Larocque Obesity Questionnaire (LOQ): how to assess the psychological factors in weight control.

Maurice Larocque, MD and Stephen Stotland, Ph D .

Editor's Note: Dr. Larocque, a member of the ASBP, runs a clinic obesity in Montreal. Dr. Stotland is part of the Department of Cognitive Behavioural Therapy Montreal General Hospital.

Introduction

The treatment of obesity requires a change of the underlying behavior, including excessive food intake and insufficient level of activity. The effectiveness of nutritional and behavioral approaches in the treatment of obesity remains limited. An alarming percentage of patients discontinue treatment within the first few weeks, never reach their weight or health, show all the lost weight. [1,2]

For the treatment of obesity to be effective, it must necessarily target the psycho-biological mechanisms responsible for the lack of self-discipline. [3,4] However, to date, research has not succeeded in all light psychological variables generally associated with obesity [5] although obviously always show patients during periods of weight loss and maintenance, mood changes [8] and personality that may have significance [6,7] clinical .

In addition, most doctors believe that emotional factors play a vital role in weight control and play a key role in maintaining long-term and the return of unwanted behaviors.

This paper presents a new questionnaire for measuring the number of behavioral and psychological variables that may play an important role in weight control. The LOQ was designed for clinical applications - it is complete, short and easy to administer computer.

These aspects are very important in clinical applications, particularly in general practice, a field in which doctors see many people suffering from obesity but have neither the time nor the resources to intervene.

The LOQ is used to evaluate effectively and inexpensively attitudes and problem behaviors that may hinder efforts to control weight. The questionnaire also provides a custom report showing the attitudes of concern and recommendations for change. This questionnaire was used during the last decade in a number of clinics with approximately 300,000 patients, but to date, no analysis of reliability and validity has been presented. We focus here on a study that examines the statistical properties of the LOQ and its relationship with other psychological measures.

Method

Topics

Seventy-eight women, all aged 18 and over, who followed a slimming cure prescribed by specialists in the treatment of obesity physicians participated in this study. The treatment consisted of a low-calorie diet and exercise and periodic visits to specialists dealing with medical or psychological problems related to weight control. The average patient was 37 years old (+ / - 8.7) and weighed 183.4 pounds (+ / - 37.8). Only patients with a BMI greater than 25 were accepted for the study.

Procedure

Subjects completed the LOQ and various other self-audit questionnaires at different stages of their

treatment. Some completed the questionnaire before following their first treatment, while others have filled at a later stage of treatment.

The LOQ is a self-audit questionnaire in 52 points, administered and corrected by computer, which can be completed in 10 minutes. These points measure variables related to behavior, emotions and personality and may be associated with problems of weight control. The variables have been selected based on clinical experience of the authors in the treatment of obesity. The questionnaire used to assess problematic eating habits, food, emotion, food-reward targets weight loss, feelings of depression, boredom and guilt, stress responses and different traits, such as aggression, passivity and paranoia.

A previous factor analysis conducted with 680 obese women (Stotland and Larocque, 1992, unpublished data) showed that the LOQ can be divided into four subscales called Habits, Motivation for weight loss, physical reactions to stress and negative emotions . Examples of these four points subscales are shown in Table 1.

Table 1
Example points LOQ

Subscale	Example of points
Habits	**. 1** Looking back at the last meal you made, try to estimate the time you took to eat: **A.** Less than 5 minutes **B.** Between 5 and 10 minutes**C.** Between 10 and 20 minutes **D.** Between 20 and 30 minutes **D.** More than 30 minutes. **2.**When you pass a basket of fruit, sweets or food, do you use often? **A.** Always **B.** Quite often **C.** At the time **D.** Never.
Motivation for Weight Loss	**1.** Deep within yourself, you think you are capable of achieving the desired weight and maintain it thereafter? **A.** Not at all **B.** Maybe**C.** Probably **D.** Certainly. **2.** If you lose only half the expected weight in the coming months, do you plan to continue your diet? **A.** Not at all**B.** Maybe **C.** Probably **D.** Certainly.
Physical reactions to stress	**1.** During the last month, while you were at rest, have you experienced any of the following symptoms:. accelerated heart beat, shortness of breath or throat knotted **A.** Never **B.** On the occasion **C.** Often (a times per week on average) **D.** Very often (several times a week).**2.** During the past month, have you experienced any of the following symptoms that are not attributable to any illness: headache, backache , neck

	pain. **A.** Never **B.**On the occasion **C.** Once a week on average**D.** More than once a week.
Negative emotions	**1.** I feel that my life is going nowhere and has no value. **A.** This is quite me **B.** I often think and **C.** I sometimes think so **D.** I never think so . **2.** I do not usually engage in activities me if I am sure to succeed. **A.** Absolutely **B.** I often this attitude **C.** I sometimes have this attitude**D.** No, it's not like me at all.

Questionnaire on the Eysenck Personality [9] is based on a scale of 90 points measuring Neuroticism, Extraversion and psychotic traits. This scale has been widely used and has shown a high level of internal consistency and test-retest reliability. Scales Traits Extraversion and neuroticism were used in this study. The Neuroticism is defined as the measure of a tendency to anxiety, mood swings and depression as well as psychomotor complaints. The Extraversion is supposed to translate sociability, needs and emotions change and relaxation.

The Depression Inventory Beck includes 13 points of study and measure the symptoms and signs of depression. The correlation between the BDI-13 and the full BDI ranges from .89 to .97, and consistency coefficients generally exceed 0.85.

The Body Esteem Scale [11] measures three moderately intercorrelated dimensions related to self-reported sexual Attraction, Concern weight and physical condition. A total score for overall body Esteem was used in this study.

The Dutch eating behavior scale [12] has been widely used to assess trends follow diets (cognitive Restriction) and overeating in response to emotional states (Food-emotion). Both scales have high levels of internal consistency and show the relationships between set variables such as caloric intake and binge eating.

To examine the validity of a discriminant function scales the LOQ, we compared [1] intercorrelations between the subscales of the LOQ and [2] relations between the subscales of the LOQ and other variables.

Results

We measured the reliability of the subscales of the LOQ using Cronbach's, which provides an indication of the internal consistency of the items of the subscales. Subscale Habits measure 17 points a wide range of attitudes to food and physical activity; So we waited a consistency coefficient of 0.67. Sub-nine-point scale physical reactions to stress showed a consistency coefficient of 0.68, which reflects the wide field of view of stress-related symptoms. Subscale 19 points in negative emotions showed a consistency level of 0.85, which indicates that it measures a relatively coherent construct. Under-5-point scale of Motivation weight loss had a consistency coefficient of just 0.46, which could be due to the limited number of points used or the multidimensional nature of this variable. However, the sum of the points of motivation was seen as a useful measure of the overall weight loss motivation, and was chosen for further analysis.

The correlations between the subscales of LOQ are presented in Table 2. The subscale Habits significantly correlated with the Motivation weight loss (r = 0.37, p.01), indicating that the patients with healthier habits are more motivated to lose weight, as well as negative emotions (r = 0.29, p.01), which suggests that better habits are associated with lower levels of of negative affects. The most significant correlation was found between negative emotions and physical reactions to stress (r =

0.57, p.001), which coincides with the results of self-assessment questionnaires on negative emotions and reactions stress. Overall, the subscales of the LOQ were weakly or moderately correlated, except for the association of emotions / stress mentioned above. It therefore appears that the subscales LOQ represent different psychological constructs. This aspect was further studied in the analysis of relations between the scales of the LOQ and other psychological measures.

Table 2
Intercorrelations between the subscales of the LOQ

	Habits	Motivation for weight loss	Physical reactions to stress	Negative emotions
Habits	---	.37 ***	- .10	- .29 **
Motivation for weight loss		---	- .1	.19
Physical reactions to stress			---	.57 ***
Negative emotions				---

* P <.05
** p <.01
*** p <.001

Subscale Habits significantly correlated with various psychological variables, body esteem (r = 0.31, p.01), cognitive dietary restraint (r = 0.46, p.001), the food-emotion (r = -0.41, p.001) and the results BDI (r = -0.32, p.01). These data indicate that subjects who have high scores in the subscale Habits tend to feel better about their bodies and a higher degree of cognitive dietary restraint and less pronounced in food-emotional tendencies and depression . Motivation for weight loss was correlated with the results BDI (r = -0.26, p.01) and weight (r = -0.26, p.01), indicating a high degree of motivation the weight loss was associated with lower levels of depression and a lower weight. Physical reactions to stress were correlated with the body esteem (r = -0.39, p.001), the results BDI (r = 0.63, p.001) and neuroticism (r = 0, 62, p.001), which suggests that stress reactions were closely related to negative affectivity and negative self-perception. Finally, negative emotions showed almost the same patterns of associations that the subscale physical reactions to stress, with significant correlations with body esteem (r = -0.27, p.01), the BDI results (0.66, p.001) and neuroticism (r = 0.76, p.001). Negative emotions were also associated with higher scores in the subscale of Food-emotion (r = 0.42, p.001).

Table 3
Relations between the subscales and other measures LOQ

	Habits	Motivation for	Physical	Negative

		weight loss	reactions to stress	emotions
Body esteem	.31 **	.08	- .39 ***	- .27 **
Cognitive dietary restraint	.46 ***	.20 *	.14	.01
Food-emotion	- .41 ***	- .19	.19	.42 ***
BDI	- .32 **	- .26 **	.63 ***	.66 ***
Extroversion	.14	.27 **	.17	.01
Neurotic traits	- .18	- .13	.62 ***	.76 ***
Weight (lbs.)	- .19	- .26 **	.17	.01

* P <.05
** p <.01
*** p <.001

Discussion

The LOQ seems a reliable instrument for measuring several psychological and behavioral variables associated with obesity. This conclusion is supported by the internal consistency and convergent validity test results. The results suggest that the LOQ measure a number of variables and consistent with the distinctiveness can be established by a discriminant function, and provides predictable associations with other measures. An ongoing study [13] will determine whether measured by the LOQ variables are related to important clinical outcomes (that is to say, weight loss or maintenance).

One of the factors LOQ subscale Motivation weight loss, appears to have a degree of internal consistency rather low. As previously mentioned, this result could be interpreted as arising from the scale of the construct of motivation to lose weight, since everyone has their own reasons for wanting to lose weight and it is not shown the various sources of motivation are additive. Nevertheless, further work should be undertaken to rapidly explore and measure this variable, given its theoretical importance and practical potential.

Variables measured by the LOQ are not new. There are already validated measures of most of these factors. [6] However, the actual value of the LOQ is that it can easily measure these psychological factors and in an accessible format in clinical applications.

Given the impact of obesity on health and the ineffectiveness of current treatments, it is imperative to study the processes involved in maintaining long-term weight. Although the barriers to effective weight control are certainly complex and involve various biopsychosocial variables, it is clear that psychological factors play a predominant role in the equation. The results of this study show that the Questionnaire on obesity Dr Larocque can be a valuable tool to understand the psychological processes involved in weight control.

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