

RELATIONS OF CHANGES IN EXERCISE SELF-EFFICACY, PHYSICAL SELF-CONCEPT, AND BODY SATISFACTION WITH WEIGHT CHANGES IN OBESE WHITE AND AFRICAN AMERICAN WOMEN INITIATING A PHYSICAL ACTIVITY PROGRAM

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Objective: To determine the effectiveness of changes in factors associated with self-efficacy theory for predicting weight change in obese women of two ethnic groups.

Design: Obese (body mass index [BMI] ≥ 30 kg/m²) White ($n=34$) and African American ($n=30$) women (mean age 44 years) were assessed on measures of body satisfaction, self-efficacy, and weight change over 20 weeks.

Setting: Community wellness centers.

Intervention: A supported exercise and nutrition information treatment.

Main outcome measures: Changes in Body Areas Satisfaction Scale (BAS), Physical Self-Concept Scale (PSCS), and Exercise Self-Efficacy Scale (ESES) scores and changes in body weight over 20 weeks.

Results: Significant improvements were found on measures of exercise self-efficacy, body satisfaction, and weight, with a trend ($P=.073$) toward significantly greater mean weight loss by the White group (-15.5 kg vs -9.1 kg). Linear multiple regression analyses, with simultaneous entry of changes in BAS, PSCS, and ESES scores, significantly predicted changes in weight for both the White ($R^2=.25$) and African American ($R^2=.50$) group. The primary predictor of weight change for the White group was change in BAS scores ($\beta=-.42$) and for the African American group was change in ESES scores ($\beta=-.68$).

Conclusions: Self-efficacy theory was supported as an explanatory model for both groups, with notable differences. Implications for weight loss intervention design and application are discussed. (*Ethn Dis.* 2007;17:19–22)

Key Words: Ethnic Difference, Obesity, Physical Activity, Self-Efficacy, Weight Loss

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INTRODUCTION

Weight loss programs have been of limited success for reducing weight, and new ideas are being sought.¹ Because of associations with increased initial weight loss and maintenance of weight loss,² some weight-reduction treatments have recently emphasized physical activity at program initiation.³ Improved perceptions of ability to complete a regimen of regular exercise may be associated with increased weight loss through both heightened energy expenditure and increased motivation to reduce energy intake.^{4,5} Perceptions of an improved body, which are associated with physical activity participation,⁶ may also give impetus to behaviors that result in weight loss.⁷

Self-efficacy is a person's perception of his or her ability to plan and act effectively to reach a goal. Self-efficacy theory posits that feelings of ability, competence, and mastery are strong predictors of performance success.⁸ Although the aforementioned propositions are embedded in self-efficacy theory and have received some empirical support,^{8–10} comparative testing of women of different ethnic groups and degrees of overweight is lacking. Because of different socialization processes and experiences, changes in weight may be associated with changes in different factors of self-perception for different ethnic groups. For example, White women have demonstrated a greater concern for an "ideal" body type than African American women.^{11–12} African American women may be more concerned with overcoming the many barriers to weight loss than are White women.¹³

Thus, the goal of this preliminary investigation was to first evaluate a model that tested the association of changes

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in self-regulation and task self-efficacy for physical activity and body satisfaction with weight changes in obese White and African American women who were beginning a physical activity and nutrition information intervention. Also of interest was contrasting the contribution of independent variables by ethnic group. On the basis of self-efficacy theory, this model was expected to significantly predict weight changes in both White and African American women; changes in body satisfaction were expected to account for the greatest amount of variance for White women, and changes in exercise barriers self-efficacy were expected to explain the greatest amount of variance for African American women.

METHODS

Participants

Groups were made up of 34 obese (body mass index [BMI] ≥ 30 kg/m²)