

Symptoms of eating disorders and narcissistic features in female athletes

Objawy zaburzeń odżywiania i cechy narcystyczne u kobiet ćwiczących na siłowni

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Abstract

The purpose of the study was to investigate whether female athletes differ from non-athletes (control group) in respect of body image, narcissistic features and severity of eating disorders.

Examined group: There were examined 30 women who exercise regularly at the gym (clinical group) and 30 women who do not exercise at the gym (control group). The average age of respondents from both groups was 24.5 years. The body mass index was about 21 in clinical and control group.

Methods: The study used the survey by Zofia Stankiewicz, the Eating Disorder Inventory (EDI) by D.M. Garner, M.P. Olmsted and J. Polivy and the Narcissism Inventory by F. Deneke, B. Hilgenstock and R. Müller, adapted in Polish by Januszewski.

Results: On the basis of statistical analysis the presence of significant differences in self-image, eating disorder symptoms and narcissistic features between female athletes training at the gym and non-athletes, were reported.

Conclusions: 1. Female athletes compared to non-athletes are characterized by more negative body image, which they perceive as disproportionate and too fat. 2. Female athletes compared to non-athletes more often exhibit disordered eating behaviour: dieting, using laxatives, using medications that inhibit appetite and overeating. 3. With regard to personality, female athletes in comparison with non-athletes are characterized by greater tendency to: escape from reality into a dream world, abandon their efforts and expect from others assistance, support, advice and they make instrumental use of others. 4. Female athletes are confident of being guided by more subtle, carefully considered and timeless moral principles than other people.

Streszczenie

Celem pracy było zbadanie czy kobiety regularnie ćwiczące na siłowni różnią się od kobiet niećwiczących na siłowni w zakresie: obrazu własnego ciała, cech narcystycznych oraz nasilenia objawów zaburzeń odżywiania.

Grupa badana: Przebadano 30 kobiet, które regularnie ćwiczą na siłowni (grupa kliniczna) oraz 30 kobiet niećwiczących na siłowni, stanowiących grupę kontrolną. Średnia wieku badanych osób z grupy klinicznej i kontrolnej wynosiła 24,5 lat. Wskaźnik BMI u kobiet ćwiczących i niećwiczących na siłowni wynosił ok. 21.

Metody: W pracy zastosowano Ankietę autorstwa Zofii Stankiewicz, Kwestionariusz Zaburzeń Odżywiania (Eating Disorder Inventory) opracowany przez D.M. Garnera, M.P. Olmsted i J. Polivy oraz Kwestionariusz Narcyzmu autorstwa F. Deneke, B. Hilgenstock i R. Müller, w polskim opracowaniu Januszewskiego.

Wyniki: Na podstawie analiz statystycznych stwierdzono występowanie istotnych różnic w zakresie obrazu siebie, nasilenia objawów zaburzeń odżywiania oraz cech narcystycznych między kobietami ćwiczącymi i niećwiczącymi na siłowni.

Wnioski: 1. Kobiety ćwiczące na siłowni w porównaniu do kobiet niećwiczących charakteryzuje bardziej negatywny obraz własnego ciała, które postrzegają jako nieproporcjonalne i za grube. 2. Kobiety ćwiczące na siłowni częściej niż kobiety niećwiczące przejawiają zaburzone zachowania żywieniowe: stosują diety, środki przeczyszczające, leki obniżające apetyt oraz objadają się. 3. W zakresie cech osobowości kobiety trenujące na siłowni różni od kobiet niećwiczących większa tendencja do: ucieczki przed rzeczywistością w marzenia, rezygnacji z własnego wysiłku i oczekiwania od innych pomocy, wsparcia, rady oraz instrumentalnego wykorzystywania innych osób. 4. Kobiety ćwiczące na siłowni uważają, że kierują się bardziej subtelnymi, przemyślanymi i ponadczasowymi zasadami moralnymi, aniżeli inni ludzie.

Key words: eating disorders, fitness, athletes, women

Słowa kluczowe: zaburzenia odżywiania, siłownia, kobiety

Introduction

Exercises in the gym have gained in recent years crowds of supporters, including women. In addition to many well known advantages, intense exercising can lead to many somatic disorders and may also be a symptom of eating disorder.

The term "female athlete triad" introduced by American College of Sports Medicine in 1992 [1] refers to the most common coexisting abnormalities in young female athletes, ie: amenorrhea, osteoporosis and eating disorders [2]. They result from an unbalanced ratio of energy supplied in the

diet and used to overly intensive training [3]. According to the American College of Sports Medicine most health-related consequences occur in people with energy availability (dietary energy intake minus exercise energy expenditure) below 30 kcal/kg of fat-free mass per day [4].

Menstrual disorders in over-exercising women are associated with a dysfunction of the hypothalamic-pituitary-ovaries axis, abnormal secretion of GnRH and lutein, and subsequent decrease in estrogen production. This causes irregular menstrual cyclicity, followed by infertility and low bone density, which in turn may lead to the formation of premature osteoporosis and osteopenia. In addition to changes in the metabolism of sex hormones, unbalanced energy in female athletes affects the secretion of triiodothyronine, growth hormone and insulin-like growth factor-1 [5,6]. In a study by Dadgostar et al [7], there was demonstrated that above-mentioned disorders occur in up to 9% of female athletes, and the risk of their occurrence is significantly higher among female athletes of endurance sports or sports requiring maintenance of constant low body weight.

The available literature data [8] also shows higher exposure, and - more frequently than in general population - occurrence of eating disorders in women, who train intensively. This is particularly associated with sports that require dietary restrictions and maintenance of low body weight (including aesthetic and endurance sports). The factors triggering the symptoms of eating disorders include: prolonged periods of dieting, frequent weight fluctuations, sudden increase in training intensity and traumatic events. Moreover, female exercisers seem to have more symptoms of eating disorders than non-exercisers. They are characterized by a strong sense of guilt in the case of non-participation in training and this feeling is more intensive at the coexistence of symptoms of bulimia and purging type of anorexia than with symptoms of restrictive type of anorexia nervosa [9]. In addition, higher stress level in sport is reflected in stronger drive for thinness, greater body dissatisfaction and more severe symptoms of bulimia [10]. Women exercising more often than non-exercising women use pathological weight control methods such as vomiting, starvation, laxatives and diuretics. Comparing the group of women practicing at the gym with control group in features of disturbed eating and personality traits, there was found the presence of: greater preoccupation with weight and body shape, stronger dissatisfaction with their bodies, prevalence of binge eating and taking anabolic steroids in exercising women [11]. Goldfield [12], found that female athletes had dietary behaviour similar to women

with bulimia, while there are few similarities in psychological traits. In her study Davis [13] showed that in exercising women greater body dissatisfaction was associated with poorer emotional well-being, and their physical appearance significantly influenced their self-esteem.

The results of studies carried out by Steinberg and Shaw [14] suggest a relationship between: low self-esteem, which is treated as an aspect of narcissism, difficulty in controlling own impulses and mood, and severe bulimic behaviour, body dissatisfaction and drive for thinness.

The aim was to answer the following questions:

- whether and in what symptoms of eating disorders and body image there are differences reported between women regularly exercising at the gym and those not exercising?
- whether and in which narcissistic features there are differences between women regularly exercising and those not exercising at the gym?

Examined group

There were examined 30 women, who exercise regularly at the gym (clinical group) and 30 women, who do not exercise at the gym (control group). The average age of respondents from both groups was 24.5 years. City dwellers constituted 99% of female athletes and 97% were the people not exercising at the gym. In the clinical group: 60% of women had secondary education and 40% - higher education. In the control group 3% of respondents had primary education, 77% - secondary education and 20% - higher. Unmarried women constituted 60% of exercisers and 80% - of non-exercisers.

The body mass index averages about 21 in clinical and control group.

Methods

The study used the Survey by Zofia Stankiewicz, the Eating Disorder Inventory (EDI) by D.M. Garner, M.P. Olmsted i J. Polivy [15] and the Narcissism Inventory (N) by F. Deneke, B. Hilgenstock and R. Müller adapted by Januszewski [16].

Results

In the first stage of the study the results of the Survey by Stankiewicz obtained by female athletes and non-athletes. were compared, with the use of Chi-square Test.

The results show that significantly more female athletes (73%) than non-athletes (47%) are dissatisfied with their appearance ($\chi^2 = 4.44$, $p = 0.04$). It is also revealed that significantly more female athletes (67%) than non athletes (23%) are dissatisfied with their body proportions ($\chi^2 = 11.38$, $p = 0.001$), and about 97% of women exercising at

the gym and 53% of women from the control group believe that their body is too fat (chi-sq.= 15,02, $p = 0,001$).

Medications to help reduce body weight are used significantly more often (chi-sq.= 8,86, $p = 0,003$) by female exercisers (53%) than non-exercisers (17%), and according to certain program, women training at the gym (70%) practice significantly more (chi-sq.= 22,50, $p = 0,001$) in comparison with the control group (10%). Healthy food is bought by 20% of women practicing at the gym, and none of the women from the control group (chi-sq.= 6,67, $p = 0,01$).

Meetings friends and family (because of collision with training) were abandoned significantly more (ch.kw. = 9,32, $p = 0,002$) by athletes (40%) than non athletes (7%).

Subsequently average scores obtained by fe-

male athletes and non-athletes in the scale of the Eating Disorder Inventory (EDI) were compared with the use of t-test (Tab. 1).

Women regularly exercising at the gym received significantly higher scores than women not exercising in three EDI scales: Drive for thinness, Bulimia and Body dissatisfaction. These results indicate that female exercisers significantly more than women from control group tend to get extremely lean figure through diet and vomiting, more frequently the symptoms of uncontrolled binge eating occur in them, and they have much more distorted body image, which is perceived as "fat".

During the next stage of the study there were compared average results obtained by athletes and non-athletes in the Narcissism Inventory scales (Tab. 2).

Table. 1. Comparison of average scores gained by female athletes (N=30) and non-athletes (N=30) in EDI scales

EDI scales	Clinical		Control		t	p
	M	sd	M	sd		
Drive for thinness	0,77	0,80	0,37	0,41	2,44	0,02
Bulimia	0,64	0,43	0,43	0,21	2,48	0,02
Dissatisfaction of body	1,33	0,69	0,83	0,56	3,11	0,003
Ineffectiveness	0,50	0,56	0,37	0,35	1,07	n.i.
Perfectionism	0,53	0,41	0,40	0,36	1,38	n.i.
Interpersonal distrust	0,63	0,44	0,53	0,46	0,86	n.i.
Interceptive awareness	0,41	0,49	0,30	0,28	1,13	n.i.
Fear of aging	0,65	0,61	0,47	0,38	1,34	n.i.

Table. 2. Comparison of average scores gained by athletes (N=30) and non-athletes (N=30) in N Inventory scales

N scales	Clinical		Control		t	p
	M	sd	M	sd		
Helpless self	2,23	0,82	2,12	0,47	0,65	n.i.
Loss of control over affection/ impulse	2,65	0,92	2,45	0,71	0,94	n.i.
Derealisation /depersonalization	1,91	0,75	1,89	0,61	0,15	n.i.
Basal hope potential	3,22	0,49	3,08	1,08	0,63	n.i.
Insignificance self	2,64	0,55	2,60	0,38	0,30	n.i.
Negative body self	1,86	0,84	1,91	0,66	-0,26	n.i.
Social isolation	2,58	0,49	2,56	0,44	0,17	n.i.
Archaic withdrawal	2,78	0,66	2,48	0,45	2,09	0,04
Greatness self	3,00	0,54	2,90	0,90	0,50	n.i.
Longing for an ideal self	2,89	0,53	2,96	0,55	-0,53	n.i.
Craving for praise and validation	2,86	0,57	2,79	0,55	0,49	n.i.
Narcissistic rage	2,67	0,51	2,56	0,58	0,82	n.i.
Autarky ideal	3,23	0,37	3,14	0,55	0,74	n.i.
Object depreciation	2,86	0,48	2,67	0,36	1,70	n.i.
Value ideal	3,56	0,50	3,01	0,64	3,73	0,001
Symbiotic self-protection	3,49	0,45	3,17	0,68	2,10	0,04
Hypochondriac anxiety bonding	2,45	0,74	2,19	0,59	1,47	n.i.
Narcissistic gains from illness	2,27	0,79	2,07	0,51	1,17	n.i.

Women exercising at the gym compared to women from the control group more often flee from reality into a dream world and are convinced of being guided by more subtle, carefully considered and timeless moral principles, rather than other people. Women exercising at the gym much more than non-exercisers look for contacts with people, from whom they can obtain assistance, support, advice, more often they drop out of their own effort, expecting from others unconditional faithfulness and loyalty. In fact they are focused mainly on their own needs instrumentally abusing the generosity of others.

Discussion

The results obtained indicate that there are significant differences in body image, eating disorder symptoms and narcissistic features between female athletes training at the gym and non-athletes. Significantly more athletes than non-athletes are dissatisfied with their appearance, body proportions and feel that their body is too fat. Women practicing at the gym more often, compared to women from the control group, use laxatives, drugs facilitating weight loss, diet, starve, practice according to strictly certain program and buy in healthy food stores. Women exercising at the gym more often abandon meetings with friends and family, if those meetings interfere with their training plan.

Similar results were obtained by Holm-Denom et al [10], Sundgot-Borgen et al [8], Goldfield [12] and Segura-García et al [11], who believe that female athletes have dietary behaviour similar to women with eating disorders. They emphasize that higher stress level in sport is reflected in stronger drive for thinness, greater body dissatisfaction and more severe symptoms of bulimia, and pointed out that exercising women more often than non-exercisers use pathological weight control methods such as vomiting, fasting, usage of laxatives and diuretics. These investigators [8,11,12] found that women training at the gym, as compared with the control group, are more preoccupied with weight and body shape, are dissatisfied with their bodies, more often exhibit purging behaviours and take anabolic steroids.

Our study shows that female athletes compared to women from control group more often flee from reality into a dream world, more often give up their effort, expecting from others unconditional fidelity, loyalty, help and support, and are confident of being guided by more subtle, carefully considered and timeless moral principles than other people. They are mainly focused on their own needs instrumentally abusing generosity of others.

The studies correspond with those obtained by Karwautz et al [17], who report significantly higher levels of narcissism in women with ano-

rexia in comparison with control group. These investigators [17] revealed that women with restrictive type of anorexia nervosa desired to be perceived as independent, industrious, courageous, persistent and are convinced of timelessness of ideals, by which they are guided. They are simultaneously characterized by unstable system of impulses control, sense of helplessness, lack of hope for survival, lack of self-esteem, sense of inadequacy, negative body image and intensive tendency to avoid social contacts.

According to Bruch [18], symptoms of eating disorders are expression of effort directed to regain sense of meaning and self-esteem. Drozdowski [19] emphasizes that the symptoms of anorexia are manifestation of narcissistic defence common in people with very low self-esteem. According to Drozdowski [19] anorexic body by acquiring the status of uniqueness becomes gratification object of narcissistic need of being unique.

As pointed out by Januszewski [20], narcissism develops in people who have experienced in their advancement too little warmth, love, and therefore, to compensate for missing self-esteem, they aim at strengthening compensation and support through gaining achievements, something significant, corresponding to their ideas of greatness.

The excessive concentration on own appearance, measuring own body, dieting and training can be seen as compensation way of lack of self-esteem, negative self-image, sense of being unique, striving to better ideals than other people.

Based on the obtained results, the following conclusions were formulated:

Conclusions

1. Female athletes compared to non-athletes are characterized by more negative body image, which they perceive as disproportionate and too fat.
2. Female athletes compared to non-athletes more often exhibit disordered eating behaviour: dieting, using laxatives, medications that inhibit appetite and binge eating.
3. With regard to personality, female athletes in comparison with non-athletes, are characterized by greater tendency to: escape from reality into a dream world, abandon their efforts and expect from others assistance, support, advice and make instrumental use of others.
4. Female athletes are confident of being guided by more subtle, carefully considered and timeless moral principles than other people.

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