



# Appearance-based exercise motivation moderates the relationship between exercise frequency and positive body image



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## ABSTRACT

Individuals with a positive body image appreciate their bodies, hold an internal perspective of their bodies, and are satisfied with the functionality of their bodies. Research shows that positive body image is more complex than the absence of body dissatisfaction. Although exercise reduces women's body dissatisfaction, very little research has explored how, or even whether, exercise is associated with positive body image. Therefore, we examined whether exercise frequency was positively related to three aspects of positive body image (body appreciation, internal body orientation, and functional body satisfaction) among 321 college women. Appearance-based exercise motivation (the extent exercise is pursued to influence weight or shape) was hypothesized to moderate these associations. Hierarchical moderated regression analyses showed that exercise frequency was related to higher positive body image, but high levels of appearance-based exercise motivation weakened these relationships. Thus, messages promoting exercise need to de-emphasize weight loss and appearance for positive body image.

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## Introduction

Positive body image refers to attitudes and behaviors that reflect a healthy acceptance of and appreciation for the body that go beyond the absence of body dissatisfaction. This construct provides a broader perspective to the study of embodiment, which has traditionally focused on problematic behaviors and attitudes. Research that explores the correlates and characteristics of positive body image has important implications for prevention and treatment because it provides clients and practitioners with an understanding of what body-related attitudes and behaviors to strive toward, not just what to avoid. Reflecting on the importance of positive body image in their recent handbook, Smolak and Cash (2011, p. 472) declared that focusing on positive body image is "essential to the future of the field."

Although positive body image has appeared in the scholarly literature only within the past decade, research suggests that it is a multi-faceted construct consisting of body appreciation, an internal orientation toward the body, and satisfaction with the body's capabilities. *Body appreciation* refers to unconditional approval and respect for the body (Avalos, Tylka, & Wood-Barcalow, 2005; Frisén & Holmqvist, 2010; Wood-Barcalow, Tylka, & Augustus-Horvath,

2010). Individuals who appreciate their bodies recognize that their bodies are unique and they accept their flaws as well as their assets. They show respect for the body by attending to its needs, engaging in health-promoting behaviors, and cognitively rejecting cultural messages that promote unrealistic standards for thinness. *Internal body orientation* refers to a focus on what the body can do and how it feels as opposed to how it looks (Frisén & Holmqvist, 2010; Wood-Barcalow et al., 2010). Instead of habitually monitoring their outward appearance, individuals with an internal body orientation are concerned with comfort. Finally, *functional body satisfaction* refers to approval of and satisfaction with the body's physical capabilities (Abbott & Barber, 2010; Frisén & Holmqvist, 2010; Wood-Barcalow et al., 2010).

Curiously, little research has explored the connection between positive body image and exercise, despite substantial evidence that physical activity reduces women's negative feelings about their bodies. A variety of methodologies have demonstrated this connection, including self-report correlational studies (Hausenblas & Fallon, 2002), ecological momentary assessment (Lepage & Crowther, 2010), quasi-experimental designs in which exercisers were compared with non-exercisers (Davis, 1990), and experimental designs (Vocks, Hochler, Rohrig, & Legenbaugher, 2009). Three major meta-analyses, including one that focused on pre/posttest experimental designs, have concluded that exercise is consistently associated with reduced body dissatisfaction (Campbell & Hausenblas, 2009; Hausenblas & Fallon, 2006; Reel et al., 2007). In addition, a review of six exercise interventions directed toward

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eating disorder patients found generally positive effects, such as decreased drive for thinness and body dissatisfaction (Hausenblas, Cook, & Chittester, 2008).

Given the consistent inverse relationship between exercise and body dissatisfaction, it is likely that exercise also improves the positive ways that women experience their bodies. However, reducing negative features (such as body dissatisfaction) is not the same as increasing positive features (Fredrickson, 2001; Tylka, 2011), and to date, no studies have empirically tested this potential benefit of exercise. Three qualitative studies provide indirect support. First, women who have a positive body image often mentioned regular exercise as a way to promote care of their bodies and overall well-being (Wood-Barcalow et al., 2010). These women viewed exercise as a way to relieve stress, enjoy themselves, and improve their health rather than to lose weight. Second, the vast majority (i.e., 93%) of adolescents with a positive body image were exceptionally active, participating in various sports and other physical activity (e.g., dancing, jogging) and found exercise “joyful and health-promoting” and “natural part of life” (Frisén & Holmqvist, 2010, p. 208). Only 20% of the adolescents mentioned that they exercised in order to take care of or change their appearance. Third, female collegiate athletes described feeling proud of their strong and developed bodies (Krane, Choie, Baird, Aimar, & Kauer, 2004). They focused on the function of their well-developed muscles and appreciated how their strength helped them in their sport. They recognized that the female athletic body has distinctive desirable features, despite the ways that it diverges from the cultural ideal of femininity. Many of the feelings and attitudes described by these athletes are similar to the characteristics of positive body image, suggesting a connection between physical activity and positive body image. Two quantitative studies also have provided support for a connection between exercise and positive body image: modern dancers and street dancers demonstrated higher body appreciation relative to non-dancers and college women (Langdon & Petracca, 2010; Swami & Tovée, 2009).

It is likely that the psychological benefits of exercise are not the same for all women. Various characteristics of the exerciser have been shown to moderate the psychological outcomes associated with exercise, including pre-existing body image disturbance, enjoyment of the activity, and cognitions during the activity (Blanchard, Rodgers, & Gauvin, 2004; Lepage & Crowther, 2010; Raedeke, 2007; Vocks et al., 2009). For example, women randomly assigned to a bout of physical activity reported feeling slimmer following the exercise session, and the effect was stronger for women with greater pre-experimental desire for thinness and weight concerns (Vocks et al., 2009). Among college students and corporate fitness participants, an acute exercise bout was generally associated with enhanced positive and reduced negative affect (Raedeke, 2007). However, participants who enjoyed the exercise experienced the greatest gains in positive affect. An experimental study randomly assigned participants to a bout of running or a no-exercise control group (Blanchard et al., 2004). Those in the exercise condition experienced increases in positive affect (such as revitalization and positive engagement) relative to the control participants. The participants' cognitions moderated the effects; when participants focused on the exercise (such as their breathing) they experienced reduced gains in positive affect relative to those who allowed their minds to wander during the running session. Results such as these indicate that multiple characteristics of the participant can influence the psychological effects of exercise.

A potentially key moderator is the individual's motivation for exercising. Previous research has shown that women who exercise primarily for appearance reasons are likely to experience elevated rates of eating disorder symptoms (including negative feelings about the body), elevated depressive symptoms, and lower self-esteem (DiBartolo, Lin, Montoya, Neal, & Shaffer, 2007; Goncalves

& Rui Gomes, 2012; Mond, Hay, Rodgers, & Owen, 2006). In contrast, among women who engaged in physical activity for health and enjoyment reasons, there was a negative correlation between exercise and eating disorder symptoms, including body dissatisfaction (DiBartolo et al., 2007). Even the physical health effects of exercise appear to depend upon exercise motivation; exercise motivated by health and enjoyment was correlated with lower pulse, systolic blood pressure, and salivary stress hormone levels while exercise motivated by weight was unrelated to these physical measures (DiBartolo et al., 2007). Together, these findings imply that exercise for weight or shape reasons is qualitatively distinct from exercise that is not motivated by appearance.

Thus, it is likely that whether the relationship between exercise and body image is adaptive depends upon the extent to which the physical activity is intended to influence weight or shape. However, this idea has not yet been explored in regard to positive body image. Such investigations would be worthwhile because (a) empirical research has shown that positive body image is a more comprehensive construct than low levels of body dissatisfaction (Avalos et al., 2005); (b) quantitative research has not explored the relationship between exercise and positive body image beyond dance despite qualitative research supporting this connection (Frisén & Holmqvist, 2010); and (c) knowing whether appearance-based motivation for exercise assuages the potential beneficial qualities of exercise on body appreciation, internal body orientation, and functional body satisfaction has important clinical implications for the promotion and maintenance of positive body image and healthy exercise.

Therefore, the purpose of the present study was to examine the relationships between exercise frequency and three aspects of positive body image: body appreciation, internal body orientation, and functional body satisfaction. We hypothesized that exercise frequency would show a positive relationship with each positive body image criterion, but that the strength of this relationship would depend upon the extent to which exercise is motivated by weight or shape reasons. We operationalized exercise as exercise frequency because it has been shown that frequency, not duration, is the major factor related to body concerns (Reel et al., 2007). We explored these connections with an undergraduate sample because colleges usually provide opportunities for regular physical activity for their students (e.g., gymnasiums, sports clubs or teams). These opportunities are generally available without an additional expense as the use of facilities is typically embedded in tuition.

## Method

### Participants

The final data set included 321 female college students who ranged in age from 18 to 51 years ( $M = 19.88$ ,  $SD = 3.73$ ), from a small liberal arts college in Western Pennsylvania ( $n = 217$ ) and a regional campus of a large public university in Ohio ( $n = 104$ ). Students identified themselves as Caucasian American (88.5%), African American (5.2%), Asian American (2.0%), Native American (1.6%), Latino (1.2%), or multiracial (1.4%). They described themselves as middle class (45.3%), upper middle class (41.6%), working class (10.3%), or upper class (2.8%).

### Measures

**Body appreciation.** The 13-item Body Appreciation Scale (BAS; Avalos et al., 2005) was used to assess participants' acceptance of and appreciation for their bodies (e.g., “Despite its flaws, I accept my body for what it is”). Its items are rated on a 5-point scale ranging

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