

MAGDALENA SZYNAL¹, JÓZEFA DĄBEK², EWELINA ŁEBEK¹, ANDRZEJ KNAPIK³

Interest in one's own body mass by post-primary school youth

Zainteresowanie młodzieży szkół ponadpodstawowych masą swojego ciała

¹Doctoral Studies, Department of Cardiology, School of Health Sciences in Katowice, Medical University of Silesia in Katowice²Department of Cardiology, School of Health Sciences in Katowice, Medical University of Silesia in Katowice³Department of Adapted Physical Activity and Sport, School of Health Sciences in Katowice, Medical University of Silesia in Katowice

SŁOWA KLUCZOWE

masa ciała,
młodzież szkolna,
szkoły ponadpodstawowe

STRESZCZENIE

Wstęp i cel pracy. Adolescencja jest etapem wielu zmian w życiu człowieka. Wiek dojrzewania cechuje się nie tylko rozwojem sfery fizycznej, ale również emocjonalnej. Kreują się wtedy poglądy dotyczące własnego ciała, rówieśników oraz zachowań względem różnych sytuacji. Celem pracy była analiza zainteresowania masą ciała i jej kontrola przez młodzież szkół ponadpodstawowych na Śląsku.

Material i metody. Przebadano 519 osób (100%): 207 dziewcząt (39,88%) i 317 chłopców (60,12%) w wieku od 12 do 20 lat ($x=15,64$; $SD=1,87$). Badanymi byli uczniowie szkół ponadpodstawowych na terenie województwa śląskiego. Narzędziem badawczym była autorska ankieta, składająca się z części ogólnej i zamkniętych pytań dotyczących badanego problemu.

Wyniki. Ponad 1/3 badanych dziewcząt (70; 33,82%) i chłopców (125; 39,74%) kontrolowała swoją masę ciała w ciągu ostatniego tygodnia. Swoją masę ciała za prawidłową uważało 85 badanych uczennic (41,06%) i 140 uczniów (44,16%). Akceptację swojej masy ciała wyraziło 72 dziewcząt (34,78%) i 119 chłopców (37,54%). Duża część badanej młodzieży (100; 48,31% dziewcząt i 148; 46,67% chłopców) nie spotkała się z negatywnymi uwagami na temat swojego wyglądu.

Wnioski. 1. Badana grupa młodzieży akceptowała swoją masę ciała. 2. Płeć, wiek oraz parametry morfologiczne nie miały wpływu na częstość kontroli masy ciała u badanej młodzieży. 3. Złośliwe uwagi na temat swojej sylwetki i masy ciała oraz rówieśników nie stanowiły problemu w badanej grupie młodzieży.

INTRODUCTION

The stage which is considered a transition phase between childhood and adulthood is called adolescence. This is a distinctive period for every young human. During this time, the child changes into an adult person and prepares to act in new social roles (1). The fastest and most noticeable changes happen in the physical sphere and are accompanied by the changes in the persons' mentality and behaviour (2, 3). This is a time when tissue size varying processes end, but physiological and biochemical activities reach their advanced limit. As soon as skeleton growth processes stop, final body height and proportions are established (2). Dynamic physical changes in the scope of body-build and mass during adolescence feature differentiation due to sex.

In health conditions, boys tend to fatless gain mass and lower the percentage of fatty tissue in general body mass. On the other hand, girls tend to gain fatless body mass and increase mass of fatty tissue which can often induce fear of obesity (4, 5). The course and meaning of this period in the psychological sphere usually determine the direction of further development as well as the forthcoming way of functioning of every young person within the society (6). Transition from childhood to adulthood results in shaping both personal and social identities, and forms areas of personal values and rules. Often the tempo of all these changes and behaviours is uneven and leads to problems with self-acceptance. It can result in teenagers giving too much attention to their own and their school mates' appearances (2, 7). Nowadays, slim silhouette is often considered

a typical human appearance. Mass media are promoting women (a slim silhouette or a very slim one) and men (large body size along with big muscle mass and great physical fitness) ideal body shape as a norm. It frequently causes discrepancy and confusion in terms of one's own body mass interest, self-control and desired appearance among young people (8-10). Growing adolescent people can be easily manipulated by false ideals and popular trends in each peer group which in consequence leads to lack of satisfaction with their own appearance and body mass self-control inadequate to reality (11-14).

AIM

The essential aim of the thesis was an analysis of interest in one's own body mass and its control by post-primary school students in Silesia. The following research questions were asked:

1. Did the examined teenager group accept their body mass?
2. Did sex, age and morphological parameters of the examined teenager group such as: height, body mass and BMI of subjects have impact on the frequency of body mass control?
3. Did subjects observe malicious comments on either their own or their peers' silhouettes and body mass within the subjects' group?

MATERIAL AND METHODS

519 people (100%) were examined: 207 girls (39.88%) and 312 boys (60.12%) aged from 12 to 20 years old ($x = 15.64$; $SD = 1.87$). People examined were students of post-primary schools in the Silesian voivodeship. A customized survey consisting of a general part and closed questions regarding the examination problem was used as an examination tool. The general part consisted of questions about age, sex, BMI, body mass and height. The topic of the examination part consisted of frequency weighing, self-assessment, acceptance of one's own body mass and malicious comments on either their own or their peers' body mass.

Static analysis

Descriptive statistics of quantity variables as well as numeric and percentage summaries of quality variables were carried out. Parametric statistics (ANOVA) were used for quantity variables. Quality variables were compared using non-parametric variables (ANOVA, Mann-Whitney U test). An accepted level of significance was $p < 0.05$.

RESULTS

Characteristics of the examined group including frequency of body mass control

During the adolescence period, teenagers pay too much attention to changes happening in their bodies. Beauty of slim silhouettes promoted by mass media makes teenagers control their body mass precisely, which has impact on their opinion about themselves. When asked about frequency of body mass control, most of girls (90; 43.48%) answered they weighed themselves during the last month. A large number of girls weighed themselves during the last week (70; 33.82%) (fig. 1). However, most of the boys weighed themselves during the last week (124; 39.74%) or the last month (113; 36.28%) (fig. 2).

Characteristics of the examined group including their morphological parameters

No relations were noted between frequency of body mass control and variables such as: age, height, body mass and BMI among both girls (tab. 1), and boys (tab. 2).

Characteristics of the examined group including self-assessment and own body mass acceptance

One's own body mass was considered correct by 85 girls (41.06%) (fig. 3), and 140 boys (44.16%) (fig. 4).

Self-assessment medians for both girls and boys were established at the same level. It can be admitted that girls and boys have the same self-assessment of their body mass. However, when looking at the answer distribution for both boys and girls, it can be found that girls were more critical about their body mass than boys (fig. 5).

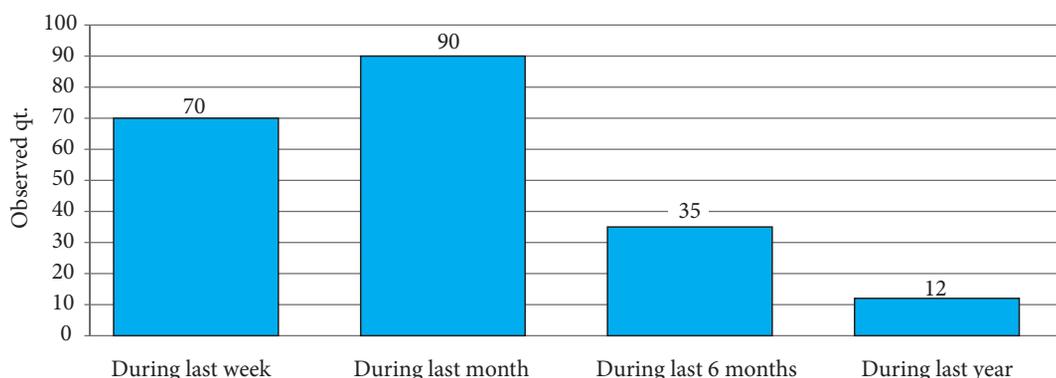


Fig. 1. Frequency of body mass control by examined girls

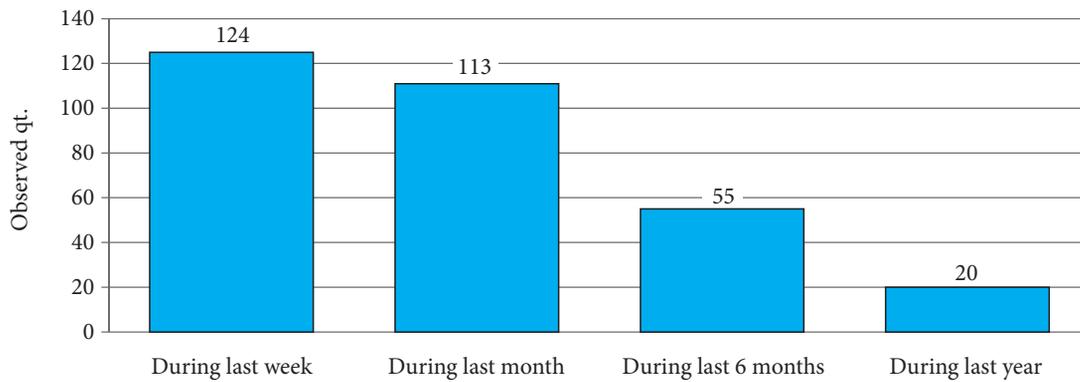


Fig. 2. Frequency of body mass control by examined boys

Tab. 1. Correlation with variables – girls

| Variable | Variables correlation – girls |
|-----------|--------------------------------|
| | Frequency of body mass control |
| Age | 0.060 |
| Height | 0.074 |
| Body mass | 0.050 |
| BMI | 0.028 |

Tab. 2. Correlation with variables – boys

| Variable | Variables correlation – boys |
|-----------|--------------------------------|
| | Frequency of body mass control |
| Age | 0.008 |
| Height | 0.020 |
| Body mass | -0.005 |
| BMI | -0.051 |

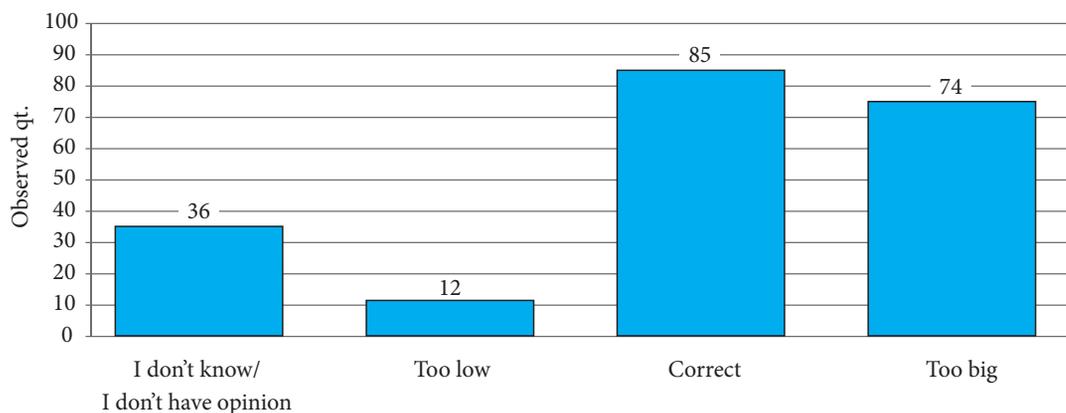


Fig. 3. Self-assessment of body mass by examined girls

Self-acceptance of their body mass was expressed by half of the examined girls (104; 50.24%) (fig. 6), and more than half of the examined boys (198; 63.46%) (fig. 7). Comparison between self-acceptance of body mass among boys and girls was also made. It can be seen in the figure that both girls and boys accept their body mass on a similar level (fig. 8).

Characteristics of the examined group including malicious comments on both own and peers' silhouette

Four figures presented below represent the cases of malicious comments about appearance in the surrounding of the examined teenagers. Girls encountered malicious comments about their peers' silhouettes from time to time (64; 30.92%)

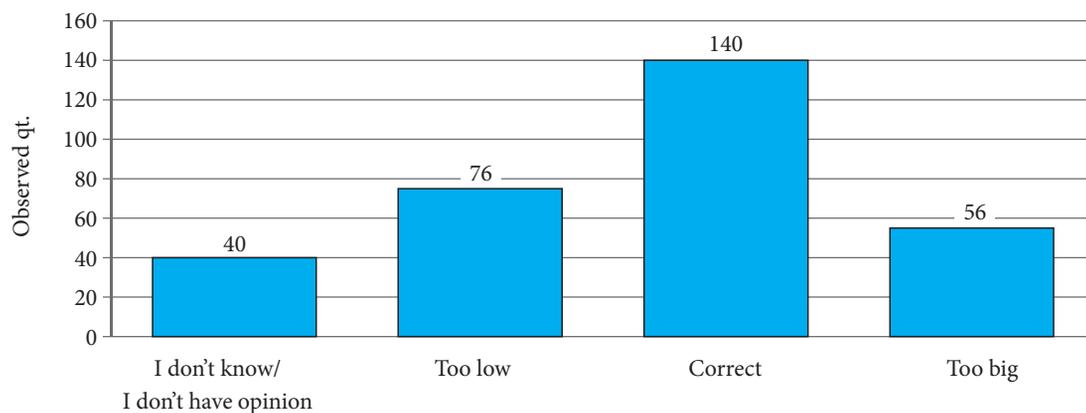


Fig. 4. Self-assessment of body mass by examined boys

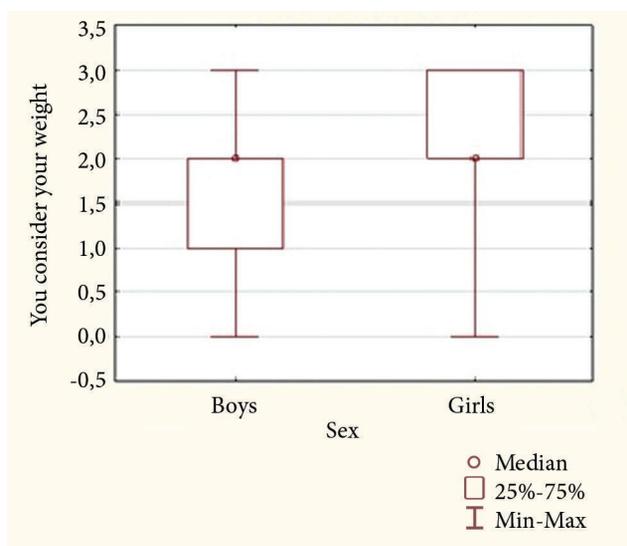


Fig. 5. Body mass self-assessment comparison among examined teenagers

or never (74; 35.75%) (fig. 9). However, regarding boys: 92 never encountered such comments (29.02%), 88 did it rarely (27.76%) and 82 – from time to time (25.87%) (fig. 10). When it comes to the comments directly aimed at the examined subjects, almost half of girls (100; 48.31%) never encountered malicious comments aimed directly towards them (fig. 11). Similarly, among boys, almost half of them (148; 46.69%) never encountered such comments (fig. 12).

DISCUSSION

In our own research, when questioned about the frequency of body mass control, most of the girls (90; 43.48%) answered that they weighed themselves during the last month. A great number of girls also weighed themselves during the last week (70; 33.82%). Most of the boys, on the other hand, weighed themselves during the last week (125; 39.43%) or the last month (116; 36.59%).

Among the examined group of teenagers (73; 35.27%) girls answered that their body mass was too high,

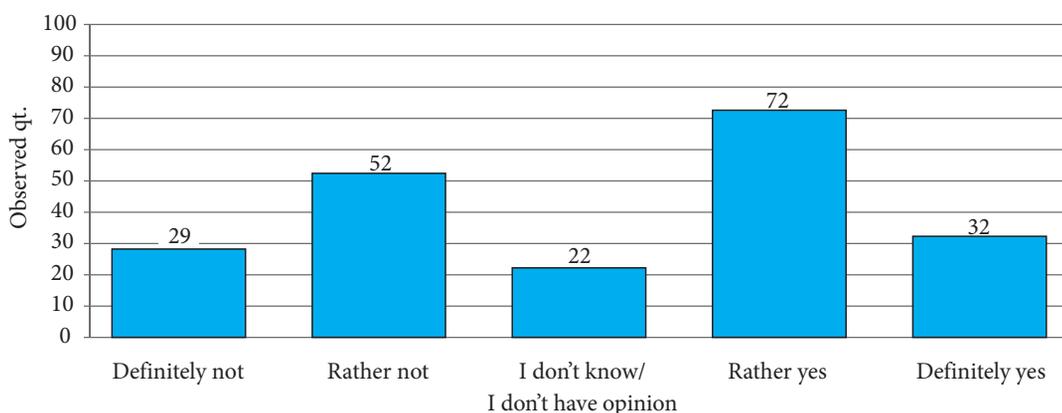


Fig. 6. Self-acceptance of body mass by examined girls

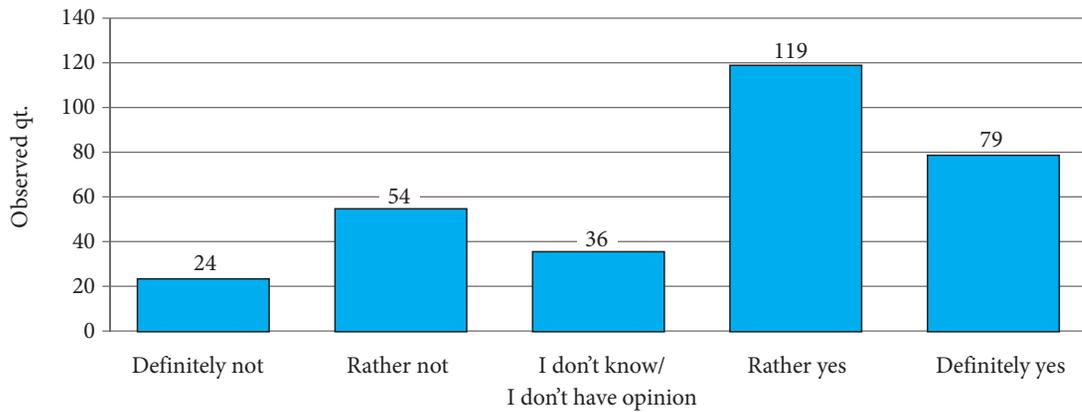


Fig. 7. Self-acceptance of body mass by examined boys

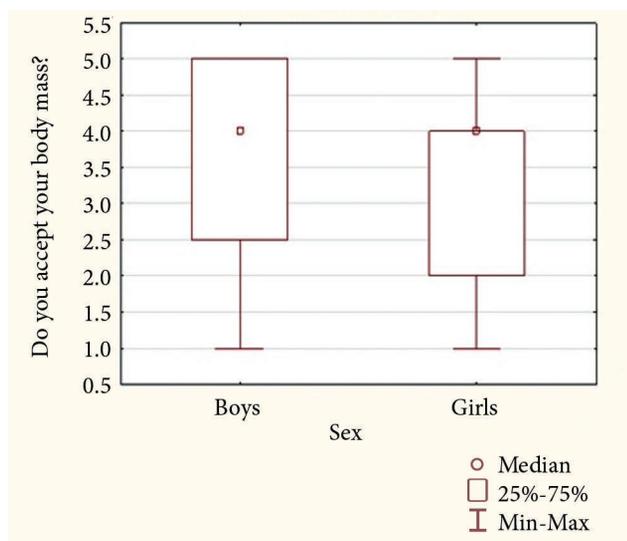


Fig. 8. Self-acceptance of body mass comparison among examined teenagers

while (78; 24.61%) boys claimed that their body mass was too low. Similar answers given by teenagers were achieved in the research by Oblacińska et al. Almost 60% of girls with correct BMI considered themselves too fat, whereas 40% of boys considered themselves too slim (15). Results of Sochacka-Tatara and Stypuła's work showed that 37.9% of the surveyed young people were not happy with their appearance due to the excessive body mass (16). Schoolboys surveyed in Kołoto and Woynarowska's work considered themselves too slim – 20.5%, while schoolgirls considered themselves too fat – 38.3% (13). Kolarzyk et al. proved that in a group of surveyed schoolgirls, whose answers were incorrect when compared to their body mass, more often answers with too big body mass (77%) were predominant in comparison to the opinions about too low body mass (23%) (17). Similar results were achieved in our own researches where the number of girls pointing out too high body mass (73 girls; 35.27%) was higher than those, who answered that their body mass was too low

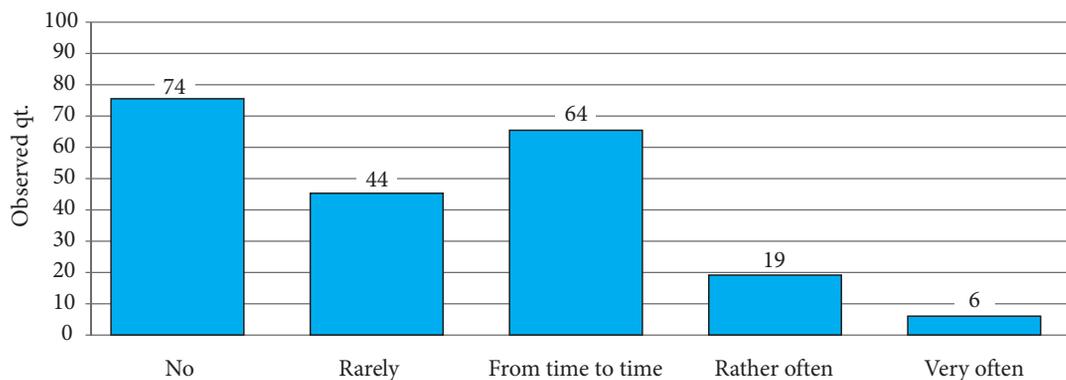


Fig. 9. Usage of malicious comments about silhouettes by peers of examined girls

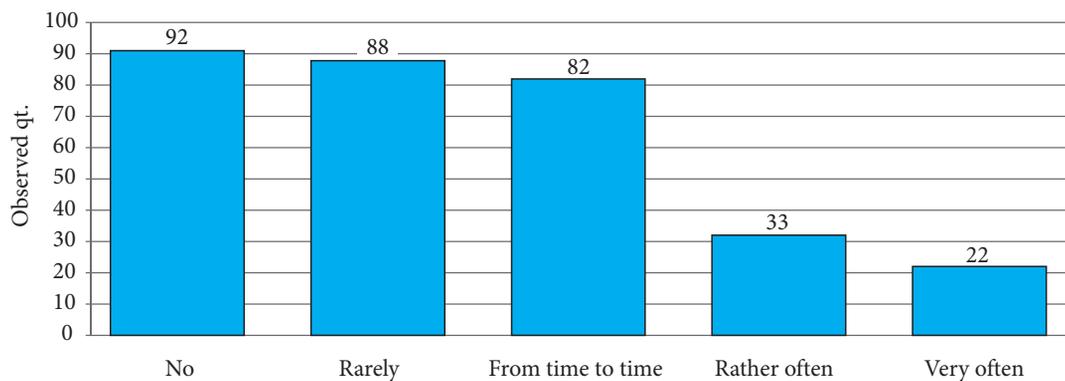


Fig. 10. Usage of malicious comments about silhouettes by peers of examined boys

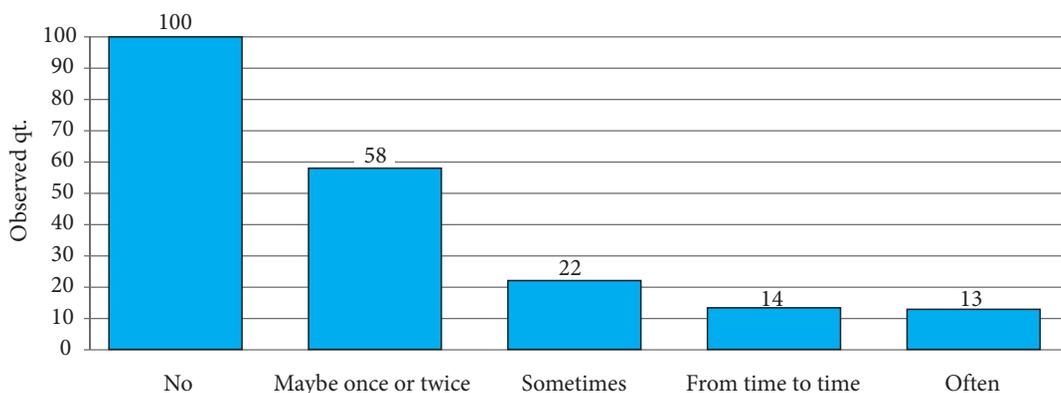


Fig. 11. Malicious comments aimed directly towards examined girls

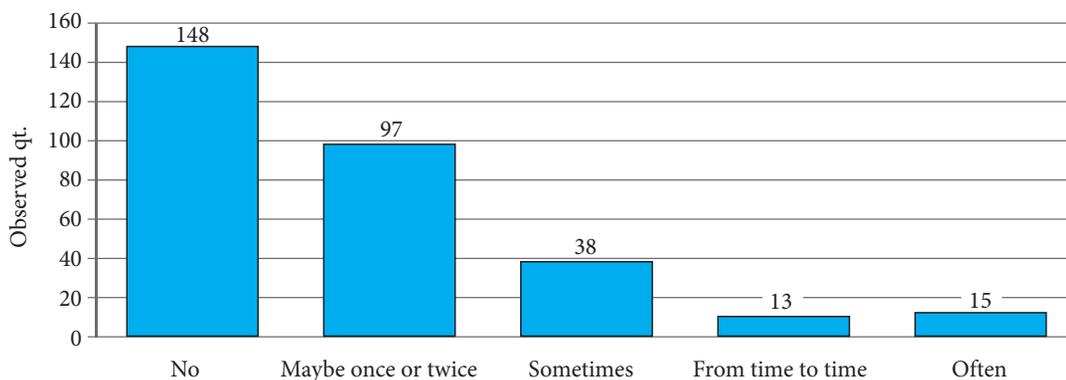


Fig. 12. Malicious comments aimed directly towards examined boys

(10 girls; 4.83%). Negative answers of the examined youth about their silhouettes could originate from prevailing standards of female slim silhouette beauty (18, 19) and male athletic posture (20) created by the mass media and marketing (17). The comparison of self-assessment between girls and boys body masses was performed in our own research, and their averages were similar. It can be said that both girls and boys have similar self-assessment of their

own body mass. However, when looking at the answer distribution of boys and girls in the authors' research, it can be acknowledged that in their body mass self-assessment, girls were far more critical than boys. In the research by Trafalska et al. there was no proof of relation between the BMI of subjects and their self-assessment of their body mass. Each fifth person considered themselves to be too fat (28.6% high school students, 24.7% secondary school students,

19.8% vocational school students and 12.8% technical college students), while 28.1% of the whole examined group claimed to be too slim in other people's views (21). In our own research, no relation was noted between the body mass control frequency and variables such as: age, height, body mass and BMI for both girls and boys.

Acceptance of one's own body mass and appearance is a very important aspect during adolescence. Youth has to adapt to physical changes and strive towards the acceptance of their changing bodies which are the most frequent subject of their worries. Changes in physical appearance can often put adolescent people in discomfort, which can lead to difficulties in functioning among their peers (22). According to the authors' own research, acceptance of one's own body mass was expressed by half of the examined schoolgirls (104; 50.24%) and more than half of the examined schoolboys (198; 63.46%). Both girls and boys accepted their body mass similarly. In their work, Knop et al. proved that 56.52% of the examined children and teenagers aged from 9 to 17 did not accept their body mass (23). In Wojtyła-Buciora and Marcinkowski's research, 799 people – 80% of the examined youth – accepted their own appearance and silhouette (24). Similar results represented Wojtyła et al. in their work. Among the examined group of secondary school students 6926 (74%), people answered that they accepted their appearance (25). Skop-Lewandowska and Szot's work results showed that 1/3 of girls both from secondary school 35% and post-secondary school 35.9% did not accept their own appearance. Similar answers came from 22.2% boys from secondary schools and 14.7% of boys from post-secondary schools (26).

The examination also included cases of malicious comments about the peer's appearance in the surveyed group. Research lead by Łuszczynska in a group of people with the excessive body mass and obesity proved that their subjects were more often mocked and meanly commented than other people. This can lead to dissatisfaction caused by one's own appearance as well as sadness and despondency favourable the appearance of depression moods (27, 28). Girls participating in the authors research very rarely witnessed malicious comments towards silhouettes of their peers: from time to time (64; 30.92%) or never (74; 35.75%) however, 92 boys (29.02%) never encountered such comments, 88 – very rarely (27.76%) and 82 – from time to time (25.87%). In our own research, the subjects were asked about comments directly aimed towards them. Almost half of the examined youth group (100, 48.31% girls and 148; 46.69% boys) never encountered such comments. In the research by Witek et al., 34 people – 69.38% answered that they never mocked an obese person, however, almost half of surveyed people (24; 48.96%) claimed they would not go on a date with an obese person (29).

CONCLUSIONS

1. The examined youth group accepted their body mass.
2. Sex and age of the examined youth as well as morphological parameters did not have impact on the body mass control frequency.
3. Malicious comments on both their own and peers' silhouette and body mass did not cause problems in the examined group of young people.
4. Body mass control is significant for the examined teenagers and is an important part of their lives.

KONFLIKT INTERESÓW CONFLICT OF INTEREST

Brak konfliktu interesów
None

ADRES DO KORESPONDENCJI

Magdalena Szywał
Katedra Kardiologii
Wydział Nauk o Zdrowiu w Katowicach
Śląski Uniwersytet Medyczny
w Katowicach
ul. Inwalidów Wojennych 41a,
41-940 Piekary Śląskie
tel.: +48 510-125-538
szynalmagdalena@gmail.com

REFERENCES

1. Piotrowski K, Wojciechowska J, Ziółkowska B: Rozwój nastolatka. Późna faza dorastania. [W:] Brzezińska A (red.): Niezbędnik dobrego nauczyciela. Instytut Badań Edukacyjnych, Warszawa 2014: 5.
2. Kędzior J: Młodzież jako specyficzna kategoria społeczna. [W:] Kurzępa J, Lisowska L, Pierzchalska A (red.): Współczesna młodzież pomiędzy Eros a Thanatos. Falochron, Wrocław 2008: 9-18.
3. Tomaszewska IE, Babicz-Zielińska E, Tomaszewski D: Odmienne postrzeganie własnych sylwetek przez młodzież a ryzyko występowania zaburzeń w odżywianiu. *Probl Hig Epidemiol* 2012; 93(4): 812-816.
4. Ponczek D, Olszowy I: Styl życia młodzieży i jego wpływ na zdrowie. *Probl Hig Epidemiol* 2012; 93(2): 260-268.
5. Woynarowska B: Edukacja zdrowotna. Polskie Wydawnictwo Naukowe, Warszawa 2008: 44-74, 273-293.
6. Ziółkowska A, Gajewska M, Szostak-Węgierek D: Zachowania żywieniowe młodzieży gimnazjalnej z Warszawy i miejscowości podwarszawskich. *Probl Hig Epidemiol* 2010; 91(4): 606-610.
7. Goluch-Koniuszy Z, Heberlej A: Methods used by adolescents for reducing body mass. *Rocz Panstw Zakł Hig* 2015; 66(4): 327-335.
8. Arcimowicz K: Współczesny ideał męskiego ciała – wybrane aspekty problematyki. *Acta Universitatis Lodzensis Folia Sociologica* 2015; 55: 57-76.
9. Benedetto MC, Tordera C, Botella Arbona C: Body image and restrictive eating behavior in adolescents. *Ad Pediatr* 2003; 58(3): 268-272.

10. Piotrowska E, Broniecka A, Bronkowska M et al.: Wpływ samooceny masy ciała na podaż energii i makroskładników wśród młodzieży 17-18-letniej w aspekcie zagrożenia zespołem metabolicznym. *Probl Hig Epidemiol* 2014; 95(2): 366-375.
11. Wojtyła-Buciora P, Marcinkowski JT: Sposób żywienia, zadowolenie z własnego wyglądu i wyobrażenie o idealnej sylwetce młodzieży licealnej. *Probl Hig Epidemiol* 2010; 91(2): 227-232.
12. Abraham SF: Dieting, body weight, body image and self-esteem in young women: doctors' dilemmas. *Med J Aust* 2003; 178(12): 607-611.
13. Kołło H, Woynarowska B: Samoocena masy ciała i odchudzanie się młodzieży w okresie dojrzewania. *Prz Pediatr* 2004; 3(3/4): 196-201.
14. Mikołajczyk E, Samochovec J: Cechy osobowości u pacjentek z zaburzeniami odżywiania. *Psychiatria* 2004; 2: 91-95.
15. Oblacińska A, Tabak I, Jodkowska M: Zachowania żywieniowe i kontrola masy ciała u młodzieży 16-18-letniej w Polsce w kontekście postrzegania swojego wyglądu i masy ciała. *Probl Hig Epidemiol* 2007; 88(2): 162-170.
16. Sochacka-Tatara E, Stypuła A: Zaburzenia odżywiania wśród uczniów szkół krakowskich – część ogólnopolskich badań zaburzeń odżywiania wśród młodzieży. *Probl Hig Epidemiol* 2010; 91(3): 591-595.
17. Kolarzyk E, Janik A, Kwiatkowski J, Potocki A: Stosowanie diet odchudzających przez krakowską młodzież ze szkół ponadpodstawowych, z uwzględnieniem wieku i płci. *Probl Hig Epidemiol* 2010; 91(3): 409-413.
18. Sulemana H, Smolensky MH, Lai D: Relationship between physical activity and body mass index in adolescents. *Med Sci Sports Exerc* 2006; 38(6): 1182-1186.
19. Boschi V, Siervo M, D'Orsi P et al.: Body composition, eating behavior, food-body concerns and eating disorders in adolescent girls. *Ann Nutr Metab* 2003; 47(6): 284-293.
20. Kilpatrick M, Ohannessian C, Bartholomew JB: Adolescent weight management and perceptions: an analysis of the National Longitudinal Study of Adolescent Health. *J Sch Health* 1999; 69: 148-152.
21. Trafalska E, Niedźwiedzka M, Nowacka E: Czynniki ryzyka zaburzeń odżywiania wśród młodzieży łódzkiej – postrzeganie i kontrola masy ciała. *Probl Hig Epidemiol* 2010; 91(4): 602-605.
22. Obuchowska I: Drogi dorastania. Psychologia rozwojowa okresu dorastania dla rodziców i wychowawców. Wydawnictwa Szkolne i Pedagogiczne, Warszawa 1996.
23. Knop K, Zawodniak-Szałupska M, Gmitrowicz A: Ja idealne u młodzieży z nadwagą i otyłością. *Psychiatr Psychol Klin* 2011; 11(3): 154-164.
24. Wojtyła-Buciora P, Marcinkowski JT: Sposób żywienia, zadowolenie z własnego wyglądu i wyobrażenie o idealnej sylwetce młodzieży licealnej. *Probl Hig Epidemiol* 2010; 91(2): 227-232.
25. Wojtyła A, Biliński P, Bojar I, Wojtyła C: Zaburzenia odżywiania u polskich gimnazjalistów. *Probl Hig Epidemiol* 2011; 92(2): 343-350.
26. Skop-Lewandowska A, Szot W: Samoocena obrazu sylwetki uczniów krakowskich szkół gimnazjalnych i ponadgimnazjalnych. *Probl Hig Epidemiol* 2010; 91(4): 596-601.
27. Łuszczynska A: Nadwaga i otyłość. Interwencje psychologiczne. PWN, Warszawa 2007.
28. Joško-Ochojska J, Lizończyk I: Występowanie depresji u młodzieży z nadwagą i otyłością. *Hygeia Public Health* 2014; 49(4): 690-695.
29. Witek A, Lewandowska-Kidoń T, Pawluk-Skrzypek A: Percepcja otyłego rówieśnika a przekonania zdrowotne młodzieży gimnazjalnej. *Medycyna Ogólna i Nauki o Zdrowiu* 2012; 18(4): 276-280.

nadesłano: 23.01.2019

zaakceptowano do druku: 10.04.2019