

Short communication

# Beliefs about the determinants of body weight predict dieting and exercise behavior

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## Abstract

This study examined the relation between beliefs about the determinants of body weight and self-reported weight-control behaviors. Restrained eaters and unrestrained eaters indicated their beliefs about amount of food eaten and amount of exercise as determinants of body weight. They also reported the extent to which they engaged in several dieting behaviors and exercise. For restrained eaters (but not for unrestrained eaters), there was a positive correlation between beliefs about amount of food eaten as a determinant of body weight and self-reported dieting behaviors. For both restrained and unrestrained eaters, there was a positive correlation between beliefs about exercise as a determinant of body weight and amount of weekly exercise. These results suggest that (a) specific beliefs about the determinants of body weight can be useful predictors of weight-related behaviors, and (b) restrained eaters are likely to engage in a broader range of behaviors aimed at controlling their weight.

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## 1. Introduction

Media messages and social pressures promote the thin-body ideal, especially for women, and these pressures have contributed to widespread body dissatisfaction and frequent dieting (Rodin, Silberstein, & Striegel-Moore, 1984; Stice, 1994, 2002). A related message promoted by the media is that people have control over their body weight and shape, as suggested by the plethora of diet books and magazine articles informing readers that they can “Lose 15 lb in seven days,” and “Have a flatter stomach in 10 easy steps.” Thus, not only are there messages dictating what one *should* look like, but there are also messages suggesting that one *can* achieve the ideal body, often with minimal effort.

A few studies over the past 20 years have examined the ways in which people’s beliefs about their control over their body weight are related to their weight-control attempts. For example, individuals who believe that they have the capacity to change their weight (i.e., those with an internal locus of control) are more likely to follow through and succeed at a weight-loss program (Saltzer, 1982) than are those who believe that their weight is determined by chance or fate (i.e., those with an external locus of control). Individuals who believe that they can control their weight are also

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more likely to be actively dieting, more confident that they will succeed at weight-loss attempts (Stotland & Zuroff, 1990), and more likely to try weight-control suggestions derived from educational materials (Holt, Clark, & Kreuter, 2001). A limitation of these studies is that the control-belief scales used have relatively low internal consistencies (Cronbach's  $\alpha = .49$  to  $.68$ ).

Two important findings from this previous research served as the impetus for the present study. It has been noted that the degree of specificity in control beliefs plays an important role in behavioral prediction; that is, predicting specific behaviors (such as weight-control attempts) requires the assessment of specific beliefs that are related to those behaviors (Rotter, 1975; Saltzer, 1982). Accordingly, we wanted to examine the utility of single-item specific beliefs about the determinants of body weight in predicting weight-related behavior. We focused on beliefs about the importance of (a) the amount of food that one eats and (b) the amount that one exercises. Second, it has been suggested that the value placed on outcomes is an important moderator in the prediction of behavior from control beliefs. For example, Saltzer (1982) found that the relation between locus of control and weight loss is particularly strong among those who highly value weight loss. Therefore, we examined the extent to which the beliefs of restrained eaters (dieters) and unrestrained eaters (non-dieters) were related to self-reported dieting behavior and exercise.

## 2. Method

### 2.1. Participants

Participants in Sample 1 were 53 female undergraduate students whose mean age was 20.6 years (range=18–29). Participants in Sample 2 were 134 female undergraduate students whose mean age was 19.2 years (range=17–35).

### 2.2. Materials and procedure

As part of two larger studies, all participants completed a pair of single items asking them to rate the importance of the following factors as contributors to body weight: (1) amount of food eaten, and (2) amount of exercise. Each item was rated on a 7-point scale (1=Not at all important, 7=Very important).

Participants in Sample 1 also indicated the extent to which they agreed (1=Completely disagree, 7=Completely agree) with a set of eight statements about their dieting-related behaviors (e.g., "I plan my daily intake carefully," "I avoid overeating"). These eight items were combined into a composite measure of attempts to control one's food intake (Cronbach's  $\alpha = .78$ ).

Participants in Sample 2 indicated on a 4-point scale (1=Never, 4=Always) the extent to which they engaged in the following behaviors: (1) plan daily intake carefully, (2) limit daily calories, (3) avoid overeating, and (4) avoid indulging in dessert. The four items were combined into a composite measure of attempts to control one's food intake (Cronbach's  $\alpha = .78$ ). Participants also reported the amount of exercise that they engaged in per week (1=None, 5=More than 4 h).

All participants also completed the Restraint Scale (Herman & Polivy, 1980), a 10-item self-report measure of dietary habits, concern with dieting, and weight fluctuations. Participants were classified as restrained eaters if they scored 15 or higher on the Restraint Scale, and as unrestrained eaters if they scored 14 or below. In Sample 1, there were 22 restrained eaters ( $M = 18.50$ ,  $SD = 3.25$ ) and 31 unrestrained eaters ( $M = 9.52$ ,  $SD = 3.23$ ); in Sample 2, there were 60 restrained eaters ( $M = 20.09$ ,  $SD = 4.03$ ) and 74 unrestrained eaters ( $M = 9.18$ ,  $SD = 3.78$ ).

## 3. Results

Restrained eaters had stronger beliefs about the connection between amount of food eaten and body weight in Sample 2,  $t_{(132)} = 3.47$ ,  $p < .002$ ,  $d = .59$ , but not in Sample 1, ns,  $d = .09$  (see Table 1). Beliefs about exercise as a determinant of body weight did not differ between restrained and unrestrained eaters, ns,  $d = .09$ .

Not surprisingly, restrained eaters reported trying to control their food intake to a greater extent than did unrestrained eaters,  $t_{(51)} = 2.83$ ,  $p < .01$ ,  $d = .79$ , and  $t_{(132)} = 7.57$ ,  $p < .001$ ,  $d = 1.30$ , for Samples 1 and 2, respectively. Amount of weekly exercise, however, did not differ significantly between restrained and unrestrained eaters,  $t_{(132)} = 1.63$ ,  $p = .11$ ,  $d = .29$ .

Table 1  
Means (SD) and correlations for control-beliefs and weight-related behaviors

	Sample 1		Sample 2	
	R (n=22)	UR (n=31)	R (n=60)	UR (n=74)
Belief				
Food intake	5.59 (1.33)	5.48 (1.09)	6.20 <sup>a</sup> (0.94)	5.55 <sup>b</sup> (1.22)
Exercise	–	–	6.48 (0.93)	6.41 (0.72)
Behavior				
Control food intake	4.03 <sup>a</sup> (1.06)	3.21 <sup>b</sup> (1.03)	2.64 <sup>a</sup> (0.63)	1.90 <sup>b</sup> (0.52)
Exercise	–	–	3.70 (1.15)	3.36 (1.21)
Belief–behavior correlation				
Food intake	.619**	.020	.372**	.192
Exercise	–	–	.311*	.284*

R=Restrained eaters, UR=Unrestrained eaters. For each sample, means within a row with different superscripts are significantly different at  $p < .01$ . \*  $p < .05$ , \*\*  $p < .01$ .

Our main interest was in the relation between people's beliefs about the determinants of body weight, and their self-reported dieting behavior and exercise. For restrained eaters (but not for unrestrained eaters), beliefs about amount of food eaten as a determinant of body weight were positively correlated with self-reported attempts to control the amount of food consumed (e.g., planning and limiting daily intake, avoiding overeating) (see Table 1). For both restrained and unrestrained eaters, there was a positive correlation between beliefs that exercise is related to body weight and self-reported amount of weekly exercise.

#### 4. Discussion

The purpose of the present study was to examine the relation between beliefs about the determinants of weight and self-reported weight-related behaviors. Not surprisingly, we found that restrained eaters tried to control their food intake to a greater extent than did unrestrained eaters. Restrained eaters also seemed to have stronger beliefs about the connection between food intake and body weight, but this finding was not consistent across the two samples. As expected, we found that a single specific item about the importance of amount of food eaten in determining body weight was positively related to self-reported attempts to control the amount of food eaten. Consistent with the findings of Saltzer (1982), this belief–behavior connection was observed only among restrained eaters.

With respect to exercise, there were no differences between restrained and unrestrained eaters either in their reported amount of weekly exercise or in their beliefs about exercise as a determinant of body weight. In addition, we found that both restrained and unrestrained eaters who believed more strongly that amount of exercise is a determinant of body weight reported engaging in more weekly exercise. These findings suggest that restrained and unrestrained eaters are equally likely to exercise as a means of weight control, and this might reflect group differences in reasons for wanting to control one's weight. Specifically, restrained eaters might be exercising (and dieting) to control their weight for appearance-related reasons, whereas unrestrained eaters might be exercising to control their weight for health-related reasons (cf. Putterman & Linden, 2004).

Taken together, these findings suggest that specific (single-item) beliefs about the determinants of body weight can be useful predictors of behavior, and that restrained eaters engage in a broader range of behaviors aimed at controlling their weight. It would be useful for future research to examine the ways in which these belief–behavior connections are related to different weight-loss motives (e.g., appearance vs. health) among restrained and unrestrained eaters.

There are a number of important questions that follow from our findings that could be important directions for future research to explore. For example, to what extent do simple specific beliefs such as the ones described in the present paper predict actual (as opposed to self-reported) eating or exercise behavior? Another important question is whether these beliefs can be modified to promote healthier dieting and exercise choices among individuals who either (a) engage in unhealthy dietary restriction, (b) engage in unhealthy excessive eating, (c) engage in excessive or compulsive exercise, or (d) are excessively sedentary.

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