

## Weight Preoccupation, Self-objectification, and Body Satisfaction among Overweight Mid-life Women: Pre- and Post- Intervention Assessment

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**Significance.** Research has demonstrated that exercise interventions across various populations are associated with positive self-image among women (LePage & Crowther 2010; Williams & Cash 2001). Women over the age of 40 are an understudied group who need preventative intervention programs regarding healthy diet and exercise (“National Health Statistics,” 2018). Due to the appearance-focused media presentation of exercise, older women may experience heightened self-objectification and body dissatisfaction, which could prevent them from participating in the exercise. However, researchers have not conducted studies specifically among overweight women over the age of 40. In addition, the intervention program of weight loss solely focused on either exercise or diet. While body image research has focused on individuals’ desire to be thin (Grogan, Shepherd, Evans, Wright, & Hunter, 2006), the success of these interventions is often based solely on the amount of weight loss. Health promotion and intervention programs need to focus on understanding body image concerns for individuals who may be more vulnerable to overall negative health conditions. Therefore, it is crucial to identify the effect of a reduced-calorie diet combined with exercise on weight perception and body image. The specific goal is to compare the effect of a reduced calorie-intake combined with exercise on weight-preoccupation, self-objectification, and body satisfaction before and after intervention among overweight women.

**Theoretical Perspective.** Self-objectification postulates that women adopt an observer’s perspective of their appearance when evaluating their physical self (Fredrickson & Roberts, 1997). Self-objectification, a form of self-evaluation characterized by body-surveillance, can provide a framework for understanding the effect of intervention among overweight women (Tiggemann & Lynch, 2001). Calogero, Davis, and Thompson (2005) illustrate the importance of understanding the experience of self-objectification linked to negative emotional experiences and disordered eating behavior. Additionally, previous research found that individuals’ intentions to avoid exercise were related to low body satisfaction (Grogan, Evans, Wright, & Hunter 2004). A correlational study examining a general population of exercisers failed to confirm positive associations between exercise and body satisfaction. Women who engaged in exercise as a compensatory behavior reported higher levels of body dissatisfaction (LePage & Crowther, 2010). Fitness centers provide an environment that frequently draws attention to the female body (Greenleaf, 2005), and researchers confirmed that exercising within the fitness center environment is associated with greater self-objectification among women (Prichard & Tiggemann 2005, 2008; Ravaldi et al., 2003; Slater & Tiggemann, 2006). Therefore, it is hypothesized that participants’ weight preoccupation (H1), self-objectification (H2) and body satisfaction (H3) are different before and after reduced-calorie intake and exercise intervention.

**Method.** After gaining the Institutional Review Board approval, participants were recruited via informational flyers posted on a college campus. The main inclusion criteria

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required participants to have a body mass index (BMI) of 26 or higher. After written informed consent was received from each participant, a total of 34 participated in the 12-week program and provided answers to the survey. Participants were instructed to exercise for at least 30 minutes/day at least five days per week. Participants were also required to record their dietary intake and exercise participation for three days at the beginning of the study, at six weeks, and at the end of the 12-week intervention. Participants were provided detailed instructions on how to complete the food record via the MyFitnessPal© mobile application (Under Armor, Inc.) and then were asked to share this information with the primary investigator. Pre-and post-study included a cover letter and a questionnaire that included the weight preoccupation (Cash, 2000), self-objectification (Noll & Frederickson, 1998), body satisfaction (Cash, 2000), and demographic information.

**Results.** The average age of the participants was 51.53 (SD: 6.74) years old, ranging from 40 to 64 years old. Based on their body weight and height ratio, 50% of the participants were overweight, and 50 % were obese. While weight preoccupation and self-objectification were not significantly changed, body satisfaction has been significantly improved ( $P < 0.00$ ) (H3). Although not statistically significant, individuals' scores of weight preoccupation (H1) and self-objectification (H2) were reduced after participating in the program. The reduced calorie regime with exercise positively affected body satisfaction.

**Discussion and Conclusion.** As previously noted, it was hypothesized that diet and exercise would reduce weight preoccupation and self-objectification (Prichard, & Tiggeman, 2012). However, no statistically significant differences were found. Part of this may be due to the fact that the participants were older and at a heavier weight. The diet and exercise did not impact their weight perception significantly even after they participated in the intervention program. Perhaps a more extended period of diet and exercise intervention may have changed the results of the study. The results of weight preoccupation would have been different if the exercisers and non-exercisers were compared, rather than using the pre- and post- comparison. The new insights into the role of restricted-calorie intake and exercise on mid-life women's improved body satisfaction suggest that it is important to tailor to this targeted group of women by providing structured programs focusing on restricted-calorie intake and exercise. Since body image studies have been conducted mostly with young women who have BMIs within a relatively normal range, the findings of the present study provide a valuable stepping stone for future research on the effects of exercise and diet for overweight and obese populations.

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