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The body self-awareness among women practicing fitness: a preliminary study

Abstract*: The purposes of the present study were to explore the relationship between body awareness and negative body attitude, interoceptive body awareness and physical self in women practicing fitness as well as to analyze the determinants of body awareness. The Body Awareness Questionnaire, the Multidimensional Assessment of Interoceptive Awareness, the Physical Self-Description Questionnaire and the Body Attitude Test were applied to 43 women practicing fitness and 32 non-fitness practitioners. Bodily self-awareness was connected with greater fitness practitioners' interoceptive body awareness and greater physical self. Noticing and global esteem predicted body awareness in women practicing fitness.*

Key words: *body awareness, interoceptive awareness, fitness*

Introduction

Definition of body awareness rarely appears in specialist literature (Mehling et al., 2009). By using this construct researchers usually mean attentional focus and awareness on internal body sensations (Bekker et al., 2008; Haugstad et al., 2006; in: Mehling et al., 2009). Mehling et al. (2009) presented a summary of research concerning body self-awareness. They classified it and placed it in three groups characterized by a different meaning of this concept. The first group describes body awareness as a negative phenomenon, which coincides with somatization (hypochondriasis, chronic pain, anxiety disorder). Into the second group, the researchers included the understanding of this concept as exteroceptive sensations and a visual channel of perception, which becomes more significant than perceptions from the inside of the body. The next group embraces neuro-psychological studies, where body awareness is very narrowly defined as interoception and proprioception (Mehling et al., 2009, 2012). Another view on this construct is presented by anthropologists, philosophers and linguists in reference to culture, beliefs, and widely defined spirituality. The variety of definitions shows how complex and ambiguous the body awareness phenomenon is.

Body awareness is an innate tendency of our organism to self organize and to feel the unity with oneself (Mehling et al., 2011). Body self-awareness seems to be equivalent with mindfulness. „The most comprehensive measure of mindfulness is based on a five-factor model with the following labels: (1) non-reactivity to inner experience; (2) observing / noticing / attending to sensations / perceptions / thoughts / feelings; (3) acting with awareness / automatic pilot / concentration / nondistraction; (4) describing / labeling with words; and (5) nonjudging of experience" (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006, p. 3; in: Mehling et al., 2009). Basing on the above mentioned definition it may be noticed that mindfulness is connected with an ability to distinguish internal experiences (such as thoughts, emotions, etc.) from all elements connected with an objective perception of reality (such as sensory perception and correct reactions to experiences). While analysing the mentioned feature, the authors (Mehling et al., 2009) stated that mindfulness is a wider concept than body awareness, especially due to the wide aspect of cognitive elements. They also indicated some common characteristics, such as sustained attention, concentration, non-reactivity, nonjudging of experience – which play a significant role in the shaping of body awareness (Mehling et al., 2009).

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To summarize all previous deliberations, the group of researchers (Mehling et al., 2009) applied the current multidisciplinary knowledge and suggested a relatively complex definition of body awareness: „Body awareness is the perception of bodily states, processes and actions that is presumed to originate from sensory prioprioceptive and interoceptive afferents and that an individual has the capacity to be aware of. Body awareness includes the perception of specific physical sensations (e.g., awareness of heart activity; proprioception of limb position) as well as complex syndromes (e.g., pain; sense of relaxation; "somatic markers" of emotions). Body awareness is hypothesized as the product of an interactive and dynamic, emergent process that (a) reflects complex afferent, efferent, forward and back-projecting natural activities, (b) includes cognitive appraisal and unconscious gating, and (c) is shaped by the person's attitudes, beliefs, experience and learning in a social and cultural context" (Mehling et al., p. 4, 2009).

For the purposes of this article, physical, mental and emotional aspects constitute the significant elements of the body awareness definition. They interact all the time and there is a constant flow of information between them, which is manifested in the awareness of every movement, registering of sensory stimuli, sensations and emotions, and also focusing on the present. That kind of multidimensional attitude towards this concept is also presented by Mehling et al. (2012).

Numerous researches show the link between physical activity and the perception of one's own body, the ability to recognize the signals sent by the organism as well as the capacity to self regulate. In the research conducted by Grabara and Szopa (2011) on health benefits resulting from yoga physical exercises (better well-being, stress reduction, gained ability to relax, greater flexibility), the researched students indicated, among other things, the rise of their body awareness, together with other aspects related to the greater physical and mental ability. The rise of body awareness was also noted in the research conducted among the group of people participating in a three-month training (Rani & Rao, 1994; in: Daubenmier, 2005).

The analysis conducted by Daubenmier (2005) showed that not only the participation in sporting activities itself is of significance but also the form of these activities. The significantly greater body awareness and body satisfaction were noted in the group doing yoga. The other two groups, that is, people doing aerobics and people who do not participate in this type of classes showed body awareness at the similar level, however, they differed as far as body satisfaction was concerned with the latter group showing higher level of this feature. In the above described research (Daubenmier, 2005) also self-objectification was included in the analysis. The research results showed that responsiveness to bodily sensations negatively correlates with self-objectification. It should be noted that body awareness is of a lesser significance here than responsiveness to bodily sensations. Therefore, the high level of self-objectification may cause the distance to sensations deriving from the body (Fredrickson & Roberts, 1997; in: Dittmann & Freedman, 2009). This construct is not going to be a direct analysis subject in the further part of this article, however, the variables included in the analysis, allude to Fredrickson and Roberts's concept which assumes the separate perception of embodied self.

The issue of body awareness was also included in the research by Dittmann and Freedman (2009). It transpired that regardless of the motivation type to start exercising, the level of body awareness, responsiveness to body sensations was high among active people.

The relation between experiencing emotions and physiological reaction to them became the subject of Sze, Gyurak, Yuan and Levenson's research (2010). The participants were the people practicing meditation, ballet and the control group. The correlation analysis indicated that the strongest relation between experiencing emotions and the physiological reaction occurred in the group of the researched who practised meditation. These people indicated the highest level of inner sensations awareness (visceral). The positive correlation between the above mentioned variables occurred also among people dancing ballet, however, here the awareness concerned somatic sensations, that is, muscle reactions, balance, posture and movement coordination. Thus, the research proves that physical activity is connected to the greater ability to recognize signals appearing in the body, particularly at the level of proprioceptive perception.

The research by Blackman, Hunter, Hilyer and Harrison (1988; in: Dishman et al., 2006) and Fox (2000; in: Taylor & Fox, 2005) indicate the positive link between a physical activity and a physical concept of oneself. Similarly, Delaney and Lee (1995; in: Dishman et al., 2006) as well as Taylor and Fox (2005) confirm that doing sport influences positively one's self-esteem. Moreover, the results of analyses conducted by Dishman et al. (2006) indicate that both physical activity and doing sport influence significantly the physical concept of oneself, regardless of one's appearance perception.

While summarizing the knowledge on the influence of physical activity, with special regard to fitness exercises, on a holistic functioning of a person, the areas may emerge where incorporating these activities may become supportive to the traditional forms of treatment or psychotherapy or could constitute an element of prevention in health psychology.

Research purpose

The analysis of foregoing deliberations in the area of body awareness indicates that in the Western culture it is a relatively new branch. Numerous researches conducted in the United States (e.g. Mehling et al. 2009, 2011, 2012) confirm that the discussed notion is in the phase of conceptualisation and there are many discrepancies in its understanding.

The problem of interoceptive awareness appears relatively frequently in the literature concerning eating disorders (Brytek-Matera, 2010, 2011; Daubenmier, 2005), where the relation of a pathological character with body is indicated. Here body is treated as a separate part of self. At

the other end of this continuum, there is the perception of body as an integral, inseparable self, which constitutes the main topic for correlation analysis in the presented article.

Moreover, the foregoing research in the area of body awareness among active people indicate the greater ability to recognize proprioceptive as well as interoceptive signals in comparison to people not participating in sporting activities. Simultaneously, the positive influence of physical activity on the changes in one's own body perception and the processes occuring in it was confirmed (e.g. Daubenmier, 2005; Impett, Daubenmier, & Hirschman, 2006; Sze, Gyurak, Yuan, & Levenson, 2010). The information resulting from the mentioned research constituted a guideline to the research conducted by the authors of this article.

The purpose of the present study were to assess the relation between body awareness and the negative attitude towards it, interoceptive awareness and physical concept of oneself among women doing fitness exercises as well as to evaluate the factors of body awareness. Moreover, people doing fitness were compared to people, who do not exercise in order to evaluate whether the groups differ as far as the level of one's own body awareness and whether there are differences between the groups in the scope of one's own body image.

Hypotheses

Analysing the already existing information on the influence of yoga on body awareness and dependent variables, the following research hypotheses were formed:

H1: Women doing fitness exercises have a higher level of their body awareness than fitness non-practitioners.

H2: Women doing fitness exercises present a more positive attitude towards their bodies in comparison to fitness non-practitioners.

H3: The higher the body awareness among women doing fitness exercises, the higher the level of their interoceptive awareness and physical self is.

Method

Participants and procedure

Seventy-five women participated in the present study. Two research groups were distinguished. The first one was constituted by 43 women practicing fitness exercises for minimun 1,5 years (they did not have a break at that time) for minimum 1,5 hours weekly. In the comparative (control) group there were 32 fitness non-participants. Table 1 includes remaining data about the researched.

Insert Table 1 here

Additionally, people from the comparative group in the majority declared the participation in other seasonal sporting activities (23 people) and only two people did not participated in sporting activities due to healthy reasons.

The researched people were selected among women participating in yoga classes in local sports clubs in the Silesian area, as well as among the workers and trade partners of the commercial company (the permission was obtained from the managers to conduct the research in selected branches). The research was of transversal and group character.

Out of 147 questionnaires, 75 were selected, which met the group selection criteria. The questionnaires with significant gaps which disenabled the qualification to groups were rejected. The questionnaires were completed manually and returned in paper form, with the exception of three which were returned in the electronic form. The reason was the lack of direct contact with the researched. Additionally approximately 25 consent forms for the participation in the research were distributed together with questionnaires, however, they were not returned.
Approval for this study was obtained from the University of Social Sciences and Humanities Human Research Ethics Committee (in Katowice).

Materials

The participants completed the questionnaires in the manner presented below. Two first pages contained the information regarding sex, education, height and body weight as well as detailed questions or statements which

Table 1. Descriptive statistics for selected sociodemographic data.

	Fitness group (N = 43)	Control group (N = 32)	Total population (N = 75)	Fitness vs control groupa	
	$M \pm SD$	$M \pm SD$	$M \pm SD$	t	p
Age	41.72 ± 12.30	40.13 ± 11.81	41.04 ± 12.04	.565	.574
BMI	22.37 ± 2.91	25.66 ± 5.64	23.77 ± 4.56	-3.014	.004

[a] t-Student test was conducted
Note. BMI = Body Mass Index

allowed to qualify the participants to appropriate research groups. In this part, the researched specified the quantity of exercising years, the intensity of exercises, including possible interruptions in the last two years. They also had the possibility to tick the answers concerning being an instructor and in the case of comparative group the reasons for not undertaking the discussed activities. The participants were also to refer to the statement "Practicing exercising fitness I integrate more with my own body". All questions mentioned were of a closed character, with the exception of the one where the researched who were instructors were asked to write what form of activity it refers to. On further pages there were questionnaires in the order given below.

In the research four research tools were applied: the Body Awareness Questionnaire (Shields et al., 1989), the Multidimensional Interoceptive Awareness Assessment (Mehling et al., 2012), the Physical Self-Description Questionnaire (Peart et al., 1994) and the Body Attitude Test (Probst et al., 1995). The first two tools relate directly to body processes awareness, the other two relate to the perception of one's physique.

All questionnaires were back translated from English into Polish and again after establishing a homogenous version from Polish into English (in order to verify). Also the permissions from all authors were obtained to apply the above mentioned methods in the research.

The Body Awareness Questionnaire (Shields, Mallory & Simon, 1989)

The Body Awareness Questionnaire (Shields et al., 1989) was applied in order to measure the subjectively regarded mindfulness to body processes unconnected to emotions. The questionnaire consists of 18 items that are rated using a 7-point Likert scale. The high questionnaire result signifies the high body awareness level. In the analysis of tool reliability and validation the positive correlation was indicated (for women: $r = .48$, for men: $r = .66$, $p \leq .005$) with the subscale of the Body Consciousness Questionnaire – the Private Body Consciousness (Miller et al., 1981, in: Shields et al., 1989). The research showed simultaneously the high test-retest reliability ($r = .80$). In the present study Cronbach's alpha for the whole questionnaire reached the value (.80).

The Multidimensional Interoceptive Awareness Assessment (Mehling et al., 2012)

The Multidimensional Interoceptive Awareness Assessment (Mehling et al., 2012) consists of 32 items scored on the 6-point Likert scale (from "not at all true of me" to "very true of me"). The first of the subscales *noticing* relates to mindfulness to changes in body due to many various factors (e.g., "I notice when I am uncomfortable in my body"). The second subscale *not-distracting* includes the tendency to distract from the sensation of discomfort (e.g., "I distract myself from sensations of discomfort"). The third subscale *not-worrying* refers to maintaining emotional balance in the situation of physical discomfort (e.g., "I can notice an unpleasant body sensation without worrying about it"). The fourth subscale *attention regulation* measures the ability to maintain and control attention to body processes (e.g., "I can pay attention to my breath without being distracted by things happening around me"). The fifth subscale *emotional awareness* describes the recognition of physiological changes in the body due to emotions such as anger, fear (e.g., "I notice how my body changes when I'm angry"). The sixth scale *self-regulation* measures the ability to regulate the sensible distress through focusing on sensations from the body (e.g., "I can use my breath to reduce tension"). The seventh scale *body listening* refers to the tendency to listen to body actively together with an insight (e.g., "I listen for information from my body about my emotional state"). The eight subscale *trust* relates to experiencing the body as a safe place (e.g., "I trust my body sensations").

The tool validation showed numerous significant correlations with other tools, the Five Faced Mindfulness Questionnaire ($r = .53$, $p < .01$, for selected subscales, Baer, 2008; in: Mehling et al., 2012), the Body Responsiveness Questionnaire ($r = .64$, $p < .01$, for selected subscales, Daubenmier, 2005; in: Mehling et al,. 2012). The validation and reliability analysis of the test were preceded by tentative research in the version containing a bigger amount of items.

In the present study the value of α indicator for individual subscales is as follows: noticing – $\alpha = .67$, not-distracting – $\alpha = .55$, not-worrying – $\alpha = .67$, attention regulation – $\alpha = .85$, emotional awareness – $\alpha = .87$, self-regulation – $\alpha = .82$, body listening – $\alpha = .80$, trusting – $\alpha = .91$. Due to the lower indicator value for not-distracting variable it was excluded from the analyses. According to the authors' suggestion (Mehling et al., 2012) only individual subscales were applied in the analyses, and not the result for the entire scale. In the case of every variable, the high result indicates a positive aspect of interoceptive awareness.

The Physical Self-Description Questionnaire (Peart, Marsh & Richards, 1994)

The Physical Self-Description Questionnaire (PSDQ; Peart et al., 1994) was created to measure physical activity and abilities in this scope. It consists of 47 items scored on the 6-point Likert scale (from "not at all true of me" to "very true of me"). In the present study two subscales were applied: the general physical and the general esteem. The first subscale measures the perception of one's own body, ow's own physique (e.g., "Physically, I am happy with myself"). The second subscale includes subjectively perceived general esteem in the context of physical activity (e.g., "Overall, most things I do turn out well"). The PSDQ is a shortened version of a preexisting tool with the same name, after reducing the number of items, reliability indicators remained at the similar level. The validation of the test in the shortened version was preceded by the research conducted among the smaller population (Peart et al., 1994).

In the present study, Cronbach's alpha for individual subscales equalled respectively: for global physical $\alpha = .94$

and for global esteem α = .72. The high result in subscales means positive self-concept.

The Body Attitude Test (Probst, Vandereycken, Van Coppenolle and Vanderlinden, 1995)

The Body Attitude Test (Probst et al., 1995) is a tool, which, in authors' assumption, is addressed mainly to people with eating disorders, however due to the subject area, only one of the subscales was applied in the research - the lack of familiarity with one's own body (e.g., I feel as if my body did not belong to me"). The questionnaire consists of 20 items scored on the 6-point Likert scale (from "always" to "never"). Test validation showed positive correlations with other questionnaires, e.g., the Eating Disorder Inventory (r = .75), the Body Shape Questionnaire (r = .93 i r = .54 – depending on a subscale). Retest results also showed a high correlation. In the present study Cronbach's alpha for the discussed subscale equals .82. The high result means a higher level of the lack of familiarity with one's own body.

Results

In the first work stage to comparative analysis of the researched variables t-Student test was applied (comparative model).

H1: Women doing fitness exercises have a higher level of their body awareness than fitness non-practitioners.

Statistical analysis did not show any statistically significant differences in the scope of body awareness, interoceptive awareness as well as their components between the group of doing fitness exercises and the group of fitness non-practitioners (p > .05).

H2: Women doing fitness exercises present a more positive attitude towards their bodies in comparison to fitness non-practitioners.

The conducted statistical analysis indicated significant differences between the group of women doing fitness exercises and the group of fitness non-practitioners in the scope of global physical and lack of familiarity with one's own body variables (p < .01). Women doing fitness exercises show a higher level of global physical and simultaneously a lower level of lack of familiarity with their own bodies in comparison to women not participating in fitness classes. The analysis did not indicate a significant difference in the scope of global esteem variable (p > .05).

The second stage of analysis provided information about the relations between body awareness and researched variables (correlative model).

Table 2. Comparison of body awareness level in fitness and comparative groups.

Variable	Fitness group		Control group		*t*	*df*	*p*
	M	*SD*	*M*	*SD*			
Body awareness	94.26	15.69	90.37	14.34	1.079	71	.284
Interoceptive awareness							
Noticing	14.37	4.52	14.29	3.96	.081	72	.936
Not-worrying	7.26	3.71	6.91	3.55	.416	72	.678
Attention Regulation	18.44	8.07	16.69	7.24	.972	73	.334
Emotional Awareness	18.71	6.13	19.25	4.75	-.409	72	.683
Self-Regulation	9.91	5.37	9.91	4.15	.001	73	.999
Body Listening	7.67	3.99	6.97	3.89	.766	73	.446
Trusting	10.12	4.23	10.06	3.64	.058	73	.954

Table 3. Attitude towards one's own body among women practicing fitness exercises in comparison to fitness non-practitioners.

Variable	Fitness group		Control group		*t*	*df*	*p*
	M	*SD*	*M*	*SD*			
Global Physical	17.88	5.01	14.69	4.88	2.764	73	.007
Global Esteem	24.60	4.18	23.63	3.42	1.082	73	.283
Lack of familiarity with one's own body	7.19	4.80	10.19	4.76	-.2688	73	.009

Table 4. Correlations between body awareness and measurable variables in fitness group and control

Variables	Body awareness	
	Fitness group	Control group
Interoceptive awareness		
Noticing	,652**	,486**
Not-worrying	,086	-,196
Attention Regulation	,466**	,539**
Emotional Awareness	,433**	,090
Self-Regulation	,451**	,267
Body Listening	,493**	,303
Trusting	,583**	,265
Global Physical	,494**	,166
Global Esteem	,452**	,332
Lack of familiarity with one's own body	-,276	,034

Note. ** $p < .01$

Table 5. Models of regression analysis for body awareness in research groups.

Predictor	R^2	*ß*	*F*	*df*	*p*
Fitness group					
Model I					
Noticing	.518	.720***	40.857	1;38	.000
Model II					
Noticing	.588	.633***	26.453	2;37	.000
Global esteem		.279*			
Control Group					
Model I					
Attention Regulation	,291	,539**	11.465	1;28	.002
Model II					
Attention Regulation	,402	,429*	9.075	2;27	.001
Noticing		,352*			

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

H3: The higher the body awareness among women doing fitness exercises, the higher the level of their interoceptive awareness and physical self is.

One's own body awareness correlated positively in the fitness group with noticing ($p < .01$), attention regulation ($p < .01$), emotional awareness, self-regulation ($p < .01$), body listening ($p < .01$), trusting ($p < .01$), global physical ($p < .01$) and global esteem ($p < .01$).

In the further part, regression model was analysed. Factors determining one's own body awareness level were examined in the fitness group and the control group (the scope of analysis was broadened to examine whether similar predictors occur in both researched groups). Analysis results are presented in table 5.

Noticing and global esteem were the predictors of body awareness among women practicing fitness exercises. Together these variables predicted accounted for 58% of the total variance ($R^2 = .588$; $F(2,37) = 26.453$, $p < .000$)

Discussion

Results of the obtained data analysis allowed to confirm only a part of hypotheses and to formulate the conclusions mentioned below.

The first hypothesis assuming the existence of differences in the scope of body awareness between the researched groups was not confirmed. It transpired that as far as responsiveness awareness at the level of interoceptive perception and the recognition of body processes are concerned, the groups did not differ from one another. Also in Daubenmier's research (2005) the group exercising aerobics and the comparative group did not differ as far as body awareness and body responsiveness is concerned. Therefore it seems that the physical activity itself is not a factor influencing body awareness. Numerous researches (e.g., Daubenmier, 2005; Impett et al., 2006; Dittmann & Freedman, 2009; Sze et al., 2010) indicate that physical activity is not a sufficient factor in forming body awareness, the aspect of work with the mind is also necessary. The

role of activities connecting mental and physical work is stressed here, including Eastern techniques of working with body and mind, e.g., yoga, qigong, tai chi or other forms relating to widely understood self-improvement.

In the case of the second hyphothesis assuming differences between women participating in fitness exercises and fitness non-practitioners, the statistical analysis allowed to partially confirm the formulated assumptions. The group of women doing fitness exercises showed a significantly higher level of global physical and a significantly lower level of lack of familiarity with their bodies in comparison to fitness non-practitioners. No significant differences in the scope of global esteem were noted. Another research (Daubenmier, 2005) showed that women doing fitness exercises in comparison to the comparative group feel the lowest level of body satisfaction, simultaneously, to a much greater extent, they regard their bodies in a self-objectifying manner. Research conducted among Polish population (Schiep, Szymańska, 2012) indicated as well that the group doing fitness exercises had a more negative body image in comparison to inactive women. However, Duncan and Earhart's research (2012) showed the positive influence of dancing classes on the body image. The experiment conducted by Garstka (2000) confirmed as well that recreational gymnastics done by women influence positively their body perception. Also Rogal-Floryan's research (2013) proved that general self-acceptance including also the positive attitude towards one's own body, correlates negatively with one's body image disorder. Simultaneously, the higher the self-acceptance the greater subjectively sensible influence of exercises on general well-being.

Zarek's research (2009), which also constitutes an interesting guideline, showed that the researched evaluated much more positively these elements of body image which relate to an activity rather than these directly referring to a visual aspect. With regard to it, on the basis on the conducted research, the author (Zarek, 2009) supposes that the greater body acceptance may be connected to engaging in physical activity so that the process context for the formation of positive body image appears. Also Fredrickson and Roberts (1997; in: Zarek, 2009) mention the participation in sporting classes, which they regard as a preventative measure against body objectification.

Thus, the results of analyses confirm the assumption that participation in fitness classes may positively shape the attitude towards one's own body and influence the inseparable perception of body as a part of self.

Third hypothesis was confirmed. According to expectations a positive correlation between the subjectively perceived mindfulness to (unconnected to emotions) body processes and interoceptive awareness and physical self was observed.

The conducted research did not allow to confirm the hypothesis that women doing fitness exercises have greater body awareness in comparison to fitness non-practitioners. Simultaneously, our research allowed to state that women doing fitness exercises have a more positive attitude towards their bodies in comparison to fitness non-practitioners. It constitutes an essential guideline for further research. It is, however, important to take into consideration the fact that the research was of a transversal character and does not allow to draw cause and effect conclusions. It constitutes the most essential limitation in the present study. The alternative explanation for the discussed results may be the fact that women practicing fitness, independently from the undertaken activity in this scope are characterised by the lower level of lack of familiarity with their bodies and a more positive attitude towards their own physique. In the future, only the research of an experimental character with the consideration of random group selection may be able to specify cause and effect relations.

Another limitation of this research is related to group selection. Only the fact of participation or non-participation in fitness classes was taken into consideration. However, the engagement in other activity forms organised individually, for instance, jogging, cycling, going to the gym or other forms of sporting activities of a seasonal character was not included. Thus the Body Mass Index indicator transpired to be significantly different in researched groups. That creates a question if being overweight is the reason for not participating in fitness classes or the lack of this type of activity influences body weight. This research does not answer the question posed in this way. Thus, it seems justified to replicate the research including more pieces of information from the researched.

Summarising, physical activity may positively change the attitude towards one's own body, however, not the body sensations awareness. Participation in fitness classes, through influencing physical condition of participating women, may effectively improve self-acceptance and the manner of regarding one's own body. Such conclusions seem to be particularly significant as far as the phenomenon of body perception as a separate self-characteristic among people suffering from eating disorders is concerned. Conclusions deriving from our research allow to suggest that fitness training may be an essential element of existing programs to prevent and treat different disorders related to body image. In particular it may improve the integration in the scope of widely understood self and consequently also a general psychological and physical well-being among girls as well as women. Thus, the further research ought to concentrate on seeking factors preventing regarding body in objectifying manner and forming the negative body image. However, the notion of body awareness requires deeper conceptualisation and further research with the consideration of such groups of people, among whom, during the process of self-improvement, the manner of process recognition changes at the interoceptive level, independently from the physical activity.

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