

The Mindset of a Perfect Body:  
The Relationship between Exercise and Body-esteem

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Author Note

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### Abstract

This study seeks to better understand the relationship between exercise and body-esteem. The hypothesis states that college students at a midwestern university who exercise more will have higher body-esteem than those who exercise less. One hundred students from a Midwestern university participated in the study. A 40-item survey was compiled using an adapted version of the Body-Esteem Scale (Franzoi & Shields, 1984). Other factors, such as type of exercise, gender, and preference of exercising alone or with others, were evaluated as well. The independent variable was self-reported amount of exercise per week, and the dependent variable was body-esteem as derived by the Body-Esteem Scale (Franzoi & Shields, 1984). Findings supported the hypothesis, as there was a positive correlation between amount of exercise and body-esteem in this sample. In the future, this work can serve to develop a better understanding between exercise and body-esteem; it would be also be interesting to examine eating habits, attitudes towards eating, and reasons for exercising.

*Keywords:* body-esteem, exercise, weight loss

### The Mindset of a Perfect Body:

#### The Relationship between Exercise and Body-esteem

Exercise and body-esteem appear to be quite prominent topics in the current United States society (Koyuncu, Tok, Canpolat, & Catikkas, 2010). There are multiple facts to consider when examining the literature on exercise and body esteem:

- It is recommended that adults exercise 30 minutes per day to maintain a healthy weight (Russel, 2002)
- Currently, 20.6% of people meet the total recommended amounts of exercise, and people between the ages of 18 and 24 are most likely to exercise (DeYoung & Anderson, 2010)
- 88% of women wish to lose weight, compared to only 23% of men who are dissatisfied with their bodies (Landaas, 2006)
- Over 1/2 of females ages 18-25 would prefer to be run over by a truck than to be fat, and 2/3 would choose to be mean or stupid rather than fat (Strelan & Hargreaves, 2005)

These facts clearly address some alarming trends in society. On the one hand, there is constant pressure of the media for females to be thin and toned and for males to be lean and muscular. Then, on the other hand, is the constant message that the United States is an obese country and must exercise and become active to combat this. When combined, these two messages can create an even more dangerous message that one must exercise and be fit in order to be satisfied with his or herself. However, when taken into context, and understood fully, a healthy amount of exercise can in fact be beneficial for body-esteem. This study aims to support the hypothesis that those who exercise more tend to have higher body-esteem.

### **The Role of the Reason for Exercising**

There are a variety of reasons people exercise. Some do it for health and fitness, some for weight loss, and some do it to gain muscle and strength. Those who exercise to improve their health may do so because exercise has been shown to prevent diabetes, heart disease, increase mood, and improve memory (Fairburn, Cooper, & Shafran, 2003). Exercise has also been linked to a reduction in stress, increase in energy, and sleep improvement (Fairburn, et al., 2003). On the other hand, many people exercise in hopes of toning their bodies and losing weight. Exercise is often linked to weight loss in addition to healthy eating. According to recent data 90% of people who have successfully lost weight and kept it off exercise an average of an hour per day (Fardouly & Vartanian, 2012).

Determining the reasons people exercise also adds important variables to the relationship between exercise and body-esteem. Generally, those who exercise in response to negative affect report lower self-esteem and body-esteem, while those who exercise for health and fitness reasons report higher self-esteem and body-esteem. In a study on the relationship between affect and exercise, participants were given questionnaires that measured affect before and after exercise, exercise quality and quantity, eating behaviors and attitudes, body image, and self-esteem (De Young & Anderson, 2010). Fifty eight percent of participants claimed to exercise in response to negative affect and were more likely to have lower self-esteem and body esteem (De Young & Anderson, 2010). Also, Strelan and Hargreaves (2005) found by surveying 18-35 year old men (women were surveyed too, but only used as a comparison group), that self-objectifications related reasons for exercise were negatively related to body esteem. In a similar study in which women who regularly exercised at a fitness center were surveyed, results showed that females who claimed to exercise for self-objectification and appearance reasons had

negative relation to body satisfaction, while females who claimed to exercise for functional reasons had positive relation to body satisfaction (Strelan, Mehaffey, & Tiggemann, 2003). Additionally, in a large diversified sample, exercising for health and fitness reasons were associated with increased self-esteem and body-esteem (Tiggemann & Williamson, 2000). Those who have an active lifestyle tend to have higher body esteem and self-esteem (Opdenacker, Delecluse, & Boen, 2009). Previous research seems to suggest that the reason people choose to exercise has an effect on their body esteem.

### **Relating Exercise to Body-esteem**

Along with increasing health, weight loss, and toning muscles, exercising releases endorphins. Endorphins are essentially chemicals that make people feel good. It would follow that people who exercise should feel good about themselves and their bodies. There are two main esteems that could be affected by exercise: self-esteem and body-esteem. Self-esteem was defined by Morris Rosenberg and social-learning theorists in the mid 1960s in terms of a stable sense of personal worth or worthiness (Gray-Little, Williams, & Hancock, 1997). Numerous studies have been done attempting to determine the relationship between exercise and self-esteem. Recently, Koyuncu, Tok, Canpolat, and Catikkas (2010) found that exercisers did not have significant self-esteem differences between nonexercisers, but did have significant body-esteem differences.

This leads to the question of what the difference is between self-esteem and body-esteem. Body-esteem is closely linked to self-esteem and is sometimes referred to as body image. It is very similar to self-esteem, except it relates to how one feels about his or her body and how he or she cares for it (Carter, Blackmore, Sutandar-Pinnock, & Woodside, 2004). At the domain level,

body-esteem is a person's opinion that he or she is attractive and has a good body (McAuley, Mihalko, & Bane, 1997).

One important theory for how body-esteem might be comprised is social comparison theory. According to social comparison theory, people use social standards and others to evaluate themselves because most attitudes, opinions, and abilities cannot be verified by objective, nonsocial means (Moore, 1993). Social comparison theory predicts that upward comparisons with thin attractive models would lead to lowering of body-esteem as long as participants considered models to be similar to them (Moore, 1993). In Western societies being thin is being beautiful. This is especially important for women as society tends to reward women with thin bodies (Moore, 1993). Because of the importance of thinness, there is great pressure on women to reduce their weight to achieve the ideal. Women who do not have the ideally thin body may act against the environment by dieting and exercising to force their natural body into conformance with the norm (Moore, 1993).

Previous research seems to demonstrate a stronger correlation between exercise and body-esteem than between exercise and self-esteem. A variety of studies have found significant relationships between the two variables. For example, in a study by Barenholdz (1995), a physical education class that underwent an exercise program, opposed to the control group that resumed normal physical education class activities, had the greater increase in body-esteem. Also, in a study examining the associations between body-esteem and body image, exercise behavior, and body fatness for Mexican American females between the ages of 13 and 15, results indicated a significant negative relationship between body-esteem and body fatness and significant positive relationships between body image and exercise involvement. (Guinn, Semper, & Jorgensen, 1997). In addition, in a survey of college students broken down between

female exercisers and nonexercisers, those who exercised were more likely to have less social physique anxiety, more body satisfaction, and higher self-esteem (Moore, 1993).

### **Gender Differences**

When examining the relationship between exercise and body-esteem, it is important to note the gender differences in regards to weight. While girls rarely desire to be heavier, boys are just as likely to wish to be heavier than lighter (Furnham, Badmin, & Sneade, 2002). A recent phenomenon has been observed in men called male muscle dysmorphia (Ey, 2010). Muscle dysmorphia is characterized by a preoccupation with one's size. The individual most often believes he is too small and becomes obsessed with increasing his size by dieting, excessively working out, and using supplements (Ey, 2010). Low self-esteem and low body satisfaction are correlated with muscle dysmorphia (Ey, 2010). These gender differences in attitudes on weight are interesting variables to examine regarding exercise and body-esteem.

### **Future Implications**

The current research on exercise and body-esteem has led to many implications regarding increasing body-esteem and self-esteem through exercise. For example, exercise in weight loss programs would be beneficial. In a study of obese adolescents, body image, scholastic competence, and social competence increased from stationary biking (Goldfield, Adamo, Rutherford, & Murray, 2012). In another study, both male and female nonexercisers who were put into a moderate aerobic exercise program for 10 weeks increased in body-esteem (Landaas, 2006). They also had lower anxiety and depression scores (Landaas, 2006). Russel (2002) reported similar findings through his research involving questionnaires concerning demographic characteristics, anxiety about physical appearance, self-esteem, body-esteem, and frequency of exercise. Higher levels of social physique anxiety were associated with higher body mass index

measures, higher body dissatisfaction, and lower self-esteem (Russel, 2002). It is clear that exercise helps improve factors such as body-esteem, self-esteem, and anxiety, along with helping to maintain and lower weight, so the implementation of exercise into weight loss programs would be very beneficial.

### **Hypotheses and Operationalized Variables**

The following independent variables will be measured by self-reported test items: gender, ethnicity, average amount of exercise per week, preference of exercising alone or with others, and type of exercise done most. The dependent variable (body-esteem) will be measured using the Franzoi & Shields Body-esteem Scale (1984). The hypothesis states that college students at a midwestern institution who exercise more frequently will have higher body-esteem than those who exercise less.

## **Method**

### **Participants**

One hundred and six students from a midwestern university participated in the study; they did not receive any class credit or reward of any kind. Data from 6 participants (three men and three women) were excluded from the analysis due to incomplete surveys. Therefore, 100 participants' data are considered in the data analysis. Breakdown of the 100 who reported ethnicity was as follows: 76% Caucasian, 22 % African American, 1% Latino, and 1% Asian. The breakdown of gender was 54% males and 46% females. Data were collected in accordance with the ethical standards of the American Psychological Associations (American Psychological Association, 2010).

**Materials**

A 40-item questionnaire was compiled using questions from the Body-esteem Scale (Franzoi & Shields, 1984), along with a few other general questions about the participants' exercise habits. The survey used all the items on the Body-esteem Scale (Franzoi & Shields, 1984), which is a 35-item survey that asks participants to rate how they feel about certain body parts or body functions. The scale uses a one through five Likert scale in which one indicates having strong negative feelings, three indicates having no feelings one way or the other, and five indicates having strong positive feelings. Items included rating body parts or functions such as "nose," "feet," "sex activities," and "weight." The Body-esteem Scale (Franzoi & Shields, 1984) measures different types of body-esteem and distinguishes between genders; however, for this analysis, such a complex method of scoring was unnecessary. Instead, body-esteem was calculated by adding all ratings together to create a total body-esteem score. Therefore, scores ranged from 35-175. The 40-item questionnaire contained two demographic questions which asked participants to select their gender and to select the ethnicity they most identified with. In addition, the questionnaire contained three questions which asked how often participants exercised on average in a week, what type of exercise they most participated in, and if they preferred to exercise alone or with others (see Appendix for a complete copy of the 40-item Questionnaire).

**Procedure**

Participants were asked to complete the 40-item questionnaire in classes, dining halls, and other campus sites. The researcher explained the general goal of the study and obtained informed consent from the participants. They were also informed that they could withdraw from the study at any time if they became overly uncomfortable. Participants were informed verbally

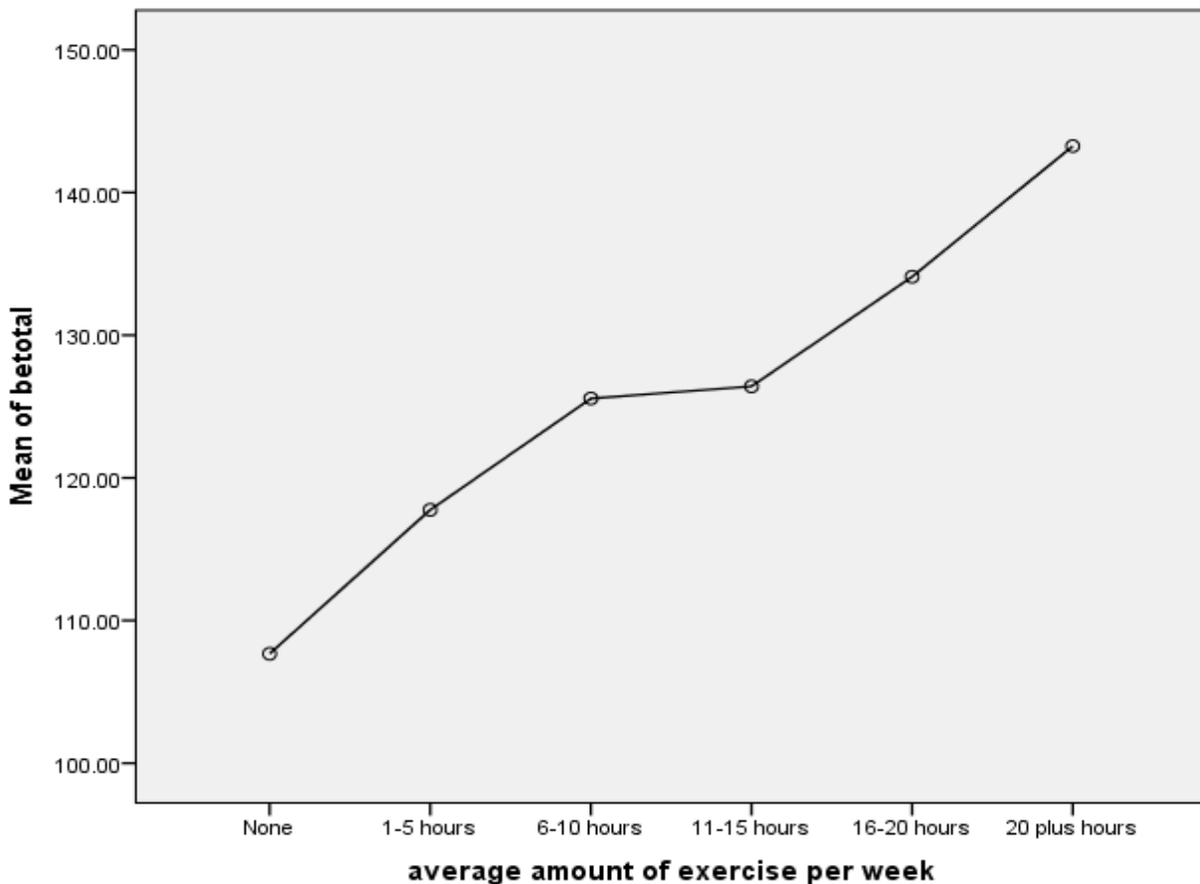
and in written instruction that all responses were anonymous. The completion of the survey took no longer than 15 minutes for the participants to complete. After completion of the surveys, the experimenter debriefed the participants and answered any questions regarding the research study.

### Results

In order to test the hypothesis that people who exercise more have higher body-esteem, a one-way ANOVA was performed. Results indicated a significant difference in body-esteem based on amount of exercise.  $F(5,94) = 3.678, p < .004$ . Those who did not exercise and those who exercised only one to five hours a week differed significantly from all other groups. These results are clearly represented in Figure 1.1.

Figure 1.1

ANOVA results



## Other Results

An independent samples t-test was performed between gender and body-esteem in order to determine if gender differences between men and women occurred. This analysis indicated that female body-esteems ( $M = 114.78$ ,  $SD = 24.25$ ) did differ significantly from male body-esteems ( $M = 129.89$ ,  $SD = 19.74$ ),  $t(98) = 3.434$ ,  $p = .001$ . In other words, males had significantly higher body-esteems than females. Similarly, a gender difference was present in the average amount of exercise males and females participated in each week. An independent samples t-test was performed in order to determine if there was a significant difference in the amount of exercise between males and females. Results indicated that males ( $M = 3.44$ ,  $SD = 1.49$ ) did exercise significantly more than females ( $2.48$ ,  $SD = 1.28$ ),  $t(98) = 3.451$ ,  $p = .001$ .

In order to test the hypothesis that those who workout with others exercise more, an independent samples t-test was performed. The independent samples t-test analysis comparing amount of exercise between those who work out with others and those who work out alone indicated that amount of exercise for those who work out with others ( $M = 3.35$ ,  $SD = 1.54$ ) did differ significantly from those who work out alone ( $M = 2.59$ ,  $SD = 1.27$ )  $t(98) = -2.672$ ,  $p = .009$ . In other words, those who worked out with others seemed to exercise more. However, another independent samples t-test indicated that working out alone or with others did not seem to affect body-esteem.

No analyses were performed involving the variable of “type of exercise;” however, the breakdown of responses was as follows: 36% aerobic, 37% athletics, 12% strength training, 9% yoga/pilates, and 6% other. Other interesting frequencies included “average amount of exercise per week” and “exercise alone or with others.” The breakdown of “average amount of exercise per week was as follows: 12% none, 37% 1-5 hours, 16% 6-10 hours, 17% 11-15 hours, 10% 16-

20 hours, and 8% 20 plus hours. The breakdown of “exercise alone or with others” was as follows: 46% preferred to exercise alone and 54% preferred to exercise with others.

### **Discussion**

The original hypothesis stated: College students at a midwestern institution who exercise more frequently will have higher body-esteems than those who exercise less. This hypothesis was supported in this sample. Other findings of this research include: males had significantly higher body-esteems, males exercised significantly more than females, and those who exercised with others exercised significantly more.

### **Limitations**

If this study is repeated in the future, there are a few alterations that would improve the quality of the results. First, in the current study, the only factor taken into consideration concerning body-esteem was exercise, when body-esteem is in fact made up of many factors. It would be beneficial to add questions that would help obtain eating habits, attitudes towards eating, and body mass index scores of participants. This would create a more thorough analysis of factors that affect body-esteem. Another question that would be beneficial to add to the questionnaire would be one that asks why the participant exercises. For instance, is he or she exercising for a sport, for health, or to lose weight? As past studies have suggested that positive reasons for exercising tend to indicate higher body-esteem and negative reasons for exercising tend to indicate lower body-esteem, this would be an interesting variable to also evaluate.

### **Implications**

In the future, this project can help further the research in areas such as exercise and body-esteem. Future research may include a population with more variability in ethnicity and age. Future studies could also focus on differences between athletes and nonathletes and look at

differences between athletes in different sports. Essentially, this research aims to portray the message that exercise is important, and when done for positive reasons, can increase body-esteem. Different from many opinionated campaigns and media agendas, this research may provide the necessary information needed to start a new campaign: one that promotes exercising for health and increasing body-esteem, but without so much pressure to have the “perfect body.”

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*Appendix*

Please circle your answer for the following questions:

1) Gender

Male                  Female

2) Ethnicity you most identify with

Caucasian      African American      Hispanic      Asian      Middle Eastern

Native American      Other \_\_\_\_\_

3) Average amount of exercise you participate in each week

None      1-5 hours      6-10 hours      11-15 hours      16-20 hours      20+ hours

4) Type of exercise you participate in MOST often

Aerobic      Athletics      Strength Training      Yoga/Pilates      Other \_\_\_\_\_

5) Do you prefer to exercise alone or with others?

Alone                  With Others

For the remaining questions, please read each item and indicate how you feel about this part or function of your own body using the following scale.

- 1 = Have strong negative feelings
- 2 = Have moderate negative feelings
- 3 = Have no feeling one way or the other
- 4 = Have moderate positive feelings
- 5 = Have strong positive feelings

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- 6) Body scent                                  \_\_\_\_\_
- 7) Appetite    \_\_\_\_\_
- 8) Nose    \_\_\_\_\_
- 9) Physical stamina                                  \_\_\_\_\_
- 10) Reflexes    \_\_\_\_\_
- 11) Lips    \_\_\_\_\_
- 12) Muscular strength                                  \_\_\_\_\_

- 13) Waist \_\_\_\_\_
- 14) Energy level \_\_\_\_\_
- 15) Thighs \_\_\_\_\_
- 16) Ears \_\_\_\_\_
- 17) Biceps \_\_\_\_\_
- 18) Chin \_\_\_\_\_
- 19) Body build \_\_\_\_\_
- 20) Physical coordination \_\_\_\_\_
- 21) Buttocks \_\_\_\_\_
- 22) Agility \_\_\_\_\_
- 23) Width of shoulders \_\_\_\_\_
- 24) Arms \_\_\_\_\_
- 25) Chest or breasts \_\_\_\_\_
- 26) Appearance of eyes \_\_\_\_\_
- 27) Cheeks/cheekbones \_\_\_\_\_
- 28) Hips \_\_\_\_\_
- 29) Legs \_\_\_\_\_
- 30) Figure or physique \_\_\_\_\_
- 31) Sex drive \_\_\_\_\_
- 32) Feet \_\_\_\_\_
- 33) Sex organs \_\_\_\_\_
- 34) Appearance of stomach \_\_\_\_\_
- 35) Health \_\_\_\_\_
- 36) Sex activities \_\_\_\_\_
- 37) Body hair \_\_\_\_\_
- 38) Physical condition \_\_\_\_\_
- 39) Face \_\_\_\_\_
- 40) Weight \_\_\_\_\_