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Self-esteem and life satisfaction in overweight and obese adolescents

Poziom samooceny i poziom ogólnego zadowolenia z życia wśród młodzieży z nadwagą i otyłością

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Key words

self-esteem, overweight, obesity, adolescence

Słowa kluczowe

samoocena, nadwaga, otyłość, młodzież

S u m m a r y

Introduction. Teenage obesity is a growing problem worldwide. Obesity leads to the numerous physiological and mental disorders and the problem is important because adolescence is the time of identity-building.

Aim. The goal of this study was to examine the level of self-esteem and overall life satisfaction in overweight and obese adolescents.

Material and methods. 149 adolescents aged 14-17 years (76 overweight/obese group and 73 normal weight in control group) completed self-report measures of self-esteem and overall life satisfaction. As a measure of self-esteem we used the Rosenberg self-esteem scale in Polish adaptation. The Cantril ladder was used for assessment of overall life satisfaction.

Results. Overweight or obese adolescents have a statistically significantly lower level of self-esteem ($p = 0.001$) and a reduced level of life satisfaction ($p = 0.000$) as compared to normal-weight adolescents.

Conclusions. Excess body weight is not only a physical problem but also a mental one. It is therefore important to approach obesity in a complex way.

S t r e s z c z e n i e

Wstęp. Otyłość wśród nastolatków to coraz poważniejszy problem na całym świecie. Nadmiar masy ciała prowadzi do licznych problemów fizjologicznych i psychicznych. Sfera psychiczna jest szczególnie istotna, ponieważ w czasie dorastania budowana jest tożsamość młodego człowieka.

Cel pracy. Celem pracy było zbadanie poziomu samooceny i poziomu ogólnego zadowolenia z życia wśród młodzieży z nadwagą i otyłością.

Materiał i metody. W badaniu wzięło udział 149 osób (76 w grupie badanej – z nadwagą/otyłością, 73 w grupie kontrolnej – z prawidłową masą ciała), w wieku od 14 do 17 lat. Do zbadania poziomu samooceny wykorzystano skalę samooceny SES M. Rosenberga w polskiej adaptacji Dzwonkowskiej, Lachowicz-Tabaczek i Łaguny. Do oceny ogólnego zadowolenia z życia użyto drabiny Cantrila.

Wyniki. Młodzież z nadwagą i otyłością charakteryzowała się obniżoną samoocena ($p = 0,001$) oraz obniżonym poziomem ogólnego zadowolenia z życia ($p = 0,000$) w porównaniu do młodzieży z prawidłową masą ciała.

Wnioski. Ze względu na fakt, iż nadmiar masy ciała oprócz problemów zdrowia fizycznego niesie ze sobą problemy natury psychologicznej, do leczenia otyłości należy podchodzić w sposób kompleksowy.

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INTRODUCTION

Childhood and adulthood obesity is a growing problem in many parts of the world, especially in developing countries (1). Obesity leads to the many serious physiological complications such as: hypertension, diabetes, dyslipidaemia. It may also cause psychological disorders and social dysfunction (2-4).

Excess of fatty tissue significantly affects physical appearance, and therefore determines the way an obese persons are perceived in their social group. Each social group has its own beauty canons and body image standards (5). If someone's appearance deviates from these norms he may become victim of discrimination, isolation and feel lack of understanding. He becomes

“stigmatized” as defined by Erving Goffman, one of the leading sociologists of the late twentieth century (6).

Physical appearance and social acceptance are particularly important for young people. Adolescence is the time for building self-identity. Unpleasant experiences may have long-term consequences affecting adult life. Stigmatization experienced in the peer group may manifest in form of lower self-esteem and dissatisfaction with life. People with low self-esteem and low life satisfaction may become hypersensitive to criticism, they are non assertive, feel unwarranted guilt and are uncertain of their advantages (7-10).

AIM

The focus of this study was to examine the effect of adolescent obesity on self-esteem and life satisfaction.

MATERIAL AND METHODS

Participants

The study included 149 participants aged 14 to 17 years; the study group consisted of 76 overweight or obese Polish adolescents, patients of Endocrinology and Pediatrics Clinic in Warsaw. The control group comprised 73 normal weight adolescents. There were more girls than boys in each group (64% and 36% respectively). The majority of the study population were inhabitants of the city. In obese group the mean Body Mass Index (BMI) was 32.5; in the control group – 21.03. Characteristics of the participants are presented in tables 1 and 2.

Table 1. Characteristics of the participants in terms of age, gender, place of live and parents' education.

		Control group (n = 73)	Overweight/ obese group (n = 76)
Age		14-17 (M = 15.3; SD = 1.10)	14-17 (M = 15.2; SD = 1.1)
Gender	Girls	47 (64%)	49 (64%)
	Boys	26 (36%)	27 (36%)
Place of live	City	54 (74%)	55 (72%)
	Countryside	19 (26%)	21 (28%)
Mothers education	Primary	1 (1%)	7 (9%)
	Secondary	26 (36%)	37 (49%)
	University	46 (63%)	31 (41%)*
Fathers education	Primary	8 (11%)	10 (14%)
	Secondary	30 (41%)	34 (47%)
	University	35 (48%)	28 (39%)**

*n = 75, **n = 72

Table 3. The level of self-esteem in control (n = 73) and the overweight/obese group (n = 76).

Self-esteem level	Control group (n = 73)			Overweight/obese group (n = 76)		
	Boys (n = 26)	Girls (n = 47)	Total	Boys (n = 27)	Girls (n = 49)	Total
High (0-24)	21 (29%)	34 (46%)	55 (75%)	22 (29%)	32 (42%)	54 (71%)
Average (25-32)	5 (7%)	11 (15%)	16 (22%)	5 (7%)	17 (22%)	22 (29%)
Low (33-40)	0	0	0	0	0	0

Table 2. Characteristics of the overweight/obese group (n = 76) in terms of overweight and obesity.

	85-94 centile	95-96 centile	≥ 97 centile
Total (n = 76)	5 (7%)	11 (14%)	60 (79%)
Gender			
Girls (n = 49)	1 (2%)	7 (14%)	41 (84%)
Boys (n = 27)	4 (15%)	4 (15%)	19 (70%)

Self-esteem and overall life satisfaction

The Rosenberg self-esteem scale in the Polish adaptation of Dzwonkowska, Lachowicz-Tabaczek and Łaguna was used for measurement of adolescent self-esteem. The scale has 10 items rated on a 4-point scale from: “strongly disagree” to “strongly agree”. The minimum number of points to obtain is 10 and the maximum is 40. If values within the 0-24 range mean high self-esteem, the result of 25-32 means average and 33-40 very low self-esteem.

To assess overall life satisfaction we used the Cantril ladder which has steps from zero (bottom) to 10 (top). The top of the ladder represents the best possible life and the bottom of the ladder the worst possible life. Participants were to choose on which step of the ladder they feel they currently stand. Values < 6 mean lack of life satisfaction and ≥ 6 mean satisfaction with life.

RESULTS

In the overweight/obese group 71% participants had high self-esteem and 29% average self-esteem. There were no adolescents with low self-esteem in this group (tab. 3).

Measurements of overall life satisfaction with Cantril ladder assume that values < 6 mean lack of life satisfaction and ≥ 6 mean satisfaction with life.

In figure 1 43% of adolescents in overweight/obese group are unsatisfied with current life. Results below 6 were achieved by 14% of adolescents with normal weight achieved.

T-student test was used to test differences in self-esteem and overall life satisfaction between control and overweight/obese group.

According to the data presented in table 4, both in normal-weight group and the overweight/obese group the mean level of self-esteem is high: 21.0; 23.2 respectively).

The mean overall life satisfaction level in the normal-weight group is 7.1 which is markedly high. For the overweight/obesity group the result is 5.8 which means lack of satisfaction.

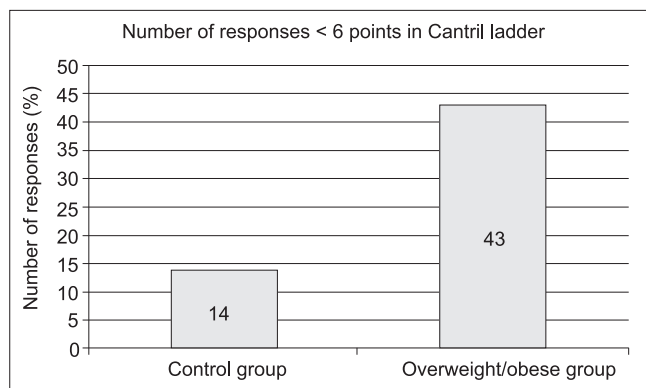


Fig. 1. The level of overall life satisfaction measured by Cantril ladder.

According to the data in table 4 overweight or obese adolescents have a reduced level of self-esteem and life satisfaction as compared to adolescents with normal weight. The values are statistically significant ($p = 0.001$ and $p = 0.000$ respectively).

Table 4. The level of self-esteem and level of overall life satisfaction in control ($n = 73$) and overweight/obese group ($n = 76$).

	Mean	SD	t-Students test	p
Self-esteem level				
Control group ($n = 76$)	21.0	4.5	-6.3	0.001
Overweight/obese group ($n = 76$)	23.2	3.7		
Overall life satisfaction				
Control group ($n = 73$)	7.1	1.1	3.3	0.000
Overweight/obese group ($n = 76$)	5.8	1.3		

In this study we also analyzed the correlation between socio-demographic factors such as age, gender, place of residence, parents' education, BMI as well as, level of self-esteem and overall life satisfaction. Among these factors only BMI and father's education are significantly related to the level of self-esteem; the place of residence is significantly associated with the overall life satisfaction (tab. 5 and 6).

Table 5. Correlation between BMI, father's education and self-esteem in overweight/obese group ($n = 76$).

Level of self-esteem	BMI	Father's education
	0.26	-0.27

Table 6. Place of life and level of overall life satisfaction.

Overall life satisfaction	Place of life	Mean	SD	t-Student test	p
	City	5.71	1.05	-2.54	0.013
Countryside	6.64	1.36			

According to the above data, BMI is negatively correlated with the level of self-esteem ($r = 0.26$); the higher BMI value the lower level of self-esteem. The data in table 5 present a significant relationship between the level of father's education and self-esteem ($r = -0.27$);

the better education of the father the higher level of self-esteem of his children.

The table 6 shows a statistically significant ($p = 0.013$) relationship between place of residence and level of overall life satisfaction. Overweight or obese adolescents who live in the country have a higher level of overall life satisfaction than obese adolescents living in a big city.

DISCUSSION

It follows from the study data that overweight or obese adolescents do not necessarily have low self-esteem. The self-esteem values were placed in the medium and high range, although they were significantly lower than for normal-weight adolescents. Also the level of overall life satisfaction for obese adolescents group is lower in as compared to normal weight control adolescents. Excess body weight also affects the quality of life. Overweight and obesity in adolescents are associated with significantly lower scores of health-related quality of life (HRQOL) (11). This presupposes a higher risk of social and psychological problems for obese children in adulthood (12-14). Parents have strong influence on pro-health behavior and eating habits of their children (15), who have less knowledge and experience regarding healthy food intake (16). Parents therefore should be aware of the consequences of obesity and educate their children how to lead a healthy lifestyle (14). The study demonstrates the particular impact of father's education on self-esteem of obese teenagers. The level of education is often associated with awareness of a of healthy lifestyle and involvement in family life (17, 18). Fathers are more willing to become engaged in the process of child development, if they know their participation will have impact on their children's future (19). The role of the father ("father's figure") in teenager's development is enormous (20). Adolescents in conflict with their father or those deprived of father's support are more frequently prone to feelings of anxiety and depression (21). Teenagers who feel no father's acceptance more often experience learning problems (22). Happiness and life satisfaction in adolescents are associated with strong relationship with the father (23). Good childhood relationship with the father has bearing on problem and stress-solving abilities in adulthood (24). Personality and eating disorders are more common among women who felt rejected by their fathers in childhood (25).

CONCLUSIONS

Study results showed that for obese adolescents the place of residence is associated with life satisfaction. Overweight or obese adolescents who live in the country have a higher level of overall life satisfaction than obese adolescents living in a big city. Rural life has numerous advantages. People are part of a smaller community. They are more open and willing to be supportive. Limited access to places of entertainment (theater,

cinema) stimulates young people to do things together. Other benefits of living in the country include less traffic, less pollution, lower population density, more peace and quiet, open spaces with less development (26).

The study shows that overweight and obesity has impact on the level of self-esteem and life satisfaction. Excess body weight is not only a physical but also a mental problem. It is therefore important to treat obesity as a complex phenomenon.

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