

Psychometric properties of the State and Trait Food Cravings Questionnaires among overweight and obese persons

Jillon S. Vander Wal ^{a,*}, Karen A. Johnston ^{a,1}, Nikhil V. Dhurandhar ^{b,2}

^a Saint Louis University, Department of Psychology, 221 North Grand Boulevard, St. Louis, MO 63103, USA

^b Pennington Biomedical Research Center, 6400 Perkins Road, Baton Rouge, LA 70808, USA

Received 9 December 2005; received in revised form 1 June 2006; accepted 2 June 2006

Abstract

A crucial problem in studies involving food cravings is the lack of a psychometrically sound measure for use among overweight and obese populations. The degree to which the Food Cravings Questionnaires-Trait (FCQ-T) and State (FCQ-S) evidenced acceptable psychometric properties among overweight and obese participants was assessed. In study 1, 109 participants completed the FCQ-T and FCQ-S. Item-total correlations, test–retest reliability, internal consistency, and factor structures were examined. Results indicate good internal consistency and partially support the factor structures. In study 2, the construct and predictive validity of the FCQ-S were examined. Twenty-eight women completed the FCQ-S 15 min after finishing a standardized breakfast and then twice more, 90 min apart. Subsequent ad libitum food intake was recorded. Results suggest that the FCQ-S is sensitive to state changes in food cravings, but that the magnitude of the changes was moderate. The FCQ-S was not a good predictor of subsequent food intake. The FCQ-T and FCQ-S may be useful in studies that examine triggers of and interventions for excessive food intake.

© 2006 Elsevier Ltd. All rights reserved.

Keywords: Obesity; Food; Craving; Questionnaires; Psychometrics

1. Introduction

Food cravings have been associated with future food intake (Barkeling, Rossner, & Sjoberg, 1995; Flint, Raben, Blundell, & Astrup, 2000; Hulshof, De Graaf, & Westrate, 1993; Porrini, Crovetti, Testolin, & Silva, 1995); increased energy intake during snacks and weight concerns (Lafay et al., 2001); difficulty resisting eating and feeling anxious when a craved food is not available (Gendall, Joyce, & Sullivan, 1997); external eating, emotional eating, susceptibility to hunger, and dysphoric mood states (Hill, Weaver, & Blundell, 1991); and dropout from weight-loss treatment (Sitton, 1991).

* Corresponding author. Tel.: +1 314 977 2282 (W); fax: +1 314 977 1006.

E-mail addresses: jillonv@yahoo.com (J.S. Vander Wal), johnstka@slu.edu (K.A. Johnston), nikhil.dhurandhar@pbrc.edu (N.V. Dhurandhar).

¹ Tel.: +1 314 977 3683 (W); fax: +1 314 977 1006.

² Tel.: +1 225 763 2741 (W); fax: +1 225 763 3030.

Despite the importance of food cravings, considerable disagreement on the definition of food cravings exists (Gendall et al., 1997). Although traditionally defined as a strong or intense desire to eat (Hill et al., 1991; Weingarten & Elston, 1991), the definition of food cravings was recently expanded by White, Whisenhunt, Williamson, Greenway, and Netemeyer (2002) who defined food cravings as an intense desire to consume a particular food, or food type that is difficult to resist. Altering the definition of food cravings from an inclusive to an exclusive definition had a significant impact on the endorsement of food cravings in a college population, reducing the percentage of endorsement from 58% to only 4%, respectively (Gendall et al., 1997). Several authors have attested to the necessity of a standardized tool by which to measure food cravings (Gendall, Joyce, & Abbott, 1999; Michener & Rozin, 1994; Weingarten & Elston, 1990), yet few alternatives are available.

A major consideration in the definition and measurement of food cravings is whether food cravings are defined as states or traits. State food cravings change in response to discrete events. The transient nature of food cravings is illustrated by studies showing the effects of visual stimuli on the onset of food cravings (Harvey, Kemps, & Tiggemann, 2005). State food craving measures are needed for studies that examine individual responses to stressful events or negative affective states, and alternatively for analogue studies that examine the effects of macronutrients, meals, and weight loss medications on food cravings.

Most studies of state food cravings make use of visual analogue scales (VASs) that typically are characterized as measures of satiety. Unfortunately, VASs measuring food cravings, the desire for food, and the desire for specific foods are often grouped together with VASs measuring different, yet related constructs. For instance, the terms *hunger*, *desire to eat*, *appetite for a meal*, and *prospective food consumption* are generally related to subsequent food intake, whereas ratings of *satiety* or *fullness* are generally not (Flint et al., 2000). Although consumption is not an adequate index of food cravings (Weingarten & Elston, 1990), most college students report indulging their cravings on a majority of occasions (Weingarten & Elston, 1991). Moreover, data from studies using trait food craving measures suggest that food cravings may occur in the absence of hunger (Lafay et al., 2001; Schlundt, Virts, Sbrocco, Pope-Cordle, & Hill, 1993).

VASs that measure constructs more closely analogous to food cravings, such as desires for specific types of foods, typically elicit a greater degree of variation in responses, thus requiring larger sample sizes (Flint et al., 2000). Defining the strength of craving intensity would likely reduce this variability although terms such as *strong* or *intense* are also somewhat ambiguous (Weingarten & Elston, 1990). Additionally, as cravings may reflect multidimensional motivational states (Cepeda-Benito, Gleaves, Williams, & Erath, 2000), single item measures may not adequately represent the content domain of interest. Therefore, the use of a multi-item measure of food cravings may prove advantageous as the ability to make finer distinctions among individuals and measurement reliability tend to improve with an increased number of items (Nunnally & Bernstein, 1994).

Unlike state measures of food cravings, trait measures of food cravings are necessary to measure the way in which food cravings are typically manifested across time and situations. Trait measures of food cravings have been most commonly used in studies of weight loss and eating disorder interventions that require the measurement of stable food cravings that may be predictive of treatment outcomes.

Trait measures of food cravings include measures of general and specific food cravings. Measures of specific cravings include the Food Craving Inventory (FCI; White et al., 2002), a measure of cravings for specific foods and types of foods, including high fat foods, sweets, carbohydrates/starches, and fast-food fats that has been developed for use among persons with obesity and binge eating disorder (White & Grilo, 2005) and the craving questionnaire (CQ; Harvey, Wing, & Mullen, 1993) which measures the desire for 40 specific foods over a preceding week's time. However, the subscales of the CQ were formed according to macronutrient content, which may not be reflective of the way in which cravings are experienced, and psychometric data are not available.

A general measure of food cravings, the food craving scale (Hill et al., 1991), measures both frequency and intensity of food cravings on five visual analogue scales. A revised version (White et al., 2002) has Likert-type scaling. However, the small number of items (five that correspond to each of Hill's five visual analogue scales) and number of items per subscale (two items comprise the frequency subscale and three items comprise the intensity subscale) is psychometrically problematic as such a small number of items is unlikely to adequately represent the content domain of interest and is unlikely to evidence adequate internal consistency.

A measure that may be related to general measures of food cravings is the Eating Inventory, also known as the Three Factor Eating Questionnaire (EI; Stunkard & Messick, 1988). The EI measures conscious restriction of food intake (*restraint*), difficulty resisting eating cues (*disinhibition*), and subjective feelings of physiological hunger (*hunger*).

متن کامل مقاله

دریافت فوری ←

ISIArticles

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