



Weight-related teasing and non-normative eating behaviors as predictors of weight loss maintenance. A longitudinal mediation analysis



Claudia Hübner^{a,*}, Sabrina Baldofski^a, Ross D. Crosby^b, Astrid Müller^c,
Martina de Zwaan^c, Anja Hilbert^a

^a Leipzig University Medical Center, Integrated Research and Treatment Center AdiposityDiseases, Medical Psychology and Medical Sociology, Leipzig, Germany

^b Neuropsychiatric Research Institute and Department of Psychiatry and Behavioral Science, University of North Dakota School of Medicine and Health Sciences, Fargo, USA

^c Department of Psychosomatic Medicine and Psychotherapy, Hannover Medical School, Hannover, Germany

ARTICLE INFO

Article history:

Received 31 August 2015
Received in revised form
26 January 2016
Accepted 9 February 2016
Available online 11 February 2016

Keywords:

Weight loss
Weight loss maintenance
Weight-related teasing
Non-normative eating behavior
Emotional eating
Mediation

ABSTRACT

Weight loss maintenance is essential for the reduction of obesity-related health impairments. However, only a minority of individuals successfully maintain reduced weight in the long term. Research has provided initial evidence for associations between weight-related teasing (WRT) and greater non-normative eating behaviors. Further, first evidence was found for associations between non-normative eating behaviors and weight loss maintenance. Hence, the present study aimed to examine the predictive value of WRT for weight loss maintenance and the role of non-normative eating behaviors as possible mediators of this relationship. The study was part of the German Weight Control Registry that prospectively followed individuals who had intentionally lost at least 10% of their maximum weight and had maintained this reduced weight for at least one year. In $N = 381$ participants, retrospective WRT during childhood and adolescence, current non-normative eating behaviors (i.e., restrained, external, emotional eating), and change in body mass index (BMI, kg/m^2) over two years were examined using self-report assessments. Structural equation modeling was used to analyze the assumed mediational relationship. As a result, a greater effect of retrospective WRT during childhood and adolescence predicted less successful adult weight loss maintenance over two years. Current emotional eating fully mediated this relationship while current restrained and external eating yielded no mediational effects. Hence, a greater effect of WRT predicted greater current emotional eating, which in turn predicted a smaller decrease or a greater increase in BMI. Our findings suggest that suffering from WRT during childhood and adolescence might lead to emotional eating which in turn impairs long-term weight loss maintenance. Thus, our results highlight the need for interventions aiming at reducing weight stigmatization and targeting emotional eating for successful long-term weight loss maintenance.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Long-term weight loss maintenance is most important for the reduction of obesity-related health impairments achieved by modest weight loss (Dixon, Anderson, Cameron-Smith, & O'Brien,

2004; Wing et al., 2011). However, only a minority of individuals who lose weight maintain the reduced weight successfully in the long term (17–34%; Kraschnewski et al., 2010; Phelan, Wing, Loria, Kim, & Lewis, 2010). Therefore, studies have sought to identify psychosocial predictors of weight loss maintenance in order to establish more efficacious interventions (Elfhag & Rössner, 2005). In this context, the influence of weight stigmatization has been noted (Latner, Wilson, Jackson, & Stunkard, 2009; Rancourt et al., 2014; Wott & Carels, 2010).

Individuals with overweight and obesity experience weight stigmatization, which is characterized by negative stereotypes,

* Corresponding author. Leipzig University Medical Center, Integrated Research and Treatment Center AdiposityDiseases, Medical Psychology and Medical Sociology, Philipp-Rosenthal-Strasse 27, 04103 Leipzig, Germany.

E-mail address: claudia.huebner@medizin.uni-leipzig.de (C. Hübner).

prejudice, and discrimination (Major & O'Brien, 2005) because of the increased weight. Discrimination may manifest in the form of weight-related teasing (WRT) that often starts in childhood or adolescence (Puhl & Heuer, 2009). Weight stigmatization in general is related to various psychosocial impairments (e.g., depression, non-normative eating behaviors; Durso, Latner, & Hayashi, 2012; Puhl & Heuer, 2009). Hence, experiences of WRT may influence the outcome of later weight loss efforts although the few intervention studies to date have produced mixed results. While lifetime WRT was associated with poorer weight loss in adults (Wott & Carels, 2010), decreases in current WRT did not predict changes in percent overweight in adolescents (Rancourt et al., 2014). Surprisingly, the results of a prospective study suggested that greater lifetime WRT predicts greater weight loss and weight loss maintenance in adults (Latner et al., 2009). However, as this study used strategies which might have promoted a selection bias of participants (e.g., dismissal from treatment in the case of failure to meet prescribed weight loss goals), the findings can hardly be compared to those of other studies.

In addition, evidence consistently suggests non-normative eating behaviors to be predictive of weight loss maintenance. A greater increase in cognitive dietary restraint (i.e., control over food intake in order to influence body weight and shape) following weight loss was found among those maintaining their weight relative to those regaining weight (Vogels & Westerterp-Plantenga, 2007). In a longitudinal study, increases in cognitive dietary restraint during weight loss predicted successful weight loss maintenance after at least two years (Vogels, Diepvens, & Westerterp-Plantenga, 2005). Further studies examined the influence of dietary disinhibition, which is defined by a susceptibility to loss of control over eating (Wing et al., 2008) in response to internal cues (e.g., emotional and cognitive cues; internal disinhibition) and external cues (e.g., social cues; external disinhibition; Niemeier, Phelan, Fava, & Wing, 2007). A longitudinal study found internal but not external disinhibition after weight loss to predict one-year weight loss maintenance (Niemeier et al., 2007). While emotional eating (i.e., overeating in response to negative emotions) and external eating (i.e., eating in response to food-related stimuli regardless of the internal states of hunger and satiety) are similar to the concepts of internal and external disinhibition, respectively, their frequency prior to weight loss did not predict weight loss maintenance after 12 months in women (Teixeira et al., 2010).

Moreover, numerous cross-sectional studies provide evidence for an association between weight stigmatization during childhood and adolescence as well as lifetime weight stigmatization and non-normative eating behaviors including restrained eating (i.e., attempts to refrain from eating), external, and emotional eating (Durso et al., 2012; Farrow & Tarrant, 2009; Goldfield et al., 2010; Olvera, Dempsey, Gonzalez, & Abrahamson, 2013; Rojo-Moreno et al., 2013; Wertheim, Koerner, & Paxton, 2001).

In this context, the present prospective study was the first to investigate the influence of retrospective WRT during childhood and adolescence on adult weight loss maintenance and of current non-normative eating behaviors (i.e., restrained, external, and emotional eating) as possible mediators of this relationship. Based on studies suggesting negative effects of weight stigmatization on various health-related aspects (Puhl & Heuer, 2009), we hypothesized that greater retrospective WRT during childhood and adolescence would predict less successful weight loss maintenance in adulthood. We further hypothesized that current non-normative eating behaviors, i.e., smaller restrained, greater external and emotional eating, to mediate this relationship.

2. Materials and methods

2.1. Participants

This study was part of the German Weight Control Registry, which aimed to identify psychosocial predictors for successful weight loss maintenance in order to improve current treatment strategies. To this end, a consecutive sample was recruited between 2009 and 2011 with the help of a broad publicity campaign and was followed prospectively for two years. Eligible participants were individuals at least 18 years of age whose lifetime maximum weight (excluding pregnancy) was in the range of overweight ($25.0 \leq \text{BMI} < 30.0 \text{ kg/m}^2$) or obesity ($\text{BMI} \geq 30.0 \text{ kg/m}^2$) and who had intentionally lost weight at any time of their lives. According to the definition of weight loss maintenance (Wing & Hill, 2001), this weight loss amounted to at least 10% of participants' maximum weight and was maintained for at least one year. A total of $N = 410$ participants completed paper-and-pencil- or web-based questionnaires at baseline as well as after being contacted again at one- and two-year follow-up. For follow-up assessments, participants were offered a financial compensation. Informed consent was obtained prior to study participation. The study was approved by the ethics committee of the Medical Faculty, University of Erlangen-Nuremberg, and is described in detail elsewhere (Feller et al., 2015; Mayr et al., 2012). In this study, participants who had undergone bariatric surgery were excluded from the analyses as their weight change is different relative to that of individuals who had lost weight due to nonsurgical methods (Sjöström, 2013). Further, participants who were older than 70 years at baseline were not included due to a potential memory bias in the recall of retrospective WRT during childhood and adolescence. Overall, the final sample consisted of $N = 381$ individuals.

2.2. Measures

2.2.1. Predictor variable

The Effect subscale of the German version of the Perception of Teasing Scale (POTS; Thompson, Cattarin, Fowler, & Fisher, 1995; German translation by AH – unpublished manuscript) was administered at baseline to measure the retrospective effect of WRT on the individual during ages 5–16 years. This subscale contains 6 items (e.g., “People made fun of you because you were heavy”) rated on a 5-point Likert scale ranging from 1 = *not upset* to 5 = *upset*. A sum score was computed with higher scores indicating greater effect of WRT. In accordance with a previous study reporting appropriate psychometric properties of the German version (Losekam, Kraeling, Goetzky, Rief, & Hilbert, unpublished manuscript), internal consistency in the current sample was $\alpha = 0.90$.

2.2.2. Mediator variable

The adapted German version of the Dutch Eating Behavior Questionnaire (DEBQ; Grunert, 1989; van Strien, Frijters, Bergers, & Defares, 1986) was used to assess three different forms of current non-normative eating behavior at baseline: restrained eating (e.g., “I eat deliberately less in order not to become heavier”), external eating (e.g., “If food smells or looks good, I eat more of it than normal”), and emotional eating (e.g., “I have the desire to eat when I'm depressed or discouraged”). Each of these subscales consists of ten items rated on a 5-point Likert scale from 1 = *never* to 5 = *very often*. Mean subscale scores were computed with higher scores indicating more frequent non-normative eating behavior. The well-established DEBQ has shown good validity and adequate reliability (Grunert, 1989). Internal consistencies in this study's sample were $\alpha = 0.82$ (restrained eating), $\alpha = 0.90$ (external eating), and $\alpha = 0.94$

Download English Version:

<https://daneshyari.com/en/article/939271>

Download Persian Version:

<https://daneshyari.com/article/939271>

[Daneshyari.com](https://daneshyari.com)