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Exercise motives and positive body image in physically active college women and men: Exploring an expanded acceptance model of intuitive eating

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ABSTRACT

The acceptance model of intuitive eating posits that body acceptance by others facilitates body appreciation and internal body orientation, which contribute to intuitive eating. Two domains of exercise motives (functional and appearance) may also be linked to these variables, and thus were integrated into the model. The model fit the data well for 406 physically active U.S. college students, although some pathways were stronger for women. Body acceptance by others directly contributed to higher functional exercise motives and indirectly contributed to lower appearance exercise motives through higher internal body orientation. Functional exercise motives positively, and appearance exercise motives inversely, contributed to body appreciation. Whereas body appreciation positively, and appearance exercise motives inversely, contributed to intuitive eating for women, only the latter association was evident for men. To benefit positive body image and intuitive eating, efforts should encourage body acceptance by others and emphasize functional and de-emphasize appearance exercise motives.

Introduction

Exercise is one of the most powerful lifestyle behaviors for promotion of health and well-being. Relative to inactive individuals, physically active adults have lower rates of all-cause mortality, cardiovascular disease, type 2 diabetes, metabolic syndrome, and some cancers; they also exhibit better cardiorespiratory and muscular fitness (U.S. Department of Health and Human Services, 2008). Regular exercise is also associated with psychological benefits, including reduced anxiety and depression, improved self-esteem, better quality sleep, and greater health-related quality of life (Mead et al., 2009; Spence, McGannon, & Poon, 2005; U.S. Department of Health and Human Services, 2008). However, in regard to body image and eating behavior, the correlates of exercise are not the same for all individuals. Instead, it appears that the links between exercise and both body image and eating-related markers of health and well-being depend on the reasons underlying an individual's desire to engage in physical activity rather than the amount or frequency of exercise (Homan & Tylka, 2014; LePage & Crowther, 2010; Mond, Hay, Rodgers, & Owen, 2006).

People choose to exercise for many different reasons, including (for example) weight control, health, fitness, stress management, socialization, and challenge (Cash, Novy, & Grant, 1994; Markland & Ingledew, 1997; Silberstein, Striegel-Moore, Timko, & Rodin, 1988). However, accruing evidence indicates that these motives can be classified into two domains based on their relationships with body image-related variables. Specifically, external motives related to appearance (including weight control, attractiveness, body tone) tend to be associated with body dissatisfaction, internalization of cultural appearance ideals, dietary restraint, and disordered eating symptoms, while internal, functional motives (including health, fitness, enjoyment, challenge, mood improvement) show inverse relationships with those same variables (DiBartolo, Lin, Montoya, Neal, & Shaffer, 2007; LePage & Crowther, 2010; Mond & Calogero, 2009; Strelan, Mehaffey, & Tiggemann, 2003; Thome & Espelage, 2007; Vartanian, Wharton, & Green, 2012).

Although researchers have investigated the relationships among exercise motives, negative body image, and disordered eating, research has not yet explored how exercise motives relate to positive body image. Positive body image is an important construct that is rapidly gaining attention among researchers because it represents a state of psychological well-being that is greater

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than the absence of appearance-related distress (Avalos, Tylka, & Wood-Barcalow, 2005; Tiggemann & McCourt, 2013; Tylka, 2011a; Tylka & Wood-Barcalow, 2015b; Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). In addition to positive appraisals of their appearance, individuals with positive body image demonstrate *positive embodiment*, or healthy ways of inhabiting the body, such as body appreciation and body functionality (Tylka & Wood-Barcalow, 2015b). *Body appreciation* includes holding favorable opinions toward the body, accepting the body regardless of appearance, respecting the body by engaging in healthy behaviors, and protecting the body by rejecting unrealistic media appearance ideals (Avalos et al., 2005). Those high in body functionality have an *internal body orientation*, focusing on what their body can do and how it feels rather than how it looks or appears to others (Augustus-Horvath & Tylka, 2011).

It would be worthwhile to examine the relationships between the external and internal exercise motive domains (hereafter referred to as "appearance exercise motives" and "functional exercise motives") and positive body image within a model that recognizes positive embodiment. Therefore, the present study examined these associations within the acceptance model of intuitive eating (Avalos & Tylka, 2006), which draws in part from humanistic theory (Rogers, 1961) and objectification theory (Fredrickson & Roberts, 1997). The acceptance model of intuitive eating posits that perceiving that the body is unconditionally accepted (rather than objectified) by others helps individuals appreciate their bodies, both directly and indirectly via developing an internal rather than external orientation of their bodies (see Fig. 1, paths a–c). Body appreciation and internal body orientation, then, foster intuitive eating (paths d–e). *Intuitive eating* is a behavioral manifestation of positive body image that involves trust in and connection with internal hunger and satiety cues and eating in response to these cues (Tribole & Resch, 2012; Tylka, 2006). Moreover, individuals who eat intuitively are not preoccupied with food and dieting; rather, they choose foods that are appealing and help their bodies function well (Tylka, Calogero, & Daníelsdóttir, 2015; Tylka & Kroon Van Diest, 2013).

There is substantial empirical support for the acceptance model of intuitive eating among various age groups, including adolescent girls, emerging adult, early adult, and middle adult women (Andrew, Tiggemann, & Clark, 2015; Augustus-Horvath & Tylka, 2011; Avalos & Tylka, 2006), as well as female college athletes (Hahn Oh, Wiseman, Hendrickson, Phillips, & Hayden, 2012). In each of these examinations of the model, its five paths were significant. Thus, in our expanded model, we hypothesized that the corresponding paths (see Fig. 1, paths a–e) would be significant for our sample of women. We also predicted that body appreciation and internal body orientation would mediate the relationship between body acceptance by others and intuitive eating among women, as the extent to which body acceptance by others is connected to women's intuitive eating has been found to be fully dependent on their positive embodiment (Augustus-Horvath & Tylka, 2011; Avalos & Tylka, 2006).

To our knowledge, the present study represents the first examination of the acceptance model of intuitive eating among men. We expected that its proposed paths (Fig. 1, paths a–e) also would be significant for our sample of men, given documented positive bivariate correlations between men's internal body orientation, body appreciation, and intuitive eating (Tylka & Kroon Van Diest, 2013) and men's perceptions of body acceptance by family members, body appreciation, and intuitive eating (Kroon Van Diest & Tylka, 2010). We investigated differences in the strengths of the model paths between women and men. Given that the acceptance model of intuitive eating was based on girls' and women's experiences, we predicted stronger pathways in women's data compared to men's data. Furthermore, to balance the analysis with women, we examined whether body appreciation and internal body orientation would mediate the relationship between body acceptance by others and intuitive eating for men, although we did not offer a hypothesis due to the absence of theory and research on men's positive embodiment.

Next, we hypothesized that exercise motives would be related to the model variables via paths f–m (see Fig. 1). The more women and men perceive that their body's appearance is unconditionally accepted by others, the more they may be "freed" from narrowly viewing exercise as a method to control their appearance. This mindset would allow them to recognize and seek out exercise's internal, functional benefits (path f) while also attenuating concerns about altering, changing, or maintaining their appearance through exercise (path g). Likewise, the more women and men have an internal body orientation, thus prioritizing how their body feels and functions over how it looks, the more likely they will be motivated to exercise for functional reasons (path h) and not appearance reasons (path i). Indeed, prioritizing one's appearance over one's competency-based body attributes was found to be inversely associated with functional exercise motives and positively associated with appearance exercise motives (Strelan et al., 2003). Additionally, the higher women's and men's functional exercise motives, the more likely they will be attuned to positive changes as a result of exercise, such as improvements in fitness and/or energy level, physical ability, and everyday functioning. Attention to these changes may foster an appreciation for their body (path j) and a readiness to eat according to their body's internal hunger and satiety cues and cravings to maintain their energy and body performance (path k). Conversely, exercising in hopes of modifying appearance (by losing fat, gaining muscle mass, etc.) is likely to be inversely associated with appreciating the body as it currently is (path l; Homan & Tylka, 2014). It is also likely to show an inverse relationship with intuitive eating (path m) out of concern that eating in this manner may "waste" the calories burned during the workout, prevent fat loss, and/or promote body fat accumulation rather than muscle tone or development. We also compared the strength of paths f–m for women and men; however, due to the lack of available theory and research, we did not formulate a hypothesis addressing whether they would be stronger for women or men.

Finally, we expected that, compared to men, women would have higher average scores on appearance exercise motivation and lower average scores on the remaining model variables due to the disproportionate cultural and interpersonal pressure women receive to focus on, tend to, and alter their appearance (Buote, Wilson, Strahan, Gazzola, & Papps, 2011; Fredrickson & Roberts, 1997). Instead, men are encouraged to tend to their body's competence and ability to function (Daniel & Bridges, 2010). Indeed, in young adult samples, women have been found to have lower levels of internal body orientation (i.e., higher body surveillance), body appreciation, and intuitive eating than men (Calogero, 2009; Tylka, 2013; Tylka & Kroon Van Diest, 2013; Tylka & Wood-Barcalow, 2015a).

Method

Participants and Procedure

After receiving approval from the affiliated college and university IRBs, we recruited undergraduate students because they are provided with opportunities for regular physical activity (e.g., gymnasiums, college sports clubs or teams). Students from a small liberal arts college in Pennsylvania received the questionnaires in an envelope which they completed at their convenience. Students at a regional campus of a large public university in Ohio completed the questionnaires online at their convenience. Students