

ANNA PLATTA, PAULINA KACZMARSKA

## **SELECTED HEALTH BEHAVIOURS OF GIRLS AGED 14 TO 19 YEARS AND THE RISK OF EATING DISORDERS: A PILOT STUDY**

### **S u m m a r y**

**Background.** Health behaviors combine emotional aspects, beliefs and tendencies to behave positively or negatively, thus making their nature very complex. The aim of this study was to assess selected health behaviors, subjective self-perception of the body image and eating patterns of girls aged 14 to 19 years ( $n = 114$ ). The study entailed: examining the propensity of girls to reduce their nutritional consumption (Restricted Eating Scale), establishing behaviors associated with improper eating (Problem Eating Behaviors Questionnaire), identifying the factors affecting girls' eating behavior and subjective self-assessment of their body image and diet.

**Results and conclusion.** The results of the study showed that girls had problems with an accurate perception of their own body image. Extreme food restriction was not proven, but some improper eating behaviors such as eating while doing activities, snacking during the day and eating irregularly were found. The continued monitoring of health-promoting behaviors is useful and reasonable due to the diagnosis of the need to take an action to promote the development of habits and hierarchies of health values among girls aged 14 to 19 from small town environments. The conducted research fits into health risk management and health promotion in the Polish population.

**Key words:** girls, body image satisfaction, improper eating behaviours, restricted eating

### **Introduction**

Along with the progress of civilization, the lifestyles of adults, children and adolescents keep changing, and this has its consequences for the health of specific groups of the population. Therefore, knowledge about nutrition and lifestyle factors that affect human health are also undergoing a constant change [21, 27]. The analysis of transformations in consumer behaviors around the world allows us to put forward the thesis that trends in consumer behavior are the consequence of existing risks being translated into food safety [14]. It is recognized that the above values are closely related to the

---

*Dr inż. A. Platta ORCID: 0000-0002-7963-1889, inż. P. Kaczmarska, Katedra Zarządzania Jakością, Wydział Zarządzania i Nauk o Jakości, Uniwersytet Morski w Gdyni, ul. Morska 81-87, 81-225 Gdynia; Kontakt: a.platta@wzpj. umg.edu.pl*

objectives of the Sustainable Development Goals (SDG) representing a roadmap for transforming and reshaping the world in which the needs of the present generation can be met in a sustainable way, with respect for the environment and with consideration for the needs of future generations [23, 26].

Health behaviors refer mainly to cognitive, behavioral and emotional components. They combine emotions, beliefs, and tendencies to behave positively or negatively, therefore their nature is very complex [4, 5, 12]. Health behavior is an integral component of the socialization process, which responds to the influence of different environments: family, school, peers, mass media and social media [16, 25].

Health behaviors depend on health awareness gained throughout one's lifetime, especially in the process of raising and forming attitudes during childhood and adolescence [6, 25, 13]. The literature emphasizes [12] that the creation and formation of health attitudes and behaviors is determined by gender, self-perception in the health space and performing social roles. Women and men perceive the issue of health differently. The motivation to engage in health behaviors is gender-related. For both men and women, health is a measure of strength and physical condition, which they consider essential for fulfilling social roles. The literature emphasizes that bad eating habits are one of the factors which negatively affect the human body and result in the development of civilization diseases, including: overweight, cardiovascular disease, type 2 diabetes, cancer, eating disorders. A properly balanced diet is supposed to provide all the necessary nutrients for the proper growth and physical development of the organism [2, 17, 20, 22, 30].

The aim of the study was to assess selected health behaviors, subjective self-perception of the body image and eating patterns of girls aged 14 to 19 years.

## **Material and methods**

The survey was conducted in 2021 among girls between 14 and 19 years old ( $n = 114$ ) attending a high school in Braniewo. The selection of respondents for the study was purposive and aimed at assessing selected health behaviors demonstrated by adolescent girls living in a small town with a population of less than 25,000 citizens. Currently, the literature is dominated by publications on the eating behavior of adolescents from large urban centers.

The research was conducted using a survey questionnaire, with an indirect interview technique. The survey questionnaire was circulated among female high school students through the Librus portal. The survey questionnaire included closed-ended questions and two scales: 1. Restricted Eating Scale [28]; 2. Problem Eating Behaviors Questionnaire [3].

The Restricted Eating Scale consists of nine questions on behaviors that affect the reduction or maintenance of current body weight. The respondents answered using a

five-point Likert scale according to the frequency of behavior (never - 1 point, rarely - 2 points, sometimes - 3 points, often - 4 points, very often - 5 points). The results were interpreted based on the averages of the responses. A higher score received by a given respondent was a reflection of the intensity of a given behavior, meaning that she was more likely to reduce her food intake and possibly follow reduction and/or elimination diets.

Problem Eating Behaviors Questionnaire consists of 24 questions relating to behaviors that can lead to obesity. The girls' task was to indicate the frequency of a given habit on a five-point Likert scale from "never" to "very often". The respondents could earn from 1 to 5 points for answering each question (never - 1 point, rarely - 2 points, sometimes - 3 points, often - 4 points, very often - 5 points). The results were interpreted based on the averages of the responses to each statement. The statement with the highest mean indicated the highest intensity of the behavior in question, that is, a greater tendency to overconsume and the risk of developing obesity.

Closed-ended questions included in the survey questionnaire addressed such issues as: 1. a subjective self-assessment of one's body image and diet; 2. the selection of factors that have the greatest influence on the girls' eating habits. The respondents making the self-assessment of their body image could choose one of three possible answers: yes - I am satisfied with my body image; no - I would like to lose some weight; no - I would like to gain some weight. When evaluating their diet, the respondents could choose one of five possible answers: definitely correct, rather correct, sometimes correct and sometimes incorrect, rather incorrect, incorrect. When answering a question that allowed them to select the factors having the greatest influence on the girls' eating habits, the respondents chose one of seven possible answers: the eating pattern followed at the family home, the peer environment, the financial situation of their family, the fashion for weight-loss diets, the promotion of healthy lifestyles by celebrities, the desire to reduce weight and their own knowledge of rational nutrition.

Based on the anthropometric measures provided by the respondents, such as height and weight, the Body Mass Index (BMI) of the respondents was calculated. It was used to determine the percentage of adolescent girls having correct body weight and also showing the features of underweight or overweight (tab. 1). The conclusion of the obtained results was drawn on the basis of the accepted ranges of the BMI index by dividing the studied group of girls into three groups: group 1 - respondents showing features of underweight or malnutrition ( $BMI \leq 18.49$ ), group 2 - respondents having correct body weight ( $BMI$  from 18.5 to 24.99), group 3 - respondents showing features of overweight or obesity ( $BMI \geq 25$ ) - tab. 1. The results of the study are presented using numerical values (n) and the percentage spread of each score (% of answers).

Table 1. Characteristics of the study group of girls aged 14 to 19 years (n = 114)

Tabela 1. Charakterystyka badanej grupy dziewcząt w wieku 16-19 lat (n = 114)

BMI values Wartości wskaźnika BMI	Numerical values (n) Liczba wskazań (n)	% of answers % wskazań
underweight and malnutrition / niedowaga i niedożywienie; BMI: $\leq 18.49$	25	21.93
correct body weight / prawidłowa masa ciała; BMI: 18.5 – 24.99	77	67.54
overweight and obesity / nadwaga i otyłość; BMI: $\geq 25$	12	10.53

## Results and discussion

### *The tendency of girls to restrict food and go on diets*

The average score obtained from the analysis of the Restricted Eating Scale for the study group of girls is  $\bar{x} = 22.31$  ( $SD = 8.37$ ;  $Me = 22$ ). An average value obtained is practically equal to the median value, i.e. the number of results above and below the norm is almost the same. The statement: "I pay attention to what I eat" received the highest average score  $\bar{x} = 3.35$  ( $SD = 1.17$ ). The averages of the other behaviors surveyed using the scale ranged from 2.19 to 2.62 – indicating that the situations in question occur rarely or sometimes in the lives of the surveyed girls. Table 2 shows the results obtained for each statement of the Restricted Eating Scale.

The spread of the results differs due to the weight pattern of the girls covered by the study. In the group of underweight and malnourished teenage girls, the averages of individual statements are lower than in the rest of the groups. The most common behavior in this group is paying attention to what one eats ( $\bar{x} = 2.80$ ). Girls whose weight was normal also indicated that the statement: "I pay attention to what I eat" best describes their eating behavior ( $\bar{x} = 3.35$ ). Meanwhile, among the girls surveyed who were overweight and obese, the statement: "I try not to eat between meals to avoid gaining weight" received the highest average score ( $\bar{x} = 3.50$ ) – tab. 2.

### **Girls' improper eating behavior**

An average result obtained for the studied group of girls based on the analysis of the Problem Eating Behaviors Questionnaire is  $\bar{x} = 56.83$  ( $SD = 13.20$ ;  $Me = 55$ ). The most commonly repeated behavior was eating while doing other activities ( $\bar{x} = 3.30$ ;  $SD = 1.13$ ). Other statements that had an average above three were: "I eat my meals irregularly" ( $\bar{x} = 3.23$ ;  $SD = 1.15$ ) and "I snack during the day" ( $\bar{x} = 3.19$ ;  $SD = 1.07$ ). The girls surveyed indicated that the following behaviors were exhibited by them the most rarely: "I eat in secret" ( $\bar{x} = 1.50$ ;  $SD = 0.98$ ), "I avoid healthy, unprocessed products" ( $\bar{x} = 1.73$ ;  $SD = 0.94$ ), "I have attacks of overeating and lose control over the

Table 2. Assessment of food restriction by girls aged 14 to 19 years (n = 114)

Tabela 2. Ocena ograniczania spożycia żywności przez dziewczęta w wieku 14–19 lat (n = 114)

Statements on the Restricted Eating Scale Stwierdzenia na Skali Ograniczonego Spożycia Żywności	x	SD	Me	% of answers % wskazań				
				never nigdy	rarely rzadko	sometimes czasami	often często	very often bardzo często
If I gain weight, I will eat less than normal / Jeśli przytyję, będę jadła mniej, niż normalnie	2.54	1.26	2.5	27.19	22.81	26.32	15.79	7.89
I limit the size of my meals, even though I would like to eat more Ograniczam porcje posiłków, pomimo, że zjadłabym więcej	2.32	1.19	2	31.58	26.32	26.32	9.65	6.14
I refuse the food and drink offered to me because I do not want to gain weight / Odmawiam oferowanego jedzenia/picia, ponieważ nie chcę przytyć	2.19	1.18	2	35.96	28.95	20.18	9.65	5.26
I pay attention to what I eat Zwracam uwagę na co jem	3.35	1.17	3	5.26	21.05	26.32	28.07	19.30
I choose low-calorie foods to eat Do zjedzenia dobieram produkty niskokaloryczne	2.37	1.13	2	26.32	30.70	28.07	9.65	5.26
If I eat too much, I eat less the next day / Jeżeli zjem za dużo, następnego dnia jem mniej	2.34	1.29	2	34.21	24.56	23.68	7.89	9.65
I purposely eat less in order not to get fat / Celowo jem mniej, aby nie przytyć	2.26	1.21	2	35.09	24.56	25.44	8.77	6.14
I try not to eat between meals to avoid gaining weight / Próuję nie jeść między posiłkami, aby nie przytyć	2.62	1.35	2	26.32	24.56	22.81	13.16	13.16
I try not to eat in the evenings because I am afraid of gaining weight / Próuję nie jeść wieczorami, bo boję się przytyć	2.30	1.28	2	37.72	21.05	21.93	12.28	7.02

Explanatory notes: x – arithmetic mean, SD – standard deviation, Me - median.

Objaśnienia: x – wartość średnia, SD – odchylenie standardowe, Me – mediana.

amount of food I consume" ( $\bar{x} = 1.82$ ;  $SD = 1.12$ ) and "I eat at night" ( $\bar{x} = 1.98$ ;  $SD = 1.20$ ). Table 3 shows the results obtained for each statement of the Problem Eating Behaviors Questionnaire.

Based on the study, it was found that the surveyed group of girls indicated the following three most common incorrect eating behaviors, namely: eating while doing activities ( $\bar{x} = 3.30$ ;  $SD = 1.13$ ), eating meals irregularly ( $\bar{x} = 3.23$ ;  $SD = 1.15$ ) and snacking during the day ( $\bar{x} = 3.19$ ;  $SD = 1.07$ ) – tab. 3. Other authors [4] picked out similar behaviors associated with inappropriate eating among women, although the prevalence was lower: snacking during the day ( $\bar{x} = 2.17$ ;  $SD = 1.07$ ), eating too little

in the first half of the day and then too much in the second half of the day ( $\bar{x} = 2.07$ ; SD = 1.21), eating while doing other activities ( $\bar{x} = 2.04$ ; SD = 1.22). The results of both studies indicate that the girls' eating regularity is improper. According to the literature, up to 52 % of high school-aged girls report that they never have meals regularly [15]. Too long breaks between meals result in a drop in blood glucose levels, and therefore a decrease in the ability to concentrate and a reduction in the mental and physical abilities of young people. Eating between meals (snacking) is an improper eating habit that leads to the development of overweight and obesity [10, 11]. Unfortunately, up to 43 % of the surveyed high school students in Poland reported eating extra snacks between meals [18]. The results of our own study are consistent with those obtained by other authors, who found that adolescents in Poland show an average level of eating behavior. It was shown that students ate irregularly and irrationally [7, 9, 24], consumed too few vegetables, fruits, dairy products, and too much meat and fast-food meals [9, 19].

Table 3. Assessment of improper eating behaviors of girls aged 14 to 19 years (n = 114)

Tabela 3. Ocena niewłaściwych zachowań żywieniowych dziewcząt w wieku 14–19 lat (n = 114)

Statements on the Problem Eating Behaviors Questionnaire Stwierdzenia na Skali Niewłaściwych Zachowań Żywieniowych	x	SD	Me	% of answers % wskazań				
				never nigdy	rarely rzadko	sometimes czasami	often często	very often bardzo często
I eat very large portions of food Jem bardzo duże porcje jedzenia	2.65	1.03	2	8.77	42.98	29.82	11.40	7.02
I choose high-calorie products / Wybieram produkty wysokokaloryczne	2.35	0.86	2	14.91	44.74	29.82	10.53	0.00
I choose greasy foods Wybieram tłuste jedzenie	2.15	0.78	2	17.54	56.14	20.18	6.14	0.00
I drink high-calorie drinks Wypijam wysokokaloryczne napoje	2.27	1.07	2	23.68	43.86	18.42	9.65	4.39
I do not eat breakfast / Nie jem śniadan	2.41	1.36	2	36.84	19.30	17.54	18.42	7.89
I eat little in the first half of the day, and then too much in the second half / Jem mało w pierwszej połowie dnia, a później za dużo w drugiej	2.39	1.22	2	28.95	29.82	21.05	14.04	6.14
I have snacks throughout the day / Pojadam w ciągu dnia	3.19	1.07	3	5.26	21.05	32.46	29.82	11.40
I eat while doing other activities such as watching TV, doing homework etc. / Jem podczas wykonywania innych czynności np. oglądania telewizji, odrabiania pracy domowej	3.30	1.13	3	3.51	21.93	35.96	18.42	20.18
I do not stop eating, despite the feeling of being full / Nie przestajesz jeść, pomimo uczucia sytości	2.02	1.12	2	43.86	25.44	18.42	9.65	2.63

I eat because I am bored / Jem, bo jestem znudzona	2.58	1.21	3	24.56	22.81	28.95	17.54	6.14
I eat when I am in a bad mood / Jem, kiedy jestem w złym nastroju	2.42	1.21	2	28.95	24.56	28.95	10.53	7.02
I eat for the sheer pleasure of eating / Jem dla samej przyjemności jedzenia	2.72	1.24	3	19.30	27.19	25.44	18.42	9.65
I reward myself with food / Nagradzam się jedzeniem	2.04	1.10	2	40.35	29.82	19.30	7.02	3.51
I have attacks of overeating and lose control over the amount of food I eat / Mam napady objadania i tracę kontrolę nad ilością spożytego pokarmu	1.82	1.12	1	54.39	23.68	10.53	7.89	3.51
I feel guilty after eating the meal / Mam wyrzuty sumienia po zjedzeniu posiłku	2.38	1.30	2	35.09	16.67	28.95	10.53	8.77
I eat too fast / Jem zbyt szybko	2.42	1.25	2	31.58	20.18	30.70	9.65	7.89
I eat my meals irregularly / Spożywam posiłki nieregularnie	3.23	1.15	3	6.14	24.56	23.68	31.58	14.04
I eat in secret / Jem w tajemnicy	1.50	0.98	1	72.81	13.16	8.77	1.75	3.51
I eat periodically very well, and then unhealthily / Jem okresowo bardzo dobrze, a później niezdrowo	2.43	1.11	2	25.44	25.44	34.21	10.53	4.39
My eating during the week is significantly different from eating on weekends / Moje jedzenie w ciągu tygodnia znaczco różni się od jedzenia w weekendy	2.20	1.12	2	34.21	27.19	27.19	7.02	4.39
I dine out/ Jadam na mieście	2.65	0.98	3	9.65	38.60	32.46	15.79	3.51
I avoid healthy, unprocessed products / Unikam zdrowych, nieprzetworzonych produktów	1.70	0.94	1	51.75	31.58	10.53	4.39	1.75
I overly avoid the feeling of hunger / Nadmiernie unikam uczucia głodu	2.04	0.98	2	33.33	35.96	24.56	3.51	2.63
I eat at night / Jem w nocy	1.98	1.20	2	47.37	25.44	14.91	6.14	6.14

Explanatory notes: in line with the explanations in table no. 2.

Objaśnienia: zgodnie z objaśnieniami w tabeli nr 2.

#### *Girls' subjective self-assessment of their own body image, diet and factors affecting their eating habits*

The girls surveyed were mostly (75.44 %) not satisfied with their appearance. The overwhelming percentage of girls (up to 63.16 %) said they wanted to reduce their current body weight, 12.28 % wanted to increase their body weight, and only 24.56 % of the respondents were satisfied with their body image (tab. 4).

Table 4. Subjective self-assessment of body image, diet, factors influencing girls' eating habits (n = 114)

Tabela 4. Subiektywna samoocena wizerunku ciała, sposobu żywienia, czynników wpływających na realizowane nawyki żywieniowe dziewcząt (n = 114)

Assessment criteria Oceniane kryteria	BMI values / Wartości wskaźnika BMI							
	total ogółem	BMI: 18.5 – 24.99; correct body weight/ prawidłowa masa ciała		BMI: ≤ 18.49; underweight and malnutrition/ niedowaga i niedożywienie		BMI: ≥ 25; overweight and obesity/ nadwaga i otyłość		
		n	%	n	%	n	%	n
assessment of one's body image / ocena wizerunku własnego ciała								
yes - I am satisfied with my body image tak - jestem zadowolona z wizerunku mojego ciała	28	24.56	22	28.57	5	20.00	1	8.33
no - I would like to lose some weight nie - chciałabym trochę schudnąć	72	63.16	52	67.53	9	36.00	11	91.67
no - I would like to gain some weight nie - chciałabym trochę przytyć	14	12.28	3	3.90	11	44.00	0	0.00
nutrition assessment / ocena sposobu żywienia								
definitely correct/ zdecydowanie prawidłowy	7	6.14	7	9.09	0	0.00	0	0.00
rather correct/ raczej prawidłowy	20	17.54	18	23.38	1	4.00	1	8.33
sometimes correct and sometimes incorrect czasami prawidłowy, a czasami nieporwidłowy	64	56.14	41	53.25	16	64.00	7	58.33
rather incorrect / raczej nieprawidłowy	16	14.04	8	10.39	7	28.00	1	8.33
Incorrect / nieprawidłowy	7	6.14	3	3.90	1	4.00	3	25.00
factors influencing the eating habits acquired / czynniki wpływające na realizowane nawyki żywieniowe								
the eating pattern followed at the family home / wzorzec żywienia wyniesiony z domu rodzinnego	25	21.93	13	15.58	8	32.00	4	33.33
the peer environment / środowisko rówieśnicze	10	8.77	8	10.39	2	8.00	0	0.00
the financial situation of their family sytuacja materialna mojej rodziny	3	2.63	1	1.30	0	0.00	2	16.67
the fashion for loss of weight – weight-loss diets / moda na odchudzanie – diety odchudzające	2	1.75	1	1.30	0	0.00	1	8.33
the promotion of healthy lifestyles by celebrities / promowanie zdrowego stylu życia przez sławne osoby	3	2.63	2	2.60	1	4.00	0	0.00
the desire to reduce weight / chęć redukcji masy ciała	26	22.81	20	25.97	3	12.00	3	25.00
their own knowledge of rational nutrition / własna wiedza na temat racjonalnego żywienia	45	39.47	32	41.56	11	44.00	2	16.67

Explanatory notes: n - numerical values , % of answers.

Objaśnienia: n - liczba wskazań, % wskazań.

The literature on this subject [24] shows that the level of satisfaction with one's appearance does not correlate with the objectively determined body weight of the respondents. This was confirmed by the results of our own study, as more than 75 % of the girls surveyed declared they were dissatisfied with their appearance (tab. 4). It is noteworthy that based on the calculated BMI for the study group of girls, as many as 67 % of them had a normal body weight (tab. 1). The literature shows [15, 27] that satisfaction with one's body image is not only related to physical indicators, but also to subjective beliefs about one's body size. Lower BMI values are related to girls' more positive assessment of their body image [1]. The results of our own and other authors' studies confirm that girls' healthy body weight value is not a factor behind their satisfaction with their body image. The results presented demonstrate the girls' highly negative evaluation of their appearance, which may be a factor that increases the risk of eating disorders in this population group.

The respondents were also asked to rate their diet. More than a half of the female respondents (56.14 %) answered that their diet was sometimes correct and sometimes incorrect. It was also found that the same percentage of girls indicated that their nutrition was definitely correct and incorrect (6.14 % each). Only 9.09 % of the girls indicated that their diet was definitely healthy, and these were only respondents with a designated correct weight (tab. 4). This group of girls was more critical of their diet compared to the other respondents, as up to 25 % of them rated it as inappropriate. Meanwhile, only 4 % of girls with a marked  $BMI \leq 18.49$  (showing features of underweight or malnutrition) and 3.9 % of girls with a marked  $BMI \geq 25$  (overweight or obese) declared that their diet was incorrect (tab. 4).

The surveyed group of girls was asked to identify the factor that influenced their diet to the greatest degree. The highest percentage of female respondents declared that it was their own knowledge of nutrition (39.47 %), the desire to reduce weight (22.81 %) and the eating pattern followed at family home (21.93 %) – tab. 4. This question was then analyzed along with the respondents' BMI. Girls with a regular body weight declared that their eating behavior was most influenced by their own knowledge (41.56 %), their desire to reduce weight (25.97 %), the role model from the family home (15.58 %) and the peer environment (10.39 %). In addition, the girls indicated that their eating behavior was influenced by celebrities' promotion of healthy lifestyles (2.6 %), as well as their families' financial situation and the fashion for weight-loss diets (1.3 % of indications each) – tab. 4. Girls with a marked  $BMI \leq 18.49$  (showing features of underweight or malnutrition) were most often guided in choosing foods to consume by their own knowledge of rational nutrition (44 %), knowledge gained at home (32 %), desire to reduce weight (12 %), opinion of the peer community (8 %) and promotion of healthy lifestyles by celebrities (4 %) – tab. 4. Respondents with a marked  $BMI \geq 25$  (overweight or obese) believed that their eating behavior was most

influenced by the eating pattern they followed at the family home (33.33 %), the desire to reduce weight (25 %), their own knowledge of rational nutrition (16.67%), the financial situation of the family (16.67 %) and the fashion for weight-loss diets (8.33 %) – tab. 4.

The analysis of the results indicated that the girls had problems with correct perception of their own body image [1, 8, 29]. The results show that the girls have a highly negative opinion of their own appearance, which may be a factor that increases the risk of eating disorders in this population group – tab. 4. The analysis of the literature on this subject indicates that there is a significant relation between low self-esteem, peer criticism, the need to be accepted and the occurrence of eating disorders [24, 27]. The conducted research fits into health risk management and health promotion in the Polish population. Learning about the health behavior of girls living in small towns with a population of less than 25,000 will allow them to introduce changes in their lifestyles that can counteract the development of diseases of nutritional origin. Understanding and improving health-related behaviors is critical to the future of public health and individuals' well-being. While policies, laws and regulations can influence health behavior, there are also many individual factors that must be considered when making an effort to improve public health. It is important to be aware that this change will be gradual. These changes will not happen in the short term. Public health programs need to identify and maximize the benefits of a positive change and consider the modification of educational programs and community support for adolescents to help young Poles sustain the changes over the long term. Understanding and improving health-related behaviors among adolescent girls is critical to the future of public health and individuals' well-being.

The above study can be used to educate adolescents, parents, teachers about adolescent girls' dissatisfaction with their body image and the consequences of this problem. Health education of adolescent girls is especially important because girls with low self-esteem are at high risk of developing eating disorders [8]. Conducting research to monitor health behaviors is useful and reasonable due to the diagnosis of the need to take an action to promote the creation of attitudes and hierarchy of health values in Poland among girls aged 14 to 19 years from small town environments. The conducted research fits into health risk management and health promotion in the Polish population.

## Conclusions

1. Statements such as "I pay attention to what I eat" and "I try not to eat between meals to avoid gaining weight" were most frequently indicated in the surveyed group of girls aged 14 to 19 years.

2. The improper eating behavior characteristics of the study group of girls are: eating while doing activities, eating irregularly and snacking during the day.
3. The girls mostly declared that their diet was sometimes correct and sometimes incorrect. In addition, they indicated that their own knowledge of nutrition, their desire to reduce weight and eating patterns they followed in their families had the greatest influence on their diet.
4. The girls had problems with the proper perception of their own body image. The results show that girls have a highly negative opinion of their own appearance, which may be a factor that increases the risk of eating disorders in this population group.

*The work has been funded by WZNJ/2023/PZ/01.*

## References

- [1] Boniecka K., Liberska H.: Aktywność fizyczna, zachowania żywieniowe i ocena ciała u dziewcząt w drugiej fazie dorastania. *Przegląd Pedagogiczny*, 2018, 2, 170-179.
- [2] Bulik C. M., Flatt R., Abbaspour A., Carroll I.: Reconceptualizing anorexia nervosa. *Psychiatry Clin. Neurosci.* 2019, 73, 9, 518-525.
- [3] Carter F. A, Jansen A., Improving psychological treatment for obesity. Which eating behaviours should we target? *Appetite*, 2012, 58(3), 1063-1069.
- [4] Castellano S., Rizzotto A., Neri S., Currenti W., Guerrera C. S., Pirrone C., Coco M., Di Corrado D., 2021, The Relationship between Body Dissatisfaction and Eating Disorder Symptoms in Young Women Aspiring Fashion Models: The Mediating Role of Stress. *Eur. J. Investig. Health Psychol. Educ.* 2021, 11(2), 607-615.
- [5] Dalle Grave R., Conti M., Sartirana M., Sermattei S., Calugi S.: Enhanced cognitive behaviour therapy for adolescents with eating disorders: a systematic review of current status and future perspectives. *Ital. J. Eat. Disord. Obes.* 2021, 3, 1-11.
- [6] Dzwonkowska-Godula K.: Kulturowa geneza postawy wobec własnego zdrowia w świadomości kobiet i mężczyzn w różnym wieku. In: Malinowska E., Dzwonkowska-Godula K., Garncarek E., Czernecka J., Brzezińska J.: Kulturowe uwarunkowania postaw kobiet i mężczyzn w różnym wieku wobec swego wyglądu i zdrowia. Wydawnictwo Uniwersytetu Łódzkiego, Łódź, 2016, 339-373.
- [7] Gałuszka A.: Emotion - their meaning and tasks. *J. Educ. Health Sport*, 2022, 12, 1, 147-159.
- [8] Grave R. D., Calugi S.: Cognitive behaviour therapy for adolescents with eating disorders: An effective alternative to the disease-based treatment. *Ital. J. Eat. Disord. Obes.* 2022, 4, 1-5.
- [9] Humeniuk E., Dąbska O., Pawlikowska-Łagód K., Rumiińska M.: Ocena wybranych zachowań zdrowotnych młodzieży z terenu Polski środkowo – wschodniej. *Rozprawy Społeczne*, 2018, 12(2), 73-81.
- [10] Jarosz M.: Piramida Zdrowego Żywienia i Stylu Życia Dzieci i Młodzieży, 2019. Downloaded 01. July, 2022, from <https://nchez.pzh.gov.pl/dzieci-i-mlodziez/piramida-zdrowego-zywienia-i-stylu-zycia-dzieci-i-mlodziezy-2>.
- [11] Jarosz M., Rychlik E., Stoś K., Charzewska J.: Normy żywienia dla populacji Polski i ich zastosowanie. Narodowy Instytut Zdrowia Publicznego – Państwowy Zakład Higieny, Warszawa 2020.

- [12] Kaczor-Szkodny P. M., Szkodny W.: Wybrane elementy wpływające na powstawanie i kształtowanie postaw i zachowań zdrowotnych. *Medycyna Ogólna i Nauki o Zdrowiu*, 2021, 27(1), 45-49.
- [13] Kropornicka B., Baczewska B., Dragan W., Krzyżanowska E., Olszak C., Szymczuk E.: Zachowania zdrowotne studentów Uniwersytetu Medycznego w Lublinie w zależności od miejsca zamieszkania. *Rozprawy Społeczne*, 2015, 9(2), 58-64.
- [14] Kozłowska-Burdziak M.: Warunki bezpieczeństwa żywieniowego Polski (ze szczególnym uwzględnieniem województwa podlaskiego). *Optimum. Economic Studies*, 2019, 3(97), 33-48.
- [15] Mikulec A., Zborowski M., Cisoń-Apanasewicz U., Stawiarska A., Kowalski St.: Wpływ pandemii covid-19 na zachowania żywieniowe dzieci i młodzieży. *Żywłość. Nauka. Technologia. Jakość*, 2022, 29, 3 (132), 42-55.
- [16] National Guideline Alliance: Eating disorders: recognition and treatment. London: National Institute for Health and Care Excellence (UK) 2017 May (NICE Guideline, No. 69).
- [17] Ojo O., Ojo O.O., Adebowale F., Wang X.H.: The Effect of Dietary Glycaemic Index on Glycaemia in Patients with Type 2 Diabetes: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Nutrients*, 2018, 19, 10(3), 373.
- [18] Orkusz A., Babiarz M.: Ocena wybranych zwyczajów żywieniowych młodzieży licealnej. *Nauki Inżynierskie i Technologie*, 2015, 2(17), 32-38.
- [19] Platta A.: Assessment of the consumption of fiber food products by a selected women's group. *Scientific Journal of Gdynia Maritime University*, 2020, 114, 17-21.
- [20] Sagili V.S., Chakrabarti P., Jayanty S., Kardile H., Sathuvalli V.: The Glycemic Index and Human Health with an Emphasis on Potatoes. *Foods*. 2022, 11(15), 2302.
- [21] Spencer R. A., Rehman L., Kirk S. F.: Understanding gender norms, nutrition, and physical activity in adolescent girls: a scoping review. *Int. J. Behav. Nutr. Phys. Activ.* 2015, 12, 6.
- [22] Suliga E., Sobaś K., Bryk P., Wawrzycka I., Głuszek S.: Assessment of eating habits of patients qualified for bariatric surgery – preliminary research. *Medical Studies/Studia Medyczne*, 2021, 37(3), 193-201.
- [23] Świtalski M., Ruszkowska M., Kamińska M.: Ocena wybranych właściwości fizykochemicznych handlowych odżywek białkowych. *Żywłość. Nauka. Technologia. Jakość*, 2021, 28, 3 (128), s. 31-45.
- [24] Trepka-Starosta J., Roszkowska A., Starosta J., Piekacz A.: The relationship between the attitudes and behaviours towards body and the risk of occurrence of eating disorders in the group of young women. *Zeszyty Naukowe - Politechnika Śląska. Organizacja i Zarządzanie. Contemporary Management*, 2021, 154, 331-346.
- [25] Wagner S., Banaszkiewicz M., Andruszkiewicz A., Strahl A., Miler A., Kubica A.: Zachowania zdrowotne i miejsce zdrowia w hierarchii wartości młodzieży. *Medycyna Ogólna i Nauki o Zdrowiu*, 2015, 21(3), 278-281.
- [26] Wiśniewska M. Z.: Ewolucja trendów i zagrożeń w konsumpcji żywności w świetle celów zrównoważonego rozwoju. *Zeszyty Naukowe UEK*, 2022, 1(995): 63-79.
- [27] Wiatrowska A.: Nasilenie objawów i struktura depresji u kobiet z zaburzeniami odżywiania. *Lubelski Rocznik Pedagogiczny*, 2021, XXXX, 4, 327-346.
- [28] Van Strien T., Frijters J. E., van Staveren W. A., Deurenberg P., Deurenberg, P.: The predictive validity of the Dutch Restrained Eating Scale. *Int. J. Eat. Disor.* 1986, 5, 747-755.
- [29] Voswinkel M. M., Rijkers C., van Delden, J. J. M., van Elburg A. A.: Externalizing your eating disorder: a qualitative interview study. *J. Eat. Disor.* 2021, 9(1), 128.
- [30] Zborowski M., Mikulec A.: Zachowania żywieniowe studentów Państwowej Wyższej Szkoły Zawodowej w Nowym Sączu podczas pandemii COVID-19. *Żywłość. Nauka. Technologia. Jakość*, 2021, 28, 4 (129), 98-110.

**WYBRANE ZACHOWANIA ZDROWOTNE DZIEWCZĄT W WIEKU OD 14 DO 19 ROKU ŻYCIA A RYZYKO WYSTĄPIENIA ZABURZEŃ ODŻYWIANIA: BADANIA PILOTAŻOWE****S t r e s z c z e n i e**

**Wprowadzenie.** Postawy i zachowania zdrowotne łączą w sobie stosunek emocjonalny, przekonania oraz tendencje do pozytywnego lub negatywnego zachowania, dzięki czemu ich charakter jest bardzo złożony. Celem badań była ocena wybranych zachowań zdrowotnych oraz subiektywna samoocena wizerunku własnego ciała i sposobu żywienia dziewcząt w wieku od 14 do 19 roku życia ( $n=114$ ). Zakres pracy obejmował: zbadanie skłonności dziewcząt do ograniczania spożycia żywności (Restricted Eating Scale), ustalenie zachowań związanych z niewłaściwym jedzeniem (Problem Eating Behaviors Questionnaire), wskazanie czynników mających wpływ na realizowane przez dziewczęta zachowania żywieniowe oraz subiektywną samoocenę wizerunku własnego ciała i sposobu żywienia.

**Wyniki i wnioski.** Wyniki przeprowadzonych badań wykazały, że dziewczęta miały problem z prawidłowym postrzeganiem wizerunku własnego ciała. Nie wykazano nadmiernego ograniczania jedzenia, ale stwierdzono niewłaściwe zachowania żywieniowe, takie jak: jedzenie podczas wykonywania czynności, pojadanie w ciągu dnia, nieregularne spożywanie posiłków. Przeprowadzone badania mogą zostać wykorzystane do celów edukacyjnych. Edukacja zdrowotna adolescentek jest szczególnie ważna, ponieważ dziewczęta deklarujące niski poziom samooceny wizerunku własnego ciała są szczególnie narażone na wystąpienie zaburzeń odżywiania. Dalsze prowadzenie badań monitorujących zdrowotne postawy i zachowania jest użyteczne i zasadne ze względu na diagnozę czy konieczne jest podejmowanie działań propagujących kształcenie postaw i hierarchii wartości zdrowotnych wśród dziewcząt w wieku od 14 do 19 roku życia pochodzących ze środowisk małomięjskich. Zrealizowane badania wpisują się w zarządzanie ryzykiem zdrowotnym i promocję zdrowia w populacji Polski.

**Slowa kluczowe:** dziewczęta, poziom zadowolenia z wyglądu ciała, niewłaściwe zachowania żywieniowe, ograniczanie spożycia żywności 