

## Reasons for Exercise and Body Esteem: Men's Responses to Self-Objectification

Peter Strelan<sup>1,3</sup> and Duane Hargreaves<sup>2</sup>

---

In this study, we applied the construct of self-objectification to men, specifically to examine the role of reasons for exercise in men's responses to objectification. A questionnaire that assessed self-objectification, reasons for exercise, body esteem, and self-esteem was voluntarily completed by 153 Australian participants between the ages of 18 and 35 years (82 men and a comparison group of 71 women). Self-objectification and appearance-related reasons for exercise were significantly negatively related to body esteem for both men and women. Self-objectification was also positively related to appearance-related reasons for exercise. The latter was found to mediate the relationship between self-objectification and body esteem for both men and women. Men were just as likely as women to exercise for appearance-related reasons. Together, the results suggest that objectification may be sensibly applied to men and that exercising for appearance-related reasons appears to exacerbate the negative impact that self-objectification has on both men's and women's esteem.

---

**KEY WORDS:** men; exercise; body esteem; self-objectification.

Exercise is widely acknowledged to have a number of psychological and health benefits, for example, it reduces depression and stress and increases self-esteem and general health (see Maltby & Day, 2001, for a review). However, such benefits tend not to be experienced by those individuals who are motivated to exercise for appearance-related reasons. In fact, exercising for weight loss, body tone, and attractiveness reasons has been shown to be related to disturbed eating (McDonald & Thompson, 1992), body dissatisfaction (Silberstein, Striegel-Moore, Timko, & Rodin, 1988), reduced body esteem and self-esteem (Strelan, Mehaffey, & Tiggemann, 2003), and lowered psychological well-being (Maltby & Day, 2001). Conversely, exercising for fitness, health, and enjoyment reasons has been found to be related to increased self-esteem, body satisfaction (e.g., McDonald & Thompson, 1992; Strelan et al., 2003;

Tiggemann & Williamson, 2000), and general psychological well-being (Maltby & Day, 2001).

Most studies indicate that men are less likely than women to exercise for appearance-related reasons (e.g., Silberstein et al., 1988; Tiggemann & Williamson, 2000). This is not surprising, given that women have traditionally been viewed as more preoccupied with their appearance (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). However, much evidence is emerging to show that men, too, are becoming increasingly concerned about their bodies (e.g., Luciano, 2001; Parks & Read, 1997; Pope, Phillips, & Olivardia, 2000). For example, a recent survey indicated that the percentage of US men who express dissatisfaction with their bodies had risen from 15% in 1972 to 43% in 1996 (Garner, 1997). The main aim of the present study was to examine the extent to which those men who are preoccupied with their appearance view exercise as a means of addressing such concerns.

Understandably, much of the theorizing on the antecedents of, and responses to, body dissatisfaction have been oriented toward women. At present no

---

<sup>1</sup>Charles Sturt University, Bathurst, Australia.

<sup>2</sup>University of Toronto, Toronto, Canada.

<sup>3</sup>To whom correspondence should be addressed at The Department of Psychology, The University of Adelaide, Adelaide, Australia, 5005; e-mail: peter.strelan@psychology.adelaide.edu.au.

explicit theoretical statement exists to explain why the same phenomenon is occurring more and more among men. Thus, a secondary aim of the study was to apply an influential theoretical account of the development of body dissatisfaction among women, Fredrickson and Roberts' (1997) objectification theory, to men.

According to objectification theory, Westernized societies sexually objectify or commodify the female body. Women experience objectification through constant evaluation (e.g., male gaze) and the entertainment and advertising media. The latter repeatedly send the message to society in general, and women in particular, that women are to be valued for what they look like, not for who they are. Specifically, a thin beauty ideal is constantly glorified, and women are encouraged to perceive that if they are to be valued by others they must attain this ideal. Objectification theory asserts that ongoing exposure to the sociocultural belief that women are to be judged by how they look leads women to internalize others' views of themselves. Fredrickson and Roberts (1997) refer to this process as self-objectification, whereby individuals come to believe that they are indeed objects or commodities to be looked at and evaluated. Self-objectification has been shown to result in appearance anxiety, body shame (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; Tiggemann & Lynch, 2001), and, ultimately, negative psychological and health consequences such as depressive symptoms (Muehlenkamp & Saris-Baglama, 2002), reduced body satisfaction, lowered self-esteem (Strelan et al., 2003), reduced body esteem (McKinley, 1998), and restrained and disordered eating (Fredrickson et al., 1998; Muehlenkamp & Saris-Baglama, 2002; Tiggemann & Lynch, 2001).

Although objectification theory was proposed ostensibly to explain the source of appearance anxiety and body shame among women, we, and others (e.g., Morrison, Morrison, & Hopkins, 2003), believe that at least one of its basic tenets may be sensibly applied to men. We acknowledge that men may not experience evaluation by women to the same degree that women experience it from men. However, a growing literature does indicate that, as for women, a likely source of men's body dissatisfaction is the entertainment and advertising media. Men are increasingly subject to articles and advertising in magazines, and to role models in films and on television, that promote images of an ideal male physique that is muscular, mesomorphic, and sharply defined

(e.g., McCreary & Sasse, 2000; Morrison et al., 2003; Morry & Staska, 2001; Pope, Olivardia, Gruber, & Borowiecki, 1999). As with the thin ideal for women, such a physique is impossible for most men to attain (Salusso-Deonier, Markee, & Pedersen, 1993). For example, Pope et al.'s (1999) analysis of the evolution of male action toys concluded that if one contemporary toy (the GI Joe Extreme) was life-size, its biceps would be larger than any bodybuilder could possibly attain.

Objectification theory would suggest that the proliferation of such images encourages men to believe that the idealized male body is valued by society, and, therefore, in order to be valued men must attain such a body. Accordingly, studies indicate that exposure to idealized images of male bodies in the media is related to men's body dissatisfaction (e.g., Harrison & Cantor, 1997; Lavine, Sweeney, & Wagner, 1999). For example, Morry and Staska (2001) found that men who read fitness magazines were more likely to express concern about their physical appearance and also to engage in disordered eating.

One might expect, then, that many men self-objectify, possibly because of media-driven pressures similar to those perceived by women. However, few studies have included direct measures of the extent to which men's self-objectification leads to the negative psychological outcomes that have been observed among women. Further, the results are inconsistent. For example, Fredrickson et al. (1998) found that self-objectification was positively related to body shame and restrained eating among women but not men, whereas Morry and Staska (2001) reported that higher self-objectification was associated with eating problems in both women and men. Thus, in the present study we sought to clarify and add to our presently limited understanding of the extent to which men self-objectify and, in turn, the impact of self-objectification on men's body esteem and self-esteem.

As we indicated earlier, the principal aim of the study was to examine the extent to which self-objectifying men use exercise to respond to perceived sociocultural pressures to attain an idealized body. A study by Strelan et al. (2003) is particularly instructive for our purposes, for it showed that the relationship between young women's self-objectification and their body esteem and self-esteem was mediated by their reasons for exercise. Women who self-objectify and who respond by exercising for appearance-related reasons were

more likely to experience reduced body esteem, self-esteem, and body satisfaction than were low self-objectifiers who exercise for functional reasons, such as health, fitness, mood, and/or enjoyment. In other words, it may be that for many women, attempts to meet sociocultural expectations of the thin ideal through exercise serve only to exacerbate their sense of appearance anxiety and body dissatisfaction.

The mediating effect of reasons for exercise observed by Strelan et al. (2003) has yet to be tested among men. Thus, in the present study we sought to examine whether a similar response pattern is exhibited by those men who perceive pressure to achieve a body ideal. To what extent do men, like women, view exercise as a means of meeting perceived sociocultural expectations of an idealized body, and do such efforts compound their appearance-related concerns in the same way as for women, that is, by reducing their body esteem and self-esteem?

We addressed these questions by proposing four hypotheses. On the basis of previous research, we predicted, first, that increased self-objectification among men would be related to decreased body esteem and self-esteem. Second, increased self-objectification among men who exercise would be positively related to exercising for appearance-related reasons and negatively related to exercising for health and fitness or mood and enjoyment reasons. Third, exercising for appearance-related reasons would be negatively related to body esteem and self-esteem, whereas exercising for health and fitness or mood and enjoyment reasons would be positively related to these outcomes. Fourth, in line with Strelan et al.'s (2003) study with young women, we expected that men's reasons for exercise would mediate the relationship between self-objectification and body esteem and self-esteem.

In testing our hypotheses, we included a sample of women to examine likely gender differences in self-objectification. The hypotheses stated above were also tested with women. Further, guided by self-objectification theory, we predicted that women would score higher than men on self-objectification. As a consequence of their higher self-objectification, and consistent with some previous findings, appearance enhancement was expected to be a more important reason for exercise among women than men, whereas health/fitness and mood/enjoyment reasons would be less likely to be endorsed by women.

## METHOD

### Participants and Procedure

There were 153 participants (82 men and 71 women). For the purpose of surveying a full range of exercise levels, the sample consisted of exercisers at an Australian university fitness center ( $n = 69$ ) supplemented by psychology undergraduate students ( $n = 84$ ) who participated for course credit. Ages ranged from 18 to 35 years (for men,  $M = 22.45$ ,  $SD = 4.73$ ; for women,  $M = 20.95$ ,  $SD = 2.41$ ). Participants responded to a questionnaire. The students who participated for course credit completed the questionnaire as a group, sitting far apart from each other in a 350-seat lecture hall. Fitness center participants were solicited via advertisements on the fitness center notice boards. The latter completed the questionnaire at a time of their choice, either at the center or at home, and returned the questionnaire in a self-addressed, postage-paid sealable envelope to the researchers. All participation was voluntary, and responses were anonymous.

### Measures

Participants responded to a five-part questionnaire that assessed, in order, exercise habits, reasons for exercise, self-objectification, body esteem, and self-esteem.

#### *Exercise Habits*

Participants indicated the number of hours per week they participated in a variety of exercise-related activities that included jogging, brisk walking, sport, aerobics classes, and gym workout (i.e., using machines and lifting weights).

#### *Reasons for Exercise*

Silberstein et al.'s (1988) Reasons for Exercise Inventory was used to measure participants' reasons for exercising. The inventory consists of 24 items, rated on a 7-point scale (1 = *not at all important*; 7 = *extremely important*), which represent seven motivations for exercising: weight control, attractiveness, body tone, health, fitness, enjoyment, and mood improvement. Following Strelan et al. (2003), we collapsed the seven subscales into three conceptually

distinct domains: one appearance-related index of reasons for exercise (weight control, attractiveness, and body tone reasons), which we will refer to as “appearance enhancement,” and two function-related factors—health/fitness and mood/enjoyment. Internal reliability for the appearance-related and health/fitness scales was acceptable for men ( $\alpha = .66$  and  $.77$ , respectively) and very good for women ( $\alpha = .88$  and  $.90$ , respectively). Internal reliability for the mood/enjoyment scale was acceptable for both men ( $\alpha = .72$ ) and women ( $\alpha = .74$ ).

### Self-Objectification

Noll and Fredrickson’s (1998) Self-Objectification Questionnaire was used to measure self-objectification. Participants respond to 10 items, 5 of which are observable, appearance-based, body attributes (i.e., weight, sex appeal, physical attractiveness, firm/sculpted muscles, measurements), and 5 of which are nonobservable, competence-based, body attributes (i.e., strength, physical coordination, energy level, health, physical fitness). Participants rank each attribute on a scale from 1 = *least important* to 10 = *most important*. Possible final scores range from  $-25$  to  $25$ , and represent the difference between the total appearance ratings and the competence ratings. The higher the score, the greater the individual’s level of self-objectification.

### Body Esteem

Mendelson, Mendelson, and White’s (2001) Body Esteem Scale for Adolescents and Adults was used to measure body esteem. Participants rate 23

statements about their bodies (e.g., “I wish I looked better”) on a 5-point scale (1 = *never*; 5 = *always*); higher scores indicate higher body esteem. The scale showed very good internal reliability for both men ( $\alpha = .90$ ) and women ( $\alpha = .94$ ).

### Self-Esteem

Bachman and O’Malley’s (1977) adaptation of Rosenberg’s (1965) Self-Esteem Scales was used to measure self-esteem. Participants rate 10 statements about themselves (e.g., “I am a useful person to have around”) on a 5-point scale (1 = *never true*; 5 = *always true*); higher scores represent higher self-esteem. The scale showed good internal reliability for both men ( $\alpha = .83$ ) and women ( $\alpha = .88$ ).

## RESULTS

### Exercise Practices and Reasons for Exercise among Men and Women

Table I presents the mean hours spent exercising per week by both men and women. For the sample of men, the most frequent type of exercise was lifting weights or using machines at the fitness center, followed by jogging or walking, and playing sport. For the sample of women, the most frequent form of exercise was jogging or walking, followed by playing sport.

Participants’ mean scores for the three reasons for exercise domains are presented in Table I. It can be seen that both men and women rated health/fitness as the most important reason for exercise, followed by appearance enhancement and

**Table I.** Mean (Standard Deviation in Parentheses) Self-Objectification, Body Esteem, Self-Esteem, and Reasons for Exercise Ratings among Men and Women

	Men	Women	<i>p</i>
Self-objectification	-10.22 (11.91)	-4.74 (15.05)	*
Body esteem	3.43 (.58)	3.13 (.67)	**
Self-esteem	4.04 (.87)	3.61 (.92)	
Reasons for exercise			
Appearance enhancement	4.34 (.87)	4.44 (1.26)	
Health/Fitness	5.47 (.81)	5.10 (1.02)	*
Mood/Enjoyment	4.30 (.98)	4.26 (.99)	
Hours spent exercising per week			
Jogging/Walking	4.35 (4.74)	3.60 (2.44)	
Aerobics	0.63 (1.63)	0.59 (1.13)	
Gym (weight/machines)	4.64 (2.51)	0.89 (1.57)	***
Playing sport	3.62 (3.66)	1.32 (1.96)	***

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

mood/enjoyment. A series of independent samples *t*-tests were conducted to examine gender differences in the importance of the reasons for exercise. Contrary to prediction, there was no difference between men and women in the importance of appearance enhancement reasons for exercise,  $t(150) < 1, p > .05$ , nor for mood/enjoyment,  $t(150) < 1, p > .05$ . Men were, however, significantly more likely than women to exercise for health/fitness,  $t(150) = 2.50, p < .05$ .

At this point, it is relevant to note that women who attended the fitness center were significantly more likely ( $M = 5.93, SD = .84$ ) than women who did not attend the fitness center ( $M = 4.96, SD = .98$ ) to exercise for health/fitness reasons,  $t(69) = 2.94, p < .05$ . This, however, was the only significant difference found in a series of independent samples *t*-tests conducted for each of the main variables between male and female participants who attended the fitness center and those who did not,  $t_s < 1$ .

### Body Image Among Men and Women

Men's and women's mean scores for self-objectification, body esteem, and self-esteem are presented in Table I. As predicted, men reported significantly lower self-objectification than women did,  $t(150) = 2.50, p < .05$ . Women's mean self-objectification score ( $M = -4.74$ ) is comparable to a previous sample of Australian college women ( $M = -5.78$ ; Tiggemann & Lynch, 2001), and lower than a sample of American college-aged women ( $M = .82$ ; Fredrickson et al., 1998). Further, men reported significantly higher body esteem than women did,  $t(151) = 3.00, p < .01$ , but there was no significant difference between men and women for self-esteem,  $t(151) = 1.11, p > .05$ .

### The Relationship Between Self-Objectification, Esteem, and Reasons for Exercise

Table II shows the correlations among self-objectification, body esteem, self-esteem, and reasons for exercise for men and women separately. Men's self-objectification was significantly negatively related to both body esteem and self-esteem. For women, self-objectification was negatively related to body esteem but not self-esteem. Self-objectification was significantly positively related to appearance-related reasons for exercise for both men and women. Self-objectification was significantly negatively related to exercising for health/fitness and mood/enjoyment for women, but not for men.

**Table II.** Pearson Product Moment Correlations Between Reasons for Exercise, Self-Objectification, Body Esteem, and Self-Esteem for Men and Women

	Self-objectification	Body esteem	Self-esteem
<b>Men</b>			
Body esteem	-.27*		
Self-esteem	-.26*	.57***	
Appearance enhancement	.35***	-.29**	-.18
Health/Fitness	-.13	-.04	.07
Mood/Enjoy	-.01	-.22*	-.32**
<b>Women</b>			
Body esteem	-.40***		
Self-esteem	-.19	.40**	
Appearance enhancement	.61***	-.49***	-.00
Health/Fitness	-.40***	.19	.19
Mood/Enjoy	-.30*	.20	.20

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Appearance enhancement reasons for exercise were significantly negatively related to body esteem for both men and women, but appearance enhancement was not related to self-esteem. Mood/enjoyment reasons for exercise, but not health/fitness reasons for exercise, were significantly negatively related to men's body esteem and self-esteem. There were no other significant correlations between reasons for exercise and body esteem or self-esteem for women.

### Reasons for Exercise as a Mediator of the Relationship Between Self-Objectification and Body and Self-Esteem

We predicted that reasons for exercise would mediate the relationship between self-objectification and both body esteem and self-esteem for both men and women. The preconditions for a test of mediation (Holmbeck, 1997) require significant relationships between the predictor variable (self-objectification) and the mediator variable (reasons for exercise), the predictor variable and outcome variable (body esteem), and the mediator variable and the outcome variable. Thus, based on the significant correlations presented in Table II, it was possible to test whether appearance enhancement reasons for exercise mediate the relationship between self-objectification and body esteem for both men and women.

To test the predicted mediation, a hierarchical regression was conducted on body esteem among men; self-objectification was entered on Step 1,

**Table III.** Summary of Hierarchical Multiple Regression Analyses for the Prediction of Body Esteem among Men and Women

Step	Predictor variables	Body esteem	
		$R^2\Delta$	$\beta$
Men			
1	Self-objectification	.07*	-.27*
2	Self-objectification	.04 <sup>a</sup>	-.20
	Appearance enhancement		-.22 <sup>a</sup>
Total $R^2$		.12*	
Women			
1	Self-objectification	.16***	-.40***
2	Self-objectification	.09**	-.17
	Appearance enhancement		-.38**
Total $R^2$		.25***	

<sup>a</sup> $p = .054$ .

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

and appearance enhancement reasons for exercise entered on Step 2. Mediation is demonstrated if the  $\beta$  value (partial regression coefficient) for the predictor variable is reduced from significance to nonsignificance when the proposed mediator is added to the equation (Baron & Kenny, 1986). As shown in Table III, the significant effect of men's self-objectification was reduced to nonsignificance when appearance enhancement reasons for exercise were added to the equation. The variance added by appearance enhancement reasons for exercise approached significance,  $R^2_{\text{change}} = .04$ ,  $F_{\text{change}}(1, 78) = 3.83$ ,  $p = .054$ . Sobel's (1982) test indicated that the decrease in  $\beta$  values approached significance,  $z(2, 78) = 1.67$ ,  $p = .09$ , which suggests that appearance enhancement reasons for exercise partially mediate the relationship between self-objectification and body esteem.

The hierarchical regression was repeated with women, and the results are presented in Table III. As can be seen in Table III, the significant effect of self-objectification was reduced to nonsignificance when appearance enhancement reasons for exercise were added to the equation. Sobel's (1982) test showed that the decrease in  $\beta$  values is significant,  $z(2, 67) = 2.56$ ,  $p < .01$ . Taken together, the two regression analyses indicate that appearance-related reasons for exercise mediate the relationship between self-objectification and body esteem for women, and they partially mediate the relationship for men.

## DISCUSSION

Our primary aim in this study was to examine, within the framework of self-objectification theory,

the consequences of exercise on men's body esteem and self-esteem. As expected, men who exercise to enhance their appearance are more likely to report lower body esteem, and men who self-objectify are more likely to exercise for appearance enhancement reasons. Also as predicted, self-objectification is related to low body esteem and self-esteem, and a regression analysis indicates that the relationship between men's self-objectification and body esteem may to some extent be explained by appearance enhancement reasons for exercise.

Thus, it appears that, although exercise has a number of psychological and health benefits (Maltby & Day, 2001), some psychological benefits are less likely to be experienced by men who self-objectify and whose primary exercise goal is to enhance their appearance. The results also suggest that the construct of objectification may be sensibly applied to men, and that, specifically, men whose exercise is motivated by their self-objectification may suffer a consequence similar to that observed among women (Strelan et al., 2003). That is, individuals who exercise to improve their appearance as a response to perceived objectification may be more likely to experience lower body esteem.

There was no relationship between self-objectification and health/fitness and mood/enjoyment reasons for exercise among men, which indicates that male low self-objectifiers are no more likely than male high self-objectifiers to exercise for such reasons. Contrary to previous research (e.g., McDonald & Thompson, 1992; Strelan et al., 2003; Tiggemann & Williamson, 2000), we found that men's health/fitness reasons are unrelated to their body esteem and self-esteem, and that men's mood/enjoyment reasons are significantly negatively related to their body esteem and self-esteem. These results require further investigation.

A secondary aim of the study was to replicate previous objectification research conducted with women. Consistent with Strelan et al. (2003), we found that self-objectification among women is positively related to appearance-related reasons for exercise and negatively related to health/fitness and mood/enjoyment reasons for exercise. Greater self-objectification among women is also related to lower body esteem, which confirms self-objectification as a risk factor for negative body image (e.g., McKinley, 1998; Strelan et al., 2003). Also important, we found that women's appearance-related reasons for exercise mediate the relationship between self-objectification and body esteem, a result consistent with Strelan et al., the previous study conducted in

this context. It is notable that the predominant form of exercise for the women in our study was jogging or brisk walking, relatively benign activities, and ones quite different from the regular aerobic workouts performed by the female fitness center attendees in Strelan et al.'s study. One might draw the tentative conclusion from these studies together that the form of exercise is less important than the reason for exercise in understanding the role of exercise within the context of self-objectification and body esteem. Further, our findings for men and women, plus those of Strelan et al., tentatively suggest that the reason for exercise most likely to explain the relationship between self-objectification and exercisers' body esteem is their motivation to exercise to improve their appearance.

The inclusion of a sample of women in our study enabled us to make some observations about the extent to which men's experiences of objectification parallel those of women. As expected, the women in our study reported significantly higher levels of self-objectification, and significantly lower levels of body esteem, than the men did. In addition, the correlation between men's self-objectification and body esteem is small relative to that of women. These findings reflect the general pattern of gender differences in the body image literature (see Levine & Smolak, 2002), which suggest that men's body image experiences mirror those of women but are typically less prevalent and, when present, less severe.

Also as expected, men are significantly more likely than women to exercise for health or fitness, a result consistent with previous studies (e.g., McDonald & Thompson, 1992; Tiggemann & Williamson, 2000). Finally, men report exercising for appearance-related reasons to an extent comparable with women, which is in contrast to some previous research that showed that women tend to exercise more for weight control reasons, whereas men exercise more for function-related reasons (e.g., McDonald & Thompson, 1992; Silberstein et al., 1988; Tiggemann & Williamson, 2000). The finding is compatible, however, with the evidence that men are becoming increasingly concerned about their bodies (e.g., Luciano, 2001; Parks & Read, 1997; Pope et al., 2000).

One might infer from our results that men and women who self-objectify tend to view exercise as a means of responding to perceived sociocultural pressure to achieve an idealized body. However, although exercise may be considered a positive response to such pressure because of the related psychological and health benefits, it appears that individuals who

value exercise for its appearance-enhancing possibilities may actually be exacerbating the potentially negative effects of self-objectification, that is, by experiencing reduced body esteem. In practical terms, intervention strategies are required to help self-objectifying men and women change their attitudes toward exercise. Rather than viewing exercise as a means of improving their appearance, they should be persuaded to approach exercise as an opportunity for experiencing the psychological and health benefits that it offers.

Of course, like the majority of research in this area, our use of a correlational design means that we cannot be certain that the directional relationships we are describing are correct. We have argued that self-objectification may have a causal impact on men's and women's reasons for exercise, specifically on those individuals who exercise to improve their appearance, and that such a motivation for exercise explains, in turn, why these men and women are more likely to experience reduced body esteem. However, it is possible that the individuals in our study who exercise for appearance-related reasons are doing so as a response to poor body esteem invoked as a consequence of self-objectification. It is also possible that exercising in response to reduced body esteem contributes to an increased likelihood of self-objectification. A longitudinal design is required to provide a satisfactory resolution of the likely causal relationships.

Finally, we make a brief comment about our measure of appearance enhancement reasons for exercise. Although Silberstein et al.'s (1988) Reasons for Exercise Inventory is widely used and is appropriate for our sample of both men and women, we surmise that the partial mediation effect of appearance enhancement for men may be a function of its applicability to men. The internal reliability  $\alpha$  for this subscale was .66 for men compared with .88 for women, which suggests that it is oriented toward women (for example, items that pertain to weight loss and maintenance of current weight are arguably less salient to men than to women). Future researchers might consider the applicability of measures that have specific reference to men (e.g., Cafri & Thompson, 2004).

Ours is the second study, after Strelan et al. (2003), to report that self-objectifying individuals who exercise to enhance their appearance are more likely to experience reduced body esteem. We have confirmed that the mediating effect of exercising for appearance-related reasons applies even for young women whose primary form of exercise is jogging or brisk walking (in contrast to Strelan et al.'s sample

of dedicated young female fitness center attendees), and have produced some preliminary evidence to suggest that the effect may also occur among men.

In light of these congruent findings, future researchers are encouraged to examine the relationships in greater depth, to identify why it is that self-objectifiers who exercise to improve their appearance experience decreased body esteem. Future researchers might consider the following possibilities. One is that exercise is unlikely to produce the desired improvements in appearance if a person's expectations about the outcomes of their exercise are unrealistic (Polivy & Herman, 2002a). Failure to meet expectations might lead to increased dissatisfaction with one's current state; this may be particularly the case with appearance enhancement, which is amenable to tangible and measurable results, for example, weight loss and improved body tone, but which requires much time and energy to achieve. A second possibility relates to the notion that changing one's outer appearance does not necessarily lead to changed body image. For example, the dieting literature (e.g., Polivy & Herman, 2002b) indicates that overweight people who lose weight do not always show a corresponding improvement in their body satisfaction. The latter thought gets, perhaps, to the heart of the matter: as this study and many others have shown, a desire to look good does not necessarily translate into feeling good. It appears that, for both men and women, exercising as a specific response to objectification may only exacerbate the problem.

## ACKNOWLEDGMENTS

This study was made possible funding from by the Charles Sturt University Seed Grant Scheme to Peter Strelan. We thank Marika Tiggemann for her comments on an earlier draft.

## REFERENCES

- Bachman, J. G., & O'Malley, P. M. (1977). Self-esteem in young men: A longitudinal analysis of the impact of educational and occupational attainment. *Journal of Personality and Social Psychology, 35*, 365–380.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.
- Cafri, G., & Thompson, J. K. (2004). Measuring male body image: A review of the current methodology. *Psychology of Men and Masculinity, 5*, 18–29.
- Fredrickson, B. L., & Roberts, T.-A. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly, 21*, 207–226.
- Fredrickson, B. L., Roberts, T.-A., Noll, S. M., Quinn, D. M., & Twenge, J. M. (1998). That swimsuit becomes you: Sex differences in self-objectification, restrained eating, and math performance. *Journal of Personality and Social Psychology, 75*, 269–284.
- Garner, D. M. (1997). The 1997 body image survey results. *Psychology Today, 30*, 30–44.
- Harrison, K., & Cantor, J. (1997). The relationship between media consumption and eating disorders. *Journal of Communication, 47*, 40–67.
- Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and paediatric psychology literatures. *Journal of Abnormal Psychology, 106*, 117–125.
- Lavine, H., Sweeney, D., & Wagner, S. (1999). Depicting women as sex objects in television advertising: Effects on body dissatisfaction. *Personality and Social Psychology Bulletin, 25*, 1049–1058.
- Levine, M. P., & Smolak, L. (2002). Body image development in adolescence. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, and clinical practice* (pp. 74–82). New York: Guilford.
- Luciano, L. (2001). *Looking good: Male body image in modern America*. New York: Hill and Wang.
- Maltby, J., & Day, L. (2001). The relationship between exercise motives and psychological well-being. *Journal of Psychology, 135*, 651–661.
- McCreary, D. R., & Sasse, D. K. (2000). An exploration of the drive for muscularity in adolescent boys and girls. *Journal of American College Health, 48*, 297–304.
- McDonald, K., & Thompson, J. K. (1992). Eating disturbance, body image dissatisfaction, and reasons for exercising: Gender differences and correlational findings. *International Journal of Eating Disorders, 11*, 289–292.
- McKinley, N. M. (1998). Gender differences in undergraduates' body esteem: The mediating effect of objectified body consciousness and actual/ideal weight discrepancy. *Sex Roles, 39*, 113–123.
- Mendelson, B. K., Mendelson, M. J., & White, D. R. (2001). Body-esteem scale for adolescents and adults. *Journal of Personality Assessment, 76*, 90–106.
- Morrison, T. G., Morrison, M. A., & Hopkins, C. (2003). Striving for bodily perfection? An exploration of the drive for muscularity in Canadian men. *Psychology of Men and Masculinity, 4*, 111–120.
- Morry, M. M., & Staska, S. L. (2001). Magazine exposure: Internalization, self-objectification, eating attitudes, and body satisfaction in male and female university students. *Canadian Journal of Behavioral Science, 33*, 269–279.
- Muehlenkamp, J. J., & Saris-Baglama, R. N. (2002). Self-objectification and its psychological outcomes for college women. *Psychology of Women Quarterly, 26*, 371–379.
- Noll, S. M., & Fredrickson, B. L. (1998). A mediational model linking self-objectification, body shame, and disordered eating. *Psychology of Women Quarterly, 22*, 623–636.
- Parks, P. S. M., & Read, M. H. (1997). Adolescent male athletes: Body image, diet, and exercise. *Adolescence, 32*, 593–602.
- Polivy, J., & Herman, C. P. (2002a). If at first you don't succeed: False hopes of self-change. *American Psychologist, 57*, 677–689.
- Polivy, J., & Herman, C. P. (2002b). Causes of eating disorders. *Annual Review of Psychology, 53*, 187–213.



- Pope, H. G., Olivardia, R., Gruber, A., & Borowiecki, J. (1999). Evolving ideas of male body image as seen through action toys. *International Journal of Eating Disorders, 26*, 65–72.
- Pope, H. G., Phillips, K. A., & Olivardia, R. (2000). *The Adonis complex: The secret crisis of male body obsession*. New York: Free Press.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Salusso-Deonier, C. J., Markee, N. L., & Pedersen, E. L. (1993). Gender differences in the evaluation of physical attractiveness ideals for male and female body builds. *Perceptual and Motor Skills, 76*, 1155–1167.
- Silberstein, L. R., Striegel-Moore, R. H., Timko, C., & Rodin, J. (1988). Behavioral and psychological implications of body dissatisfaction: Do men and women differ? *Sex Roles, 19*, 219–232.
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290–312). San Francisco: Jossey-Bass.
- Strelan, P., Mehaffey, S. J., & Tiggemann, M. (2003). Self-objectification and esteem in young women: The mediating role of exercise. *Sex Roles, 48*, 89–95.
- Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance*. Washington, DC: American Psychological Association.
- Tiggemann, M., & Lynch, J. E. (2001). Body image across the lifespan in adult women: The role of self-objectification. *Developmental Psychology, 37*, 243–253.
- Tiggemann, M., & Williamson, S. (2000). The effect of exercise on body satisfaction and self-esteem as a function of gender and age. *Sex Roles, 43*, 119–127.