

THE BODY IMAGE OF PHYSICALLY ACTIVE AND INACTIVE WOMEN

MONIKA GUSZKOWSKA

*Józef Piłsudski University of Physical Education in Warsaw,
 Faculty of Tourism and Recreation, Department of Recreation Methodology*

Mailing address: Monika Guskowska, Faculty of Tourism and Recreation, Department of Recreation Methodology, 34 Marymoncka Street, 00-968 Warsaw, tel.: + 48 22 8340361, fax: +48 22 3428800, e-mail: monika.guskowska@awf.edu.pl

Abstract

Introduction. The aim of the study was to compare the image of the body, the level of its acceptance and satisfaction with it, as well as anxiety about one's physical appearance and overall self-esteem in a group of adult women who did fitness exercise and those who were physically inactive. **Material and methods.** The study involved 464 women aged 18 to 35 years ($M=25.49$; $SD=5.24$), including 277 women who exercised regularly in fitness clubs in Warsaw and 187 women who did not engage in regular physical activity. The following instruments were adapted and used for the purposes of the study: the Figure Rating Scale, the Body Satisfaction Scale, the Self-Esteem Scale, the Social Physique Anxiety Scale, and a questionnaire designed by the authors. Student's t-test was used to determine the differences between the two groups. **Results.** There were no statistically significant differences between the groups in terms of actual and ideal body parameters; however, the discrepancies between actual and ideal height and BMI were greater in women who were not physically active. The women who did fitness exercise were less dissatisfied with their overall and facial appearance, and they had higher self-esteem and lower anxiety about their physical appearance than those who were inactive. No significant intergroup differences were found for the subjects' ideal and actual figures or for those preferred by women and preferred by men, nor for the discrepancies between these figures. **Conclusions.** Differences in the body image of adult women who did fitness exercise and those who were physically inactive were revealed for the emotional aspects of body image, but not for the cognitive ones. The differences found in the study are likely to be due to the selection of subjects and they do not provide sufficient evidence to prove that exercise has a positive impact on body image.

Key words: body image, body dissatisfaction, fitness, women

Introduction

Pin the past few decades increased focus on physical appearance has been observed both in women and men [1]. In modern Western societies a key element of body image is its shape and mass. What makes body shape and mass different from other aspects of physical appearance is that they are perceived as controlled mainly by the individual, in contrast to such physical features as height and eye colour [2]. Research results indicate that physical appearance to a large extent determines the self-worth and status of women, and for this reason the evaluation of their physical appearance is an important component of their self-esteem [3, 4]. Appearance, including body shape and mass, is particularly important in late adolescence and early adulthood, as well as for engaging in various forms of physical activity, whether job- or sports-related, whose effects depend on these factors [1, 5].

Excessive focus on one's physical appearance can lead to anxiety, which can have the form of concern or fear related to being negatively evaluated by others in situations where the physical appearance of an individual can be assessed by other persons [6]. The relationship between this type of social anxiety and physical activity can take two basic forms: a high level of anxiety regarding appearance can prevent the individual from undertaking physical activity, or physical exercise can influence an individual experiencing anxiety about their appearance, either by increasing or decreasing the level of this emotion [7, 8, 9]. Persons who are physically active and those who do not exercise regularly can be expected to differ in this respect, however

it is difficult to predict the direction of the differences between them.

The current ideal female body type lays particular emphasis on thinness. This ideal is commonly accepted despite the fact that most women cannot achieve it through rational behaviour. The increasing discrepancy between the model promoted by the media and one's own appearance is causing a growing number of persons to be dissatisfied with their bodies [10, 11].

The relationship between body image and physical activity can be considered from at least two perspectives. First of all, physical activity can influence a person's body image, particularly in the emotional domain. Most of the studies conducted so far have shown that physically active persons are more satisfied with their bodies and that their satisfaction tends to increase as a result of physical exercise [12, 13, 14, 15]. The results of a meta-analysis of studies concerning the impact of physical exercise on body image led the authors [16] to conclude that physical exercise was associated with improved and more positive body image in persons who performed physical exercise compared to physically inactive ones. Secondly, physical activity can be used as a method of reducing or controlling body mass, and bringing the shape of the body closer to the ideal one, which makes it a behavioural aspect of body image. Research findings have confirmed the importance of these motives for undertaking regular physical activity, particularly in women [17, 18]. In situations where these motives dominated in women who exercised regularly, these women were sometimes observed to have a more negative body image than those who did not exercise [19, 20].

An important issue is the type of physical activity (sporting vs. recreational) and the sports discipline practised. Women who are involved in "aesthetic" sports disciplines, where physical appearance is important for being successful, tend to be more dissatisfied with their appearance than women who practise other sports disciplines and even those who are physically inactive [5, 21]. These findings indicate that it is necessary to conduct further research into the relationship between physical activity and body image, including comparative ones.

The aim of the current study was to compare the image of the body, the level of its acceptance and satisfaction with it, as well as anxiety about one's physical appearance and overall self-esteem in a group of adult women who did fitness exercise and those who did not exercise regularly.

Material and methods

The study involved 464 women aged 18 to 35 years ($M=25.49$; $SD=5.24$), including 277 women who exercised regularly in fitness clubs in Warsaw and 187 women who did not engage in regular physical activity. Their declared body mass was between 41 kg and 105 kg ($M=62.05$; $SD=9.68$), their declared height was 150 cm to 190 cm ($M=168.01$; $SD=6.43$), and the BMI calculated based on these values ranged from 15.62 to 33.25 ($M=21.97$; $SD=3.10$).

The women who were physically active had been exercising for 1 to 14 years ($M=4.00$; $SD=2.76$), engaging in 1 to 8 training sessions per week ($M=3.12$; $SD=1.30$). A training session typically lasted one to three hours ($M=1.43$; $SD=0.61$), and the intensity of the training was typically described as moderate (44.4%) or high (49.4%). The physically inactive group consisted of women who declared that they had done neither individual nor organised physical exercise regularly for at least three years.

A specially designed questionnaire was used to collect data concerning the subjects' age as well as actual and ideal body mass and height, based on which BMI values were calculated. The physically active women additionally answered questions concerning their training experience (how long they had been exercising), as well as the frequency, intensity and duration of the training sessions.

Moreover, the Figure Rating Scale designed by Stunkard et al. [22], consisting of nine sketches of figures arranged from extremely thin to extremely obese, was used. The subjects were to indicate the figure which they thought best reflected how they looked (actual figure), the one which they would prefer to have (ideal figure), the one that they thought was attractive for other women (figure preferred by other women), and the one that was attractive for the opposite sex (figure preferred by men). The discrepancies between the categories were then calculated by deducting the values for the subjects' actual figures from the values for the remaining categories.

The subjects' satisfaction with their bodies was measured using a modified version of the Body Satisfaction Scale (BSS) [23]. Apart from assessing their level of satisfaction with 8 parts of the face (dissatisfaction with face) and 8 parts of the trunk (dissatisfaction with trunk), the subjects also assessed their level of dissatisfaction with 5 general physical features (height, mass, figure, physical attractiveness in general, and physical attractiveness for opposite sex) using a seven-point scale, which helped measure their dissatisfaction with their general physical appearance, and 8 features to do with physical fitness and health (precision of movement, flexibility, endurance, strength, agility, speed, health, and physical fitness), which made it possible to measure their dissatisfaction with their motor skills.

We additionally used Rosenberg's Self-Esteem Scale (SES) [24], consisting of 10 items answered on a four point scale rang-

ing from 'strongly agree' to 'strongly disagree', which made it possible to evaluate the subjects' general self-esteem, as well as the Social Physique Anxiety Scale developed by Leary and Kowalski [7], comprising 12 items answered on a five point scale ranging from 'does not concern me at all' to 'concerns me to a very large extent', which enabled us to measure the subjects' level of anxiety related to their physical appearance in situations where they were exposed to being evaluated socially. Student's t-test for independent samples was used in order to determine the statistical significance of the differences found.

Results

Table 1 shows the values for the subject's actual (declared) and ideal body mass and height, the BMI values calculated based on them, and the values for the discrepancies between ideal and actual parameters. In the group of women who did fitness exercise a smaller discrepancy was found between ideal and actual values for height and BMI.

Table 1. Body parameters

Indicator	Group	Physically active M \pm SD (n=277)	Physically inactive M \pm SD (n=187)	Student's t-test t; p
Body mass		61.86 \pm 8.33	62.35 \pm 11.42	0.508; NSS
Ideal body mass		57.10 \pm 5.55	56.64 \pm 6.65	0.816; NSS
Discrepancy between ideal and actual body mass		-4.82 \pm 5.39	-5.71 \pm 7.29	1.440; NSS
Body height		168.23 \pm 6.91	167.66 \pm 5.63	1.002; NSS
Ideal body height		170.60 \pm 5.21	170.94 \pm 4.66	0.717; NSS
Discrepancy between ideal and actual body height		2.29 \pm 4.41	3.27 \pm 5.21	2.119; 0.035
BMI		21.86 \pm 2.78	22.13 \pm 3.52	0.868; NSS
Ideal BMI		19.64 \pm 1.82	19.38 \pm 2.11	1.408; NSS
Discrepancy between ideal and actual BMI		-2.24 \pm 2.15	-2.75 \pm 2.54	2.254; 0.025

The two groups did not differ significantly in terms of their body image (actual, ideal, preferred by other women, or preferred by men) as revealed in the test conducted using the Figure Rating Scale, or in terms of the discrepancies between the figures chosen (tab. 2).

Table 2. Results for the Figure Rating Scale

Indicator	Group	Physically active M \pm SD (n=277)	Physically inactive M \pm SD (n=187)	Student's t-test t; p
Actual (perceived) figure (A)		3.84 \pm 1.01	3.87 \pm 1.28	0.269; NSS
Ideal figure (B)		2.77 \pm 0.69	2.78 \pm 0.73	0.176; NSS
Figure preferred by other women (C)		2.56 \pm 0.68	2.57 \pm 0.76	0.187; NSS
Figure preferred by men (D)		2.95 \pm 0.73	2.87 \pm 0.81	1.100; NSS
Discrepancy B-A		-1.07 \pm 0.92	-1.09 \pm 1.30	0.155; NSS
Discrepancy C-A		-1.28 \pm 1.14	-1.29 \pm 1.50	0.125; NSS
Discrepancy D-A		-0.89 \pm 1.24	-1.00 \pm 1.54	0.835; NSS

The women who performed fitness exercise were less dissatisfied with their faces and general physical features than the physically inactive ones. Moreover, they were found to be less

anxious about their physical appearance and to have higher general self-esteem (tab. 3).

Table 3. Results for the Body Satisfaction Scale, Self-Assessment Scale, and Social Physique Anxiety Scale

Indicator	Group	Physically active M \pm SD (n=277)	Physically inactive M \pm SD (n=187)	Student's t-test t; p
Dissatisfaction with face		20.66 \pm 7.26	22.17 \pm 7.02	2.139; 0.033
Dissatisfaction with trunk		26.41 \pm 7.43	27.32 \pm 8.86	1.144; NSS
Dissatisfaction with general physical appearance		17.60 \pm 5.89	19.86 \pm 7.12	3.465; 0.001
Dissatisfaction with motor skills		24.00 \pm 8.35	24.78 \pm 9.39	0.884; NSS
General self-esteem		30.82 \pm 4.79	28.96 \pm 5.23	3.892; <0.001
Social physique anxiety		34.30 \pm 10.16	36.36 \pm 9.24	2.215; 0.027

Discussion

Body image is currently understood as a complex and multi-dimensional construct which includes cognitive (among others perceptual) as well as affective and behavioural aspects of experiencing one's body [25]. The current study covers all of the aspects included in this conceptualisation, namely: 1) cognitive – the perception of one's figure as well as the beliefs concerning one's ideal figure, the figure preferred by persons of the same sex, and the one preferred by those of the opposite sex; 2) emotional – the level of dissatisfaction with particular parts of the body; 3) behavioural – physical activity as a method of achieving or maintaining ideal physical appearance. The third aspect was the criterion according to which the subjects were divided into groups, which were then compared in terms of the first two aspects of body image.

Before discussing the differences in body image found in the current study, it is worth mentioning that the two groups did not differ significantly as far as the declared or ideal parameters of the body are concerned. However, there were statistically significant differences in the discrepancies between ideal and actual values for some of the parameters studied. The absolute values for the discrepancies between ideal and actual height and BMI were higher in the group of women who were physically inactive, which indicates that they found the parameters of their body less acceptable than the physically active ones. The differences concerning BMI stem from the differences related to ideal and actual body height. It is worth noting that height is a constant physical feature which cannot be changed using physical exercise. Thus a higher level of its acceptance in the group of women who exercised regularly proves that they accepted their bodies more than the physically inactive group, however this is not an effect of systematic physical activity.

As far as the results of the Figure Rating Scale test are concerned, no intergroup differences were found either in the figures chosen or in the discrepancies between them. These data suggest that the women who exercised regularly did not differ from those who did not exercise in terms of the cognitive aspects of body image (perceived figure and opinions about the body).

On the other hand, statistically significant differences were found for the emotional aspect. The physically active women revealed greater acceptance of the general features of their physical appearance (body height and mass), figure, general physical attractiveness, and facial appearance and were more satisfied with them. It should be borne in mind, though, that it is impossible to determine whether these differences were due to the subjects' level of physical activity or due to the selection of sub-

jects for the study. As shown by the results of experimental studies, physical exercise can increase body acceptance and satisfaction [16, 26, 27]. At the same time, a lack of acceptance of one's own body and a high level of dissatisfaction with one's physical appearance can discourage an individual from undertaking physical activity [17].

It is further worth emphasising that a greater level of satisfaction in the women who did fitness exercise was mainly recorded for features that are not impacted by physical activity. The results obtained for these women were similar to those for the physically inactive subjects with respect to the physical features that can be modified using exercise, that is actual figure as perceived by the subjects, whose perception was mainly influenced by the size of particular parts of the trunk, satisfaction with the trunk, and motor skills. This suggests that the differences found are more likely to be the reason why the subjects had undertaken physical activity rather than the effect of physical exercise.

This hypothesis seems to be evidenced by a significantly higher level of anxiety related to physical appearance recorded for the women who were physically inactive. Persons who experience acute anxiety of this type tend to avoid situations in which their body is exposed, which are common during fitness exercise that is organised in groups and usually takes place in rooms where mirrors are installed. This factor can additionally encourage greater focus on one's appearance, which can increase anxiety and the chance of withdrawing from social activity [28, 29, 30].

The women who participated in fitness exercise had significantly higher general self-esteem than the physically inactive ones. Physical appearance, and more broadly body image, is an important component of self-image, particularly for women, and a higher level of satisfaction with one's body is associated with a higher level of self-esteem [31]. Self-esteem can be treated as a motivational factor for physical activity, since persons with high self-esteem, especially related to the physical dimension, undertake physical activity due to the fact that it enables them to impact or increase their sense of competence and self-worth [32, 33]. On the other hand, self-esteem can be influenced by performing physical exercise. Developing various skills, perfecting the achievement of certain tasks, and experiencing success can enhance an individual's self-esteem; however, with negative experiences exercise may have an opposite impact [32, 33]. Considering the remaining differences between the groups, it is more likely that in this study high self-esteem motivated the subjects to undertake physical activity.

The current study has some limitations. The first one is that no information was collected regarding the type of fitness classes that the subjects had been taking part in, while the results of previous research suggest that the impact of physical activity on body image may vary according to the form of activity undertaken. The results of the meta-analysis carried out by Hausenblas and Fallon [16] have not allowed the authors to draw unequivocal conclusions regarding this issue. Depending on the research paradigm used, better effects were achieved in programmes which combined aerobic and anaerobic exercise than in those where one type of exercise was used (experimental studies) and in aerobic and mixed exercise programmes rather than in anaerobic ones (correlational research).

Another important factor which was not monitored in the current study was the type of motivation of the women who were physically active. The findings of previous research show that exercise aimed at improving physical appearance or reducing body mass can increase self-objectification, reduce self-esteem, and negatively affect body image [34]; such motivation was associated with worse body image in women who did exercise [19, 20, 35]. It is more likely that a person's body image will improve as a result of physical exercise, if they are motivated by the willingness to improve their physical ability, maintain their health,

or derive enjoyment from physical activity [36, 37]. Since the current study involved a relatively high number of women, it is likely that both the motivation for undertaking physical activity and its forms varied. Conducting an analysis which would include these variables could have allowed for a better understanding of the relationship between the level of physical activity and body image of adult women.

Finally, this study involved women in late adolescence and early adulthood, whereas the effects of physical exercise can differ based on a person's age. Hausenblas and Fallon [16] have not drawn clear conclusions in this respect from their meta-analysis, as results varied depending on the type of research: in experimental research the greatest effects were observed in adolescents, while in correlational research the impact of exercise was the largest in students and adult women. It is possible that dividing the group into adolescents and adult women for the purpose of analysis could have influenced the findings of the current study.

Conclusions

The following conclusions may be drawn based on the study and its findings:

1. The women who had higher self-esteem and lower anxiety about their physical appearance and who were more satisfied with their bodies were more likely to participate in group exercise involving social exposure.
2. Anxiety about one's physical appearance, combined with dissatisfaction with one's body, seems to be a major barrier for undertaking physical exercise.
3. The differences in the image of one's body and satisfaction with it as well as general self-esteem and anxiety concerning one's physical appearance found in the current study seem to have determined whether or not the subjects performed physical exercise rather than being the effect of physical activity. The issues raised in this study require further research.

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