown for the

<sup>☆</sup> Acknowledgments: We would like to thank our patients who participated in the study. We would also like to thank our Toronto Western Hospital Bariatric Interdisciplinary team for their support and the Ministry of Health of Ontario and the Ontario Bariatric Network for their ongoing psychosocial program funding. *Conflict of interest:* The authors have no conflicts of interest related to this work.

\* Corresponding author.

E-mail address: [jessica.vanexan@uhn.ca](mailto:jessica.vanexan@uhn.ca) (J. Van Exan).

association between emotion regulation difficulties and binge eating in both non-clinical (e.g., Whiteside et al., 2007) and clinical samples. Higher rates of emotion regulation difficulties have been found in individuals with BED (Svaldi, Griepenstroh, Tuschen-Caffier, & Ehring, 2012; Zeeck et al., 2011). These findings support the notion that binge eating functions as a behavioral means of managing negative affect.

#### *Attachment theory and emotion regulation*

Attachment theory provides a valuable framework for understanding eating pathology, as difficulties with emotion regulation can reflect individual differences in early attachment organization (Shaver, Mikulincer, & Chun, 2008; Tasca & Balfour, 2014). During early interactions with primary caregivers, children develop an internal cognitive-affective schema that organizes expectations of both self and others and that informs and directs subsequent behaviour (Bowlby, 1982; Shaver et al., 2008; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). These behaviours comprise attachment patterns which can be secure or insecure, and which are fairly stable across the lifetime; longitudinal research has indicated a stability rate of 72% between ages 12 months and 20 years (Waters et al., 2000).

A secure attachment organization is characterized by a tendency to seek proximity from others and to effectively manage emotional distress, while insecure attachment styles (e.g., avoidant and anxious) are characterized by an overdependence on or avoidance of relationships with others to regulate attachment concerns (Shaver et al., 2008). Specifically, individuals high in attachment avoidance tend to exhibit deactivating strategies, in which emotions are suppressed and regulated through an overreliance on self. In contrast, individuals high in attachment anxiety demonstrate hyper-activating strategies such that they often become preoccupied by emotional distress and over-reliant on others to manage negative emotional responses (Hunter & Maunder, 2001; Shaver et al., 2008; Tasca & Balfour, 2014). These insecure patterns are thought to emerge as a result of interacting with unresponsive, insensitive, or inconsistent caregivers (Shaver et al., 2008). These early experiences then serve as a template for future relationships (Shaver et al., 2008). Considerable research with both children (e.g., Panfile & Laible, 2012) and adults (e.g., Gentzler, Kerns, & Keener, 2010) supports the notion that attachment insecurity is associated with greater difficulties with emotion regulation.

#### *Attachment style and eating pathology*

Higher rates of attachment insecurity have been reported among eating disordered women compared to women without eating disorders (O'Shaughnessy & Dallos, 2009; Troisi, Massaroni, & Cuzzolaro, 2005; Zachrisson & Skarderud, 2010), and higher attachment anxiety is associated with greater severity of eating disorder symptoms (Tasca & Balfour, 2014). Attachment insecurity has also been found to be associated more specifically with disinhibited eating (Wilkinson, Rowe, Bishop, & Brunstrom, 2010) and binge eating (Han & Pistole, 2014) in non-clinical samples of university students. There has been limited research examining the role of attachment insecurity in bariatric samples. In pre-bariatric surgery candidates, attachment insecurity has been found to be associated with poorer mental quality of life (Aarts, Hinnen, Gerdes, Acherman, & Brandjes, 2014; Sockalingam, Wnuk, Strimas, Hawa, & Okrainec, 2011) and high attachment avoidance has been found to be associated with post-bariatric surgery non-attendance (Sockalingam, Cassin, Hawa et al., 2013). The relationship between attachment insecurity and binge eating has not yet been examined in bariatric patients.

#### *Attachment, emotion regulation and eating pathology*

Impaired emotion regulation strategies are associated with attachment insecurity and may manifest in maladaptive behaviours, such as eating disorder symptoms (Tasca & Balfour, 2014). The research to date supports this notion (Burns, Fischer, Jackson, & Harding, 2012; Han & Pistole, 2014; Keating, Tasca, & Hill, 2013; Tasca et al., 2009; Ty & Francis, 2013). Specifically, emotion regulation difficulties have been found to mediate the relationship between high attachment insecurity and disordered eating (Ty & Francis, 2013) and binge eating in non-clinical samples (Han & Pistole, 2014). These findings have also been extended to other correlates of eating pathology (Tasca et al., 2009), such as low body esteem (Keating et al., 2013) in women with eating disorders. Findings regarding the mediating role of emotion regulation in the relation between anxious attachment and disordered eating are particularly consistent. In contrast, the results are mixed for the role of emotion regulation in the relation between avoidant attachment and disordered eating (Tasca et al., 2009; Ty & Francis, 2013). Given that binge eating may be more related to under-controlled, as opposed to over-controlled emotion regulation, one could speculate that individuals who are high in avoidant attachment would be more inclined to engage in restrictive dietary behaviour than in binge eating (Tasca & Balfour, 2014). However, limited research has examined the different dimensions of attachment insecurity, and only one study has focused on binge eating specifically (Han & Pistole, 2014). There are also no known studies to date that have examined these associations in a bariatric population.

The current study investigated whether emotion regulation difficulties mediate the relationship between attachment insecurity and binge eating in pre-surgical bariatric candidates. As such, the current study sought to extend research by Ty and Francis (2013) and by Han and Pistole (2014) using a sample of bariatric surgery candidates. It was hypothesized that there would be a significant positive relationship between insecure-anxious attachment and binge eating, and that this relationship would be mediated by difficulties with emotion regulation. A similar model was examined for the avoidant attachment style. However, it was hypothesized that there would be no significant association with binge eating, since deactivating strategies are more common in individuals high in avoidance (Hunter & Maunder, 2001; Tasca & Balfour, 2014) and since the relationship between over-controlled emotion regulation strategies and binge eating remains unclear.

## **Method**

### *Participants*

Participants were 1388 morbidly obese patients who were being assessed in terms of their candidacy for bariatric surgery at Toronto Western Hospital (TWH) in Toronto, Ontario. TWH is an adult bariatric surgery assessment centre that has been accredited by the American College of Surgeons as a Level 1A bariatric surgery Centre of Excellence. The pre-surgery assessment process has been described in previous studies (Pitzul et al., 2014; Sockalingam, Cassin, Crawford et al., 2013).

### *Procedure*

The current study utilized cross-sectional data collected from pre-surgical bariatric candidates in the Bariatric Surgery Program at TWH between May 2010 and August 2013. These data were collected as part of a larger study evaluating psychosocial outcomes of bariatric surgery. This study was approved by the University Health Network research ethics review board. To be eligible for the program, patients must have a BMI  $\geq 40$  or  $\geq 35$  with a comorbid obesity-related

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات