

Resilience, self-esteem, and body attitude in women from early to late adulthood

BACKGROUND

There are only a few papers dealing with the correlation power of mental resources (i.e. resilience and self-esteem) and attitude towards one's own body in women at different ages, from youth to late adulthood. The aim of the article was to present the results of research focusing on the influence of mental resources (resilience and self-esteem) on development of anti-health or health-promoting attitudes in adult women towards their own bodies.

PARTICIPANTS AND PROCEDURE

The study involved 150 female participants aged 20–55 years. The following research methods were applied: the Rosenberg's self-esteem scale SES, the Scale of Resilience Measurement SPP-25, the Contour Drawing Rating Scale by Thomson and Gray, the Multidimensional Self-Esteem Inventory (MSEI), the Body Esteem Scale BES by Franzoi and Shields, the Eating Disorder Inventory EDI, and the Questionnaire of Behaviour Towards the Body.

RESULTS

The conducted analysis indicated a relevant relation between individual resources (both general self-esteem and mental resiliency) and cognitive emotional attitude towards one's own body in the examined women. The predictors of behaviours towards one's own body in the examined women turned out to be only a strong drive to be thin and fear of gaining weight. The strongest predictors of self-assessment of the body and the evaluation of physical attractiveness were general self-esteem and resilience. Self-esteem turned out to be the strongest predictor for satisfaction with sexual attractiveness.

CONCLUSIONS

Early diagnosis of distorted body image, and adopting a negative attitude towards it, can help to make more detailed psychological diagnosis of individual's resources (resiliency and self-esteem) and their role in the development of the attitude towards one's own body.

KEY WORDS

resilience; body image; self-esteem; mental resources; attitude towards body

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BACKGROUND

The assessment of the impact of women's mental resources during their lifetime on their attitude towards their own body is important both from scientific and health prophylaxis perspectives. There are only a few papers dealing with the correlation power of mental resources (i.e. resilience and self-esteem) and attitude towards one's own body in women at different ages, from youth to late adulthood (Heszen & Sęk, 2007; Lipowska, Lipowski, Olszewski, & Bieck, 2016; Pop, 2016; Zeigler-Hill & Noser, 2015). Psychology attempts to identify mental and social factors that help to maintain health by protecting a human's psyche and promoting an attitude towards one's own body that is beneficial to health. Human behaviours regarding their attitude towards their own body may pursue health-promoting or anti-health objectives i.e. those that do not maintain the physical and mental health condition. Psychological protective factors, i.e. resilience and self-esteem, can be an important source of motivation for health-promoting or anti-health attitude. Such attitudes lead to health-seeking or anti-health behaviours, e.g. those that concern an inappropriate attitude towards food and physical activity. Anti-health behaviours (restrictive food limitation or undertaking numerous physical activities, inducing vomiting, and using laxatives and other medications not according to medical indications) frequently reflect a negative attitude towards one's own body, manifesting with distorted body image and dissatisfaction with it (Izidorczyk, 2014).

The aim of the article was to present the results of the author's research focusing on the influence of mental resources (resiliency and self-esteem) on the development of anti-health or health-promoting attitudes towards one's own body in adult women. Therefore, mental resources were defined as an independent variable, and the dependent variable was the attitude towards one's own body. Literature defines individual's resources as a system of relatively constant psychological factors and personal characteristics, which enhances the process of coping with difficulties and overcoming them. Defining the concept of mental resources frequently leads to resilience, as a relatively constant personality trait (Borys, 2010; Heszen & Sęk, 2007; Hobfoll, 2006; Juczyński & Ogińska-Bulik, 2003; Luthar, 2006; Moos & Schaefer, 1993; Ogińska-Bulik, 2001; Ogińska-Bulik & Juczyński, 2008; Semmer, 2006; Talik & Szewczyk, 2010; Tugade & Fredrickson, 2007). Fredrickson (2001) also understood resilience as the characteristic of an individual, calling it a protective factor, a constant mental resource of a person, which is most often activated in difficult, stressful, or threatening situations. Resilience is also understood as a stress

coping mechanism, a process of overcoming negative life situations in an effective way (Ogińska-Bulik & Juczyński, 2008; Ostrowski, 2014). In contemporary literature, the issue of mental resources is most often defined as resilience denoting "a set of skills required to deal effectively with high levels of stress, which consists of flexible, creative ways of dealing with adversities. The main role is played here by the ability of bounce-back from the negative experience and the ability to evoke positive emotions" (Heszen & Sęk, 2007, p. 173).

Literature indicates that high resilience can be a protective factor, which supports a satisfactory level of one's own body's acceptance (Choate, 2005; McGrath, Julie, & Caron, 2009). In the present study we assumed mental resources to be a complex variable, consisting of a relatively constant system of psychological factors that support the process of dealing with and overcoming difficulties. Those factors are self-esteem and resilience.

- Resilience, defined on the basis of literature and the abovementioned theoretical assumption, was presented in our research as a personality predisposition describing the individual ability of emotional detachment from difficult and stressful situations as well as the ability to evoke positive emotions (Heszen & Sęk, 2007; Sęk & Cieślak, 2004). Whereas, the ability to be emotionally detached from a difficult situation was defined as the capacity to cope with frustration, and perseverance in pursuing a goal despite adversities and difficulties. The following components were identified here (Heszen & Sęk, 2007; Ogińska-Bulik, 2001; Ogińska-Bulik & Juczyński, 2008): Resiliency and determination in action, which is the ability to make an effort in order to solve the problem, the consequent pursuance of goals, and the belief that one can solve even the most difficult problems,
- Tolerance towards negative emotions, which is the ability to adjust to difficult and uncomfortable situations and efficiency of action despite adversities,
- Tolerance of failure – understood as the ability to learn a lesson and accept failure as well as to take actions despite possible difficulties. The component of mental resilience was called, for the sake of this research, the ability to evoke positive emotions and a sense of humour. In the present study, it was understood as the ability to look on the positive side of life, despite difficult situations, and show an optimistic attitude towards life (the ability of perceiving funny sides of different situations, looking at them from a different perspective and being open to new experiences, predisposition to perceiving positive opportunities to solve the problem in difficult situations, as well as showing a positive attitude towards life).

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Another variable classified in personal resources, i.e. general self-esteem, was defined as an individual's conviction about their own value as a human being, having many positive characteristics, and being satisfied with oneself and one's actions (Łaguna, Lachowicz-Tabaczek, & Dzwonkowska, 2007; Rosenberg, 1965). This idea refers to the concept of self-efficacy by Bandura (1977).

The dependent variable in the present study is attitude towards one's own body. It includes components of cognitive and emotional attitude towards one's own body and behaviours towards one's own body. The cognitive and emotional attitude towards one's own body are the reason for certain behaviours, which can have healthy or unhealthy results on the individual (Brytek-Matera, 2010, 2011; Cash, 2012; Głębocka, 2009; Izydorczyk, 2014; Lipowska et al., 2016; Thomson & Gray, 1995). The quality of the presented attitude towards one's own body is connected with beliefs, thoughts (cognitive approach), and feelings (emotional approach) towards the body (satisfaction/dissatisfaction). It is assumed that emotional and cognitive attitude towards one's own body have an influence on health-promoting or anti-health behaviours. Anti-health behaviours are: restrictive food limitation that is incompatible with standards of healthy eating, starvation diet, and very intensive physical exercise leading to body ruin. There is also a category of self-destructive behaviour called compensatory behaviour, e.g. inducing vomiting, binge-eating disorder, or using diuretics and laxatives in order to improve or obtain an idealised appearance. Cognitive and emotional attitudes towards one's own body are described by the following components: self-assessment of one's own body (consisting of evaluation: Ideal Self: who you are vs. the person you want to be; and Ought Self: who you are vs. who you ought to be, assessment of physical attractiveness of the body) and the feeling of satisfaction from one's own body (satisfaction with physical features, weight, sexual attractiveness) as well as a drive to be thin and fear of gaining weight. According to Higgins's theory, self-assessment of the body was defined as the self-discrepancy: discrepancy between the actual self and the ideal self, and discrepancy between the the real self and the ought self. Numerous studies referring to the self-discrepancy theory by E.T. Higgins conclude that significant discrepancies between different types of the self concern the perspective "self in the eyes of others" and are the result of social influence (Brytek-Matera, 2011; Higgins, 1987; Izydorczyk & Rybicka-Klimczyk, 2009). Behaviours towards one's own body were verified through the frequency of compensatory behaviours (for example inducing vomiting, using laxatives, and others) or restrictive behaviours towards food and physical activity in order to reduce weight and change an unaccepted appearance.

The authors of this paper refer to the assumption of the model of Resilience Body Image by Choate (2005) and agree with Cash's theory that the importance of protective factors (resiliency) in women should be taken into account. Consequently, they are able to build resistance against socio-cultural pressure, which will help them to improve their body satisfaction (Choate, 2005; Snapp, Hensley-Choate, & Ryu, 2012). Choate's Resilience Body Image (2005) refers to Cash's ideas, indicating that while researching the body image we should not focus on pathology, but on protective factors and resilience. Choate's model of dependence between resilience and body image indicates that an individual's mental resources (adequate self-esteem and resiliency) and, resulting from them, good mental condition and the feeling of holistic balance between intellectual, emotional, spiritual, and physical aspects, allows the appropriate self-esteem and emotional experience of one's own body (Choate, 2005). It can be concluded that resiliency that is appropriate for the health condition, together with good general self-esteem, can lead to everyday health-promoting behaviours concerning the body, i.e. nourishment adequate to health needs, undertaking physical activity, and caring about one's own body, not causing any disorders (e.g. in terms of nourishment).

Despite the fact that literature indicates gender and adolescence as the risk factors for developing an anti-health attitude towards one's one body (focus on the drive to thinness), also the period of early and late adulthood is a time when body image disorders develop in women. According to developmental psychology, further development of psychosocial competences occurs in early and late adulthood (see Erikson, 2000; Shaffer & Kipp, 2014). Numerous contemporary research results indicate that women in different stages of life, including psychosocial development, in early and middle adulthood, perceive their own body in varied ways and adopt anti-health behaviours in order to change their body image, which they do not accept at present (Brytek, 2008; Głębocka, 2016; Izydorczyk & Rybicka-Klimczyk, 2009; Kochan-Wójcik & Piskorz, 2010; Pruis & Janowsky, 2010).

RESEARCH QUESTIONS AND OBJECTIVES

- 1) Is there a relation between individual resources (general self-esteem and resilience) and cognitive and emotional attitude towards one's own body in women from early to late adulthood? If so, how strong is it?
- 2) Is there a relation between individual resources (general self-esteem and resiliency) and anti-health behaviour towards one's own body (restrictive food limitation and physical activity) and

compensatory behaviours (inducing vomiting, using laxatives in order to lose weight)? If so, how strong is it?

PARTICIPANTS AND PROCEDURE

MATERIAL

In total, 150 adult Polish women between 20 and 55 years of age were enrolled in the study. Target screening was used in the study. The inclusion criteria were: lack of mental disorders (including eating disorders) and lack of other conditions connected with body deformation or disturbed body image (visible disability within the body). The study group was homogenous when socio-demographic variables were considered (age, big-city living environment, status of an employee and/or student, secondary and/or higher education). The group included women with and without children, married, single, and those living in civil partnerships. The studies were conducted in the years 2016-2017 in three big cities, where the women lived, studied, and/or worked. The study group comprised: 45 women aged 20 to 24 years ($M = 22.50$, $SD = 1.20$), i.e. in late adolescence; 35 women aged 25 to 29 years ($M = 26.20$, $SD = 1.30$), i.e. in early adulthood; 35 women aged 30 to 39 years ($M = 33.70$, $SD = 2.50$), i.e. in middle adulthood; and 35 women aged 40 to 55 years ($M = 46.20$, $SD = 4.90$), i.e. in late adulthood.

METHODS

The variable of “individual resources” was measured by the following methods:

- The Rosenberg’s self-esteem scale SES (Polish version developed by: Łaguna, Lachowicz-Tabaczek, & Dzwonkowska, 2007) – a general self-esteem measurement; Cronbach’s $\alpha = .83$ (students aged 19 to 24 years), Cronbach’s $\alpha = .82$ (adults aged 25 to 55 years) (Łaguna, Lachowicz-Tabaczek, & Dzwonkowska, 2007),
- The Scale of Resilience Measurement SPP-25 by Ogińska-Bulik & Juczyński (2008) – mental resilience measurement (the ability to distance oneself emotionally from difficult situations and the perseverance to pursue one’s aim despite adversities and difficulties); it is reliable and valid in terms of general results (Cronbach’s $\alpha = .89$).

For the measurement of the attitude towards one’s own body the following methods were used:

- The Contour Drawing Rating Scale by Thompson and Gray – the body-image assessment tool (Thompson & Gray, 1995),
- The Multidimensional Self-Esteem Inventory (MSEI) by O’Brien and Epstein – the measurement

of the physical attractiveness domain. “Physical Attractiveness” scale concerning self-assessment of one’s own appearance was used; Cronbach’s $\alpha = .88$ (O’Brien & Epstein, 2009),

- The Body Esteem Scale BES by Franzoi and Shields (Polish version developed by Lipowska & Lipowski, 2006) – the measurement of emotional attitude towards one’s own body, i.e. satisfaction from one’s own body (i.e. satisfaction with weight, satisfaction with physical features, satisfaction with sexual attractiveness); Cronbach’s $\alpha = .89$ (Lipowski & Lipowska, 2006),
- The Eating Disorder Inventory EDI by D. Garner (Polish version developed by C. Żechowski, 2008) – the measurement of a drive to thinness and fear of gaining weight; the scale “A Drive to Thinness” was used; Cronbach’s $\alpha = .86$ (Garner, 2004; Żechowski, 2008),
- The Questionnaire of Behaviour Towards the Body (KZWC) by B. Izydorczyk was used for the measure behaviours towards one’s own body; Cronbach’s $\alpha = .80$ (Diets), Cronbach’s $\alpha = .86$ (Restrictive Physical Activities), Cronbach’s $\alpha = .74$ (Restrictive limitation on food), Cronbach’s $\alpha = .62$ (Compensatory behaviours) (Izydorczyk, 2014).

All procedures performed in the study involving human participants were in accordance with the ethical standards of the institutional and/or national Research Committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

RESULTS

The data were developed with IBM SPSS Statistics (Statistical Package for the Social Sciences). The statistical analysis of the study results was adapted to the objectives and study questions. At first, variables were analysed with descriptive statistics: mean and standard deviation for the whole study group of 150 women. Next, Pearson’s r correlation coefficient and the analysis of multiple linear regression were conducted to measure the strength of the relationship between mental resources, cognitive/emotional attitude towards one’s own body, and behaviours towards the body for the relationships between all study variables.

INDIVIDUAL RESOURCES CHARACTERISTICS (SELF-ESTEEM AND RESILIENCE)

The analysis of results showed that the first component of the mental resources variable, general self-esteem, has the mean value $M = 30.93$ (min = 12.00, max = 40.00). The average result is very close to the $Me = 31.00$, $SD = 5.24$, which means that there

is low result dispersion around the average. The results indicate that women who took part in the study had average results on the level 5-6 in a standard ten-point scale, which shows average (correct) self-esteem in the population of examined women.

When considering the second component of mental resources, called 'resiliency', the examined women had an average result, $M = 69.31$ (min = 30.00, max = 100.00). The value of $Me = 69.00$, $SD = 13.62$ means that there is a high dispersion around the average. The analysis of given results indicates that the average result in the resiliency scale SPP-25 is on the level 5-6 in a standard ten-point scale, which means an average level in the scope of the examined women's resilience. The result suggests that the examined women had an average ability to detach themselves emotionally from difficult situations, tolerance to cope with frustration and negative emotions, and average (correct) ability in the scope of evoking positive emotions.

Summing up, the average results in the scope of independent variables confirm that the group of 150 women of 20 to 55 years of age have appropriate (average) mental resources (general self-esteem and resiliency) in the whole examined population.

THE CHARACTERISTICS OF COGNITIVE AND EMOTIONAL ATTITUDE TOWARDS ONE'S OWN BODY

The statistical analysis of the Contour Drawing Rating Scale by Thomson allows verification of body self-esteem indexes. Therefore, the measurement was conducted to discover the scale of divergence between the cognitive evaluation of the examined women in terms of: "who you actually are" (Real Self), and evaluation of "the person you want to be" (Ideal Self) and "who you ought to be" (Ought Self). The average value of the self-assessment of the body results in the scope of Ideal Self: $M = 1.42$ (min = 0.00, max = 5.00), $Me = 1$, $SD = 1.08$. The average value of the self-evaluation results in the scope of Ought Self: $M = 0.39$ (min = 0.00, max = 3.00). The median (Me) has a value similar to the average 0, $SD = 0.68$.

The remaining index of cognitive attitude towards one's own body measured in the scale of physical attractiveness has the average value $M = 33.08$ (min = 9.00 self-assessment and max = 50.00), $Me = 33$, $SD = 7.55$. The obtained mean result, within the range of average results, indicates that women have an appropriate self-assessment of their physical attractiveness. The result shows a lack of extremely positive or negative evaluation of one's body, inadequate to one's health condition and general content from one's appearance.

To sum up, the average results shown above, in the scope of all components of cognitive attitude to-

wards one's own body, do not confirm that women in the examined population had significant mental and perceptual distortion of body image and negative self-assessment of their body image.

The statistical analysis of the results concerning emotional satisfaction or dissatisfaction with the body showed average results in terms of physical features, weight, and sense of sexual attractiveness. The intensity of satisfaction with physical appearance was on an average level $M = 32.26$ (min = 15.00, max = 45.00), $Me = 33$, $SD = 6.03$. The average result for every age group of subjects is between 4 and 7 in the sten scale, which is an average result in the scope of satisfaction with physical features and body image.

However, satisfaction with sexual attractiveness among the examined women was average $M = 48.83$ (min = 31.00, max = 65.00), $Me = 48$, and $SD = 7.22$. The mean result for every age group is between 4 and 7 in the sten scale, which is an average result.

Concerning the satisfaction with one's weight, the result was average $M = 34.18$ (min = 16.00, max = 50.00), $Me = 35$, $SD = 7.45$. The mean result for every age group of the subjects is between 4 to 7 in the sten scale, which is the average result. This result suggests that the subjects' attitude towards the change of appearance, by dieting or undertaking physical activities, is average.

The last verified component of emotional attitude towards one's own body was a drive to thinness and fear of gaining weight. The result of this variable was average $M = 3.20$ (min = 0.00, max = 21.00), $Me = 1$, $SD = 4.43$. The obtained mean result, as the only one, can be classified as high, indicating strong (inappropriate for health) intensity of drive towards thinness and, at the same time, fear of gaining weight, among the examined women. That is the only result, out of all variables, which can suggest a tendency to change the appearance without any health reasons and despite normal BMI.

THE CHARACTERISTICS OF EXAMINED WOMEN IN THE SCOPE OF SPECIFICITY OF THEIR BEHAVIOUR TOWARDS ONE'S BODY

The score for the variable "diet" was average $M = 5.94$ (min = 0.00, max = 33.00), $Me = 4$, $SD = 6.34$. In terms of "restrictive physical activity" the mean value is $M = 2.49$ (min = 0.00, max = 22.00), $Me = 0$, $SD = 4.19$. The mean value for restrictive food limitation is $M = 2$ (min = 0.00, max = 13.00), $Me = 1$, $SD = 2.53$. In the case of the intensity of all examined compensatory behaviours, the results were average $M = 0.05$ (min = 0.00, max = 3.00), $Me = 0$, $SD = 0.34$. The obtained results show that the examined women were very often on diets or restrictive food limitation and undertook physical activities. The results in three scales of restrictive behaviours towards one's own

body were in the third quartile for all studied women, which represent the highest values in the data set. The result represents high intensity of restrictive type of behaviours towards one's own body. However, the mean result in compensatory behaviours indicates the average results. The results show that the examined women, despite the lack of medical recommendation, very often disclosed their dieting, restrictive food limitation, and undertaking physical activities. The mean results in the described behaviours towards one's own body indicate their anti-health character because they confirm high intensity of restrictiveness when it comes to food. Restrictive behaviours declared by the examined women do not result from health recommendations. Furthermore, as already demonstrated, there is a high tendency for a drive to thinness despite having BMI appropriate for age in the study group.

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CHARACTERISTICS OF THE SIGNIFICANCE OF RELATION BETWEEN MENTAL RESOURCES AND COGNITIVE, EMOTIONAL ATTITUDE TOWARDS ONE'S OWN BODY

The results presented so far led to the next step in the statistical analysis, aimed at answering research questions. The analysis aimed to answer whether self-esteem and/or resilience are cognitive-emotional predictors of an attitude towards one's body in the examined group of adult women. Table 1 presents the correlation between the variables with Pearson's *r* correlation coefficient, whereas Table 2 shows overall collation of the results of multiple linear regression in terms of statistically significant models.

The Pearson's *r* correlation coefficients presented in Table 1 indicate a significant relation between general self-esteem in the examined women and their cognitive emotional attitude towards one's own body. Pearson's *r* correlation coefficients indicate also a significant relation between resilience

and their emotional cognitive attitude towards one's own body. The strongest relation was found between general self-esteem and satisfaction with physical attractiveness (PA) and between general self-esteem and satisfaction with sexual attractiveness (SA). The above-presented statistically significant relations have positive high correlation between the above-shown variables, which can be interpreted as meaning that the higher the general self-esteem in the examined women, the higher the assessment of their own body (assessment of physical attractiveness). The higher general self-esteem in the subjects also means greater satisfaction with their own sexual attractiveness. The values of Pearson's *r* correlation coefficients indicate that there is a significant relation between general self-esteem and satisfaction with one's weight (SW), as well as satisfaction with physical features (SPF). The relation between the variables shown above is positive, which means that the greater the satisfaction with one's weight (SW) and physical features (SPF), the higher the general self-esteem in the subjects. A similar situation can be observed in the case of the demonstrated significant relation between variable "mental resiliency" and components describing emotional cognitive attitude towards one's own body in the examined women, with the exception of a drive to be thin and fear of gaining weight (DT). The correlation coefficients show a significant, positive relation between the resilience of the subjects and their emotional state of satisfaction with their sexual attractiveness, weight, and physical features (Table 1). All presented correlations transpired to be significant at the level $p < .01$. It can be concluded that the higher the general self-esteem and resilience of the examined women, the greater the cognitive acceptance of one's body they have (higher positive evaluation of physical attractiveness) and higher emotional state of satisfaction from one's body (Table 1).

In the case of the evaluation of the level of Ought Self (OS – who you ought to be) and Ideal Self (IS

Table 1

Person's r correlation coefficient for the individual resources – cognitive emotional attitude towards one's body (n = 150)

Variables	IS	OS	PA	SSA	SW	SPF	DT
Self-esteem	<i>r</i>	-.20	-.22	.54	.53	.39	-.08
	<i>p</i>	.017	.007	< .001	< .001	< .001	.346
Resiliency	<i>r</i>	-.31	.01	.43	.47	.36	-.08
	<i>p</i>	< .001	.911	< .001	< .001	< .001	.324

Note. IS – Ideal Self (actual: ideal self-discrepancy); OS – Ought Self (actual: ought to be self-discrepancy); PA – physical attractiveness; SSA – satisfaction with sexual attractiveness; SW – satisfaction with one's weight; SPF – satisfaction with physical features; DT – drive to be thin and fear of gaining weight.

Table 2

The summary of statistical analysis of significant models of multiple linear regression – dependent variable: cognitive and emotional attitude towards one's body in women at the age of early and late adulthood ($n = 150$)

Variables	Components of variable	The significance of regression's model (p)	% Explained variation	Predictors	
Self-assessment of the body	IdealSelf (IS)	$p < .001$	7.00%	Mental resources – Resiliency and determination in action ($\beta = -.28, p < .001$)	<i>Mental resources and body attitude in women</i>
	OughtSelf (OS)	$p < .001$	8.00%	Self-esteem ($\beta = -.31, p < .001$) Resiliency and determination in action ($\beta = .23, p = .007$)	
Satisfaction with one's body	Physical attractiveness	$p < .001$	28.60%	General self-esteem ($\beta = .54, p < .001$)	
	Satisfaction with sexual attractiveness (SSA)	$p < .001$	32.80%	General self-esteem ($\beta = .41, p < .001$) Tolerance to failures ($\beta = .26, p < .001$)	
	Satisfaction with one's weight (SW)	$p < .001$	18.00%	Resiliency and determination in action ($\beta = .22, p < .001$) Self-esteem ($\beta = .12, p < .001$)	
	Satisfaction with physical features of the body (SPF)	$p < .001$	24.10%	Mental resources – Resiliency and determination in action ($\beta = .34, p < .001$) General self-esteem ($\beta = .26, p < .001$)	
Drive to be thin and fear of gaining weight	–	<i>n.i.</i>	–	–	

– who you actually are) there is a significant, but reversed relation, which could mean that the greater the divergence in the evaluation “who you really are and the person you want to be”, the lower the general self-esteem and also lower resilience they have (Table 2). The results of correlation analysis did not show a significant relationship between general self-esteem, resilience, a drive to be thin, or fear of gaining weight.

Furthermore, the statistical analysis was deepened to find predictors explaining the emotional and cognitive attitude towards one's body in the examined women. The analysis of multiple linear regression was conducted. It was checked, one by one, whether the general self-esteem of the examined women and their resiliency (resiliency and determination in action, tolerance to negative emotions, tolerance to failures, openness to new experiences, and humour as well as optimistic attitude towards life) can, in a significant way, explain the specificity

of emotional and cognitive attitude towards one's own body in the adult women. First of all, it was checked whether the general self-esteem of the examined women and the components of resilience significantly explain the cognitive attitude towards one's own body (divergence between assessment: who you really are (Real Self), the assessment: the person you want to be (Ideal Self) and “who you ought to be” (Ought Self). The model of multiple linear regression was conducted, in which the dependent variable was Ideal Self. The model was significant from a statistical point of view ($F(1, 148) = 12.85, p < .001$), but it explained only 7.00% of the results of Ideal Self variable variation (the person you want to be). The only relevant predictor was the component of resiliency called: resiliency and determination in action ($b = -.09, \beta = -.28, p < .001$). The standardised coefficient beta indicates that a person with high resilience and determination in action has lower Ideal Self (IS).

The next step was to calculate the model of multiple linear regressions, in which the dependent variable was: Ought Self (OS). The model of regression for the analysed variable is also significant from a statistical point of view ($F(2, 147) = 7.54, p < .001$) but explained only 8.00% of dependent variable variation. The relevant predictors of Ought Self (OS) were general self-esteem ($b = -.40, \beta = -.31, p < .001$) as well as resilience and determination in action ($b = .05, \beta = .23, p = .007$). Standardised beta coefficients indicate that subjects with higher general self-esteem and lower resilience and determination in action have lower Ought Self (the evaluation of who you ought to be). The values of Beta coefficients prove that evaluation of the body is, in a relevant way, explained by general self-esteem, resilience, and determination in action of the examined women.

In the results analysis it was tested whether, perceptible by subjects, physical attractiveness (PA), as a part of self-esteem, can be explained by individual resources. The next model of regression was calculated, in which physical attractiveness (PA) was dependently reliable. It was statistically significant ($F(1, 148) = 60.50, p < .001$) and explained 28.60% of physical attractiveness variations, which is much more than the two previously described models of regression. The results of the regressions analysis show that general self-esteem (physical attractiveness) can be a significant self-esteem predictor ($b = .78, \beta = .54, p < .001$). The higher the general self-esteem in the examined women, the higher the self-assessment of their body. In that case, it may suggest that high self-esteem has a very positive prognosis when it comes to perception of one's body and its emotional acceptance. The next step of statistical analysis was to check whether the satisfaction with one's body can be explained by general self-esteem and components of the variable called mental resiliency.

First of all, the model of linear regression for the dependent variable was calculated: satisfaction from sexual attractiveness (SSA). This model proved statistically significant ($F(2, 147) = 37.4, p < .001$), explaining 32.80% of variation of the dependent variable. As a result, general self-esteem ($b = .57, \beta = .41, p < .001$) and tolerance towards failure ($b = .65, \beta = .26, p = .007$) as a component of mental resiliency transpired to be significant variables explaining subjects' sexual attractiveness. Standardised beta coefficients indicated that the examined women with high general self-esteem and high tolerance to failure were more satisfied with sexual attractiveness connected with their body image. The next model of regression for the variable satisfaction with one's weight (SW) was statistically significant ($F(2, 146) = 17.19, p < .001$). This model explained 18.00% of the variations in satisfaction with one's weight. Significant predictors of satisfaction with one's body were also general satisfaction ($b = .43, \beta = .30, p < .001$),

resilience, and determination in action ($b = .47, \beta = .22, p < .001$). The obtained results of statistical analysis showed that women with higher self-esteem and higher results in the scope of the resilience and determination variable (a component of mental resiliency) disclosed greater satisfaction with their body.

From the statistical point of view, the model of regression was also significant. It was tested whether subjects' satisfaction with one's physical features (SPF) of the body can be explained in a relevant way by individual resources in the examined women. This model also proved to be statistically significant ($F(2, 147) = 24.60, p < .001$) and was helpful in the explanation of 24.10% of the dependent variable variations. The relevant predictors of satisfaction with physical features, as in the previous case, turned out to be general self-esteem ($b = .30, \beta = .26, p < .001$) as well as resilience and determination in action ($b = .58, \beta = .34, p < .001$). Therefore, it can be assumed that women with high general self-esteem as well as resilience and determination in action (resiliency feature) are more satisfied with the physical features of their body. The only model of linear regression that transpired to be irrelevant from a statistical point of view is the variable of drive to be thin and fear of gaining weight (DT) ($F(6, 143) = 0.77, p = .598$) (Table 2).

Summing up all the above models of regression, it can be seen that there are two dominant variable-predictors, which significantly explain the cognitive emotional attitude towards one's own body. The first predictor is general self-esteem. Regression models showed that self-esteem explains Obligatory Self divergence (the evaluation: who you ought to be and satisfaction from one's body) significantly. The second predictor is resilience and determination in action. As a component of mental resilience, resilience and determination in action generally describes the ability to make efforts in order to solve a task, the consequent pursuance of a goal, and the belief that even the most difficult problems can be solved. This variable, in particular, significantly explains the divergences between the actual body image vs. ought to image and ideal, and satisfaction with one's weight and physical features. It can be also noticed that tolerance to failure, as one of the components of resilience, significantly explains satisfaction with sexual attractiveness. This means that the higher the tolerance to failures and coping with frustration, the greater the satisfaction and feeling of sexual attractiveness of one's body the subjects have. The data presented in Table 2 show that the variable of drive to be thin and fear of gaining weight (DT) is not explained in a significant way by resilience or general self-esteem. This result may suggest that there is a significant socio-cultural influence: internalisation and pressure of social standards as a predictor, which stimulates a drive to be thin and fear of gaining weight in the examined women.

Table 3

The values of Pearson's *r* correlation coefficients distinguished between the individual resources and behaviour towards one's body in examined women (*n* = 150)

Variables		Diets	Restrictive Physical Activity	Restrictive limitation on food	Compensatory behaviours
General Self-esteem	<i>r</i>	-.09	-.07	-.05	.04
	<i>p</i>	.302	.399	.555	.601
Resilience	<i>r</i>	-.05	.05	.06	.08
	<i>p</i>	.531	.539	.468	.333

Mental resources and body attitude in women

CHARACTERISTICS OF THE SIGNIFICANCE OF RELATIONS BETWEEN INDIVIDUAL RESOURCES AND BEHAVIOUR TOWARDS ONE'S OWN BODY

The statistical analysis regarding the measurement of the significance of correlation between self-esteem, resilience, and the examined women's behaviour towards one's body (restrictive and compensation) showed that there is no significant relation between the given variables. This is confirmed by the values of Pearson's *r* correlation coefficients presented in Table 3.

Due to the fact that the correlation between variables self-esteem, resilience, and behaviour towards one's body was not significant from a statistical point of view, analysis of regression was not conducted (Table 3). It means that the examined women's diets, restrictive limitation of food, restrictive undertaking of physical activities and other forms of sport, and compensatory behaviours (using laxatives and inducing vomiting) in order to change the body image, are not significant to the specificity of self-esteem and resilience of subjects. Resilience (component: resilience and determination in action) and self-esteem significantly explained cognitive (through thoughts) and an emotional (through emotions) acceptance or dissatisfaction with one's body (Table 1, Table 2), which does not mean that the described individual variables are directly responsible for the frequency of restrictive and compensatory behaviours in the examined women.

In order to check how the cognitive and emotional attitude towards one's body, i.e. displayed and consolidated in patterns of cognitive thoughts towards the body, explain the behaviours towards one's own body, regression analysis was finally conducted, which checked the influence of cognitive and emotional attitude towards one's body and behaviour towards one's body. Before the regression analysis, Pearson's *r* correlation coefficients for research vari-

ables were found. They results showed that the usage of linear regression analysis for the given variables was justified. The summary of significant regressions models is shown in Table 4.

The analysis of regression in which the dependent variables were diet and independent variables were cognitive and emotional attitude towards one's own body, showed that the obtained model of regression is important from a statistical point of view ($F(1, 148) = 231.44, p < .001$) and explains 61.00% of variations in the case of frequency of diets. It turned out that among seven verified components of attitude towards one's body the only significant predictor is the drive to be thin and fear of gaining weight ($b = 1.12, \beta = .78, p < .001$). The results show that the greater the drive to be thin and, connected with it, fear of gaining weight in the examined women, the more frequently they go on a diet. In the case of the variable restrictive food limitation, the regression model was also proven to be significant from a statistical point of view ($F(3, 145) = 22.14, p < .001$) and explained 30.00% of variation of dependent variables. The significant predictors turned out to be also the drive to be thin and fear of gaining weight ($b = .31, \beta = .54, p < .001$), the evaluation of one's physical attractiveness ($b = -.09, \beta = -.26, p = .004$), and satisfaction with one's weight ($b = .07, \beta = .20, p = .030$). The strongest predictor is, as in other cases, the drive to be thin and, connected with it, fear of gaining weight. Standardised beta coefficients show that women whose drive to be thin and fear of gaining weight is high have low self-esteem and greater satisfaction with one's own weight and the feeling of physical attractiveness, and they more often go on restrictive diets and limit their food. For the variable of compensatory behaviour, this model was not considered reliable.

The model of regression for the variable physical activity also turned out to be significant from the statistical point of view ($F(2, 147) = 31.53, p < .001$) and can explain 29.00% of variations in undertaking restrictive physical activities in order to change the

Table 4

The summary of statistical analysis of significant models of multiple linear regression – dependent variable ($n = 150$)

Dependent variable behaviours towards one's body	The significance of the model of regression (p)	% explained variation	Predictors
Diets	$p < .001$	61.00%	Drive to be thin and fear of gaining weight ($\beta = .78, p < .001$)
Physical activity	$p < .001$	29.00%	A drive to thinness and fear of gaining weight (DT) ($\beta = .52, p < .001$) Physical attractiveness (AF) ($\beta = .17, p = .019$) A drive to thinness and fear of gaining weight (DT) ($\beta = .54, p < .001$)
Restrictive limitation on food	$p < .001$	30.00%	Physical attractiveness (AF) ($\beta = -.26, p = .004$) Satisfaction from one's weight (SW) ($\beta = .20, p = .030$)
Compensatory behaviour	–	–	–

body image. The significant predictors are also here, the drive to be thin and fear of gaining weight ($b = 0.52, \beta = .55, p < .001$) and physical attractiveness ($b = .92, \beta = .17, p = .019$). It can be concluded that the examined women who have a drive to be thin, fear of gaining weight, and higher self-assessment of their body, more often undertake restrictive physical activity in order to change their body image.

Summing up, there was no significant correlation between the variables self-esteem, resilience, and behaviour towards one's body. The strongest predictor of anti-health behaviour towards one's body was the drive to be thin and fear of gaining weight. The relevant, but much weaker, predictors also turned out to be the variables physical attractiveness (referring to the feeling of body attractiveness and appearance) and satisfaction with one's own weight.

DISCUSSION

Summing up the results of the research in the scope of cognitive and emotional characteristic of attitude towards one's own body in the researched women, it is worth indicating that, despite the fact that there are no indexes suggesting body dysmorphic or distortion disorders, it was demonstrated that there are strong (not relevant to the BMI) fears of gaining weight and

high drive to be thin. Second in the group of high results (improper for maintaining health) turned out to be an average value indicating frequent behaviours such as: restrictive undertaking of various physical activities and cutting down on food (regular, frequent restrictive diets, limits on calories and starvation diets), without any medical recommendations. What is the reason for such big tendency for a drive to be thin and fear of gaining weight, despite proper general self-esteem, and when there is no relevant distortion of body image? It is worth mentioning that in the case of behaviour towards one's body, which means cutting down on food in a very restrictive way and undertaking physical activity, the results were similar.

Analysing other author's research and literature, it is worth mentioning the significant role of one's own cognitive and emotional attitude towards one's body (thoughts and emotions towards one's body) and the significance of socio-cultural influence (internalisation and pressure of standards promoted in mass media) on the development of body image and behaviours towards one's body (Cash, 2011, 2012; Cook & Kaiser, 2004; Dittmar & Halliwer, 2008; Messner, Duncan, & Cooky, 2003; Levy, 2005; Merskin, 2004; Mills, Shikatani, Tiggemann, & Hollitt, 2014; Tiggemann, 2003; Tiggeman & Slevic, 2012). Those mass media promote the standards of excessive thinness, which often results in anti-health attitude towards

one's body. Many contemporary researchers confirm that mass media and social influence play a significant role in building up the fear of gaining weight and a drive to excessive thinness, irrelevant of BMI and health indicators (Cash, 2011, 2012; Chernyakdf, 2008; Cooley & Toray, 2001; Ferguson, Munoz, Contreras, & Velasquez, 2011; Shroff & Thompson, 2006). The socio-cultural influence on the development of contemporary women's body image is widely described in literature sources and documented with results of numerous Polish researches after 2013 (Czeczor, Kościcka, & Brytek-Matera, 2016; Głębocka, 2016; Izydorczyk, 2014).

As presented in the literature, empirical reports on the subject of psychosocial (including socio-cultural) conditioning of body image distortion are supported also by widely-spread in contemporary culture, sexualisation and objectification of the female body (Fredrikson, 2001).

We should also draw attention to the fact that there is no correlation of drive to be thin and fear of gaining weight in the author's research, and it is not explained by the main dependent variable, which is the individual's resources (general self-esteem and mental resiliency). According to literature, a drive to be thin and fear of gaining weight can result from unconscious intrapsychological conflict or socio-cultural impact, rather than being a result of mental resiliency. As our results showed, the strongest predictor, crucial for the anti-health behaviour (diet, restrictive physical activity, and food limitation), is the drive to be thin and fear of gaining weight.

Interestingly, a low but significant (negative) relationship between self-assessment of the body, which is Ought Self OS (who you actually are- who you ought to be), and resilience was confirmed in our research. As the results indicate, the greater the resilience, the lower the divergence in the evaluation "who you actually are – who you ought to be", and the higher the level of accuracy of self-assessment of the body. These results, in terms of the presented relationships, are also confirmed in other papers (Buczak & Samujło, 2013). As quoted in literature, the research of other authors indicate that high resilience can result in lower risk of anti-health behaviour (Ogińska-Bulik, 2001). The findings of Choate (2005), McGrath, Wiggin, and Carron (2009) also indicated that resilience has a protective function against the development of negative body image. The results of the presented research show that women who have a high level of resilience are more satisfied with their body (weight, physical features, and sexual attractiveness).

We found that mental resilience, especially the domains of resilience and determination in action and tolerance towards failure (which are part of the ability to detach oneself from difficult situations), are relevant when considering the development of atti-

tude towards one's own body. The second component of resilience, defined as the ability to evoke positive emotions, did not prove to be significant. Therefore, together with general self-esteem, the so-called ability to cope with frustration, dealing with difficult, critical situations, and tolerance towards negative emotions are significant elements for the development of an attitude towards one's own body. Sense of humour itself and the individual's ability to evoke positive emotions in that case were not significant in the scope of explaining the attitude towards one's own body.

RESTRICTIONS ON RESEARCH RESULTS

The conducted research, despite the adapted procedure, in accordance to the assumptions of scientific methodology, entail some restrictions. First of all, the issue of the study concerns the measurement of variables that are difficult to verify from an empirical point of view because they are based on questionnaire results. Those methods are standardised. However, they can only be a declaration, not always in accordance with the truth. In order to restrict this influence, the study was conducted only after informing and explaining to the subjects the aim of the research and its importance for health protection. Some kind of restrictions were relatively low (but adequate to conduct the statistical analysis): the number of the examined women at different stages of life (from early to late adulthood) and from different socioeconomic backgrounds. The research issues require verification of obtained results in further populations of women of similar age in order to check the credibility of the obtained data and to expand the measurement of the independent variables (mental, e.g. with the feeling of coherence). A restriction of the presented research is also the fact that, when defining a dependent variable (the attitude towards one's body), it was essential to choose many factors that would help to define this variable. There are numerous definitions of body image in the literature. They are varied and defined in different ways, which can cause difficulties in constructing the discussed variable in the research model. Consequently, it is difficult to choose measurement methods for such a complex variable. The selection of indexes, which will be a part of the variable attitude towards one's own body was chosen by the researcher. While constructing the presented variables, the authors, being aware of the restrictions mentioned above, referred to scientifically documented theoretical concepts and literature and also chose the measurement tools for the discussed variables with the indexes of reliability and accuracy. It is planned that the research be continued, including qualitative analysis.

CONCLUSIONS

Taking the obtained research results and their statistical analysis into consideration, we can draw the following conclusions:

- 1) There is a significant relationship between individual resources (both general self-esteem and mental resilience) and cognitive emotional attitude towards one's own body in the examined women at the age of early and late adulthood.
- 2) There is no relevant relationship between individual resources (both general self-esteem and mental resiliency) and presented behaviours towards one's own body (restrictive diet and physical activity, as well as compensatory behaviours, i.e. inducing vomiting, using laxatives in order to reduce weight) in the examined women.
- 3) The predictors of behaviours towards one's own body in the examined women transpired to be only a strong drive to be thin and fear of gaining weight.
- 4) The strongest predictors of self-assessment of the body (especially in the scope of the evaluation of divergence between who the women want to be and who they ought to be) and the evaluation of physical attractiveness are general self-esteem and resilience: resilience and determination in action as well as tolerance of failure. Evoking positive emotions as a component of resilience did not prove to be relevant in the explanation of the development of emotional and cognitive attitude towards one's own body in the examined women.
- 5) Women who have high resiliency and determination in action, have lower actual ideal self-discrepancy and actual ought self-discrepancy "the person you want to be/look like, and who you ought to be/look like".
- 6) Women with high general self-esteem have higher subjective self-esteem concerning their physical attractiveness.
- 7) Self-esteem and high level of tolerance to failure explain in a significant way the satisfaction with all examined aspects of the body. Self-esteem turned out to be the strongest predictor of satisfaction with sexual attractiveness (but not with the relevant behaviour).
- 8) Drive to be thin and fear of gaining weight are not variables that explain general self-esteem and mental resiliency.
- 9) Drive to be thin and fear of gaining weight as components of emotional attitude towards the body proved to be predictors of restrictive behaviour towards food and undertaking physical activity.

SUMMARY AND PRACTICAL IMPLICATIONS

The empirical knowledge obtained from the results can expand the source material, helping to identify the first signals (prodromes) of distorted body image as well as eating disorders. Early diagnosis of distorted body image, and adopting a negative attitude towards it, will help to make more detailed psychological diagnosis of an individual's resources (resiliency and self-esteem) and their role in the development of attitude towards one's own body, which can support psychological counselling and make it more effective in the case of different body image disorders. Further research on preventive factors may lead to the creation of preventive programs for girls and women in the eating disorder risk group.

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