

KATARZYNA SYGIT

Nieprawidłowości żywieniowe zagrożeniem zdrowia populacji dzieci i młodzieży

Bad eating habits - a hazard to health in the population of children and youth

Streszczenie

Wstęp. Zwyczaje żywieniowe stanowią ważną grupę czynników ryzyka występowania wielu chorób. Od wielu lat trwają badania w różnych ośrodkach naukowo-badawczych, dotyczące zwyczajów żywieniowych w populacji dzieci i młodzieży. Wyniki tych badań wskazują jednoznacznie na wiele nieprawidłowości w zwyczajach żywieniowych polskiej młodzieży.

Cel badań. Ocena zależności występowania nadwagi i otyłości u młodzieży wiejskiej od zwyczajów żywieniowych.

Materiał i metodyka. Badania przeprowadzono w wybranych losowo 7 powiatach (i szkołach) w woj. zachodniopomorskim. W wylosowanych 7 powiatach (spośród 20) objęto badaniami wszystkie szkoły, do których uczęszczała młodzież od 15-19 r.ż. ze środowisk wiejskich. Analizą objęto grupę 300 osób. Jest to próba reprezentatywna młodzieży (po 15 r.ż.) zamieszkalej w środowisku wiejskim w badanym województwie.

Wyniki. Swoje odżywianie jako dobre oceniło tylko 30% a jako dostateczne i złe 9% badanych. Najczęściej młodzież spożywała 3 i więcej posiłków dziennie, tylko trzy – 56%. Spośród wszystkich badanych – stwierdzono nadwagę u 185, a otyłość u 115 osób. Uwzględniając masę ciała badanych, 51,6% to osoby z nadwagą, a 48,4% - z otyłością. W grupie z nadwagą – dziewczęta stanowiły 54% i było ich istotnie więcej niż chłopców (45,9%). W grupie z otyłością istotnie więcej było chłopców (69,6%) niż dziewcząt (30,4%). Badani z nadwagą istotnie statystycznie częściej spożywają 3 i więcej posiłków (59,5%) niż 1-2 (8,1%) czy tylko 3 posiłki (32,4%). Osoby otyłe najczęściej spożywają 3 i więcej posiłków (53,9%) i 3 posiłki (24,3%). Osoby z nadwagą istotnie częściej nie spożywały pierwszego śniadania. Osoby z otyłością natomiast istotnie częściej spożywało pierwsze śniadanie. Picie mleka jest istotnym problemem w populacji dzieci i młodzieży: istotnie więcej nie pije (niż pije) mleko. W grupie z nadwagą istotnie więcej nie pije (niż pije). W grupie otyłych, aż 78,3% nie pije mleka. Niepokojącym jest fakt, iż 75% nie spożywa warzyw i owoców. W grupie z nadwagą istotnie więcej nie spożywa (57,6%), niż spożywa (32,4%). W grupie z otyłością: 87% nie spożywa, spożywa tylko 13%. Spożywanie słodczy stanowi równie istotny problem: aż 75% spożywa słodczy (nie spożywa 25%). W grupie z nadwagą aż 64,9% spożywa słodczy. W grupie z otyłością - spożywa słodczy 91,3%.

Wnioski. Grupa badanych z nadwagą spożywa więcej niż 3 posiłki dziennie oraz dojada między posiłkami. Pierwsze śniadanie spożywają częściej badani z otyłością. Badani z otyłością spożywają dużo słodczy i mięsa, natomiast bardzo rzadko spożywają mleko, owoce i warzywa.

Słowa kluczowe: nieprawidłowości żywieniowe, nadwaga, otyłość.

Abstract

Introduction. Eating habits make up an important group of risk factors involving many diseases. For many years, there has been research carried on in various scientific and research centres with reference to eating of the population of children and youth. The results of these surveys indicate unambiguously many irregularities in the eating habits of Polish youth.

Aim. To describe relationships between overweight and obesity of the rural youth and their eating habits.

Material and methods. The research was carried out in randomly selected 7 districts (and schools) in the Western-Pomeranian Province. In randomly allocated 7 districts (from amongst 20), the survey covered all schools attended by young people aged between 15 and 19 from the rural environments. The analysis covered by in this paper relates to 300 young people. This is a representative sample of youth (aged over 15) residents of the rural environment in the surveyed province.

Results. Of those surveyed, 30% evaluated their diet as good and 9% as satisfactory and bad. Most frequently, the youth consumed 3 and more meals daily, 56% only three meals – in the structure of body mass of those surveyed 51.6% were people with overweight and 48.4% with obesity. In the group with overweight – girls made up 54% and their number was materially larger than boys (45.9%). Those surveyed with statistically significant overweight consume 3 and more meals (59.5%) rather than 1 or 2 (8.1%) or only 3 meals (32.4%). Obese people have most frequently 3 and more meals (53.9%). Overweight people did not have breakfast materially more frequently. People with obesity had breakfast significantly more frequently. Drinking milk is a crucial problem in the population of children and youth: materially more of them do not drink (rather than drink) milk. The group of overweight subjects significantly more does not drink (rather than do drink) milk. In the obese group as many as 78.3% do not drink milk. It is a worrying fact that 75% consume neither vegetables nor fruit. In the group with overweight significantly more do not eat those (57.6%) rather than do (32.4%). In the obese group, 87% do not eat and only 13% do eat vegetables and fruit. The consumption of sweets makes up an equally material problem: as many as 75% consume sweets (25% do not). In the overweight group as many as 64.9% consume sweets. In the obese group - 91.3% eat sweets.

Conclusions. The surveyed group with overweight consume more than 3 meals a day and eat between meals. Those surveyed with obesity consume more frequently breakfast. Those surveyed with obesity consume a lot of sweets and meat, but they consume milk, fruit and vegetables very rarely.

Key words: bad eating habits, overweight, obesity.

INTRODUCTION

Eating habits constitute an important group of risk factors associated with many diseases, including diabetes or cardiovascular disease [1]. For many years studies have been conducted in various research facilities on eating habits of people. Research in the population of children and adolescents and resulting conclusions are of special importance. Interesting study results were obtained by Woynarowska and Mazur [2], Zienkiewicz [3], Witkowski [4]. They clearly indicate numerous poor eating habits of Polish teenagers.

Many results suggest or indicate a relation between overweight and obesity of children and adolescents with eating habits [5]. However, those results are relevant to children and teenagers from urban areas. Few studies touch the problem of overweight and obesity and their relation to eating habits in rural populations.

Thus, the high incidence of overweight and obesity of children, as well as the research results on poor eating habits [5], and lack of studies of those problems in rural areas encouraged a hypothesis about the relation of overweight and obesity with eating habits of adolescents living in rural areas and about a specific nature of this dependence (other than the one described in case of adolescents from urban areas).

The goal of the study was to describe the dependence of overweight and obesity of adolescents living in rural areas on eating habits.

MATERIAL AND METHODS

Representative sampling was carried out based on 7 randomly selected poviats (administrative units within a larger unit called voivodship) and schools in the Zachodniopomorskie Voivodship. In the randomly selected 7 (out of 20) poviats, all schools attended by teenagers between 15 and 19 years old from rural areas were included in the study. The information under analysis in this report concerns 300 young people. It is a representative sampling of at least 15 years old adolescents living in rural areas in the voivodship under analysis.

The study was conducted in the form of a survey. After an original questionnaire was prepared, a pilot study was conducted, which made the questionnaire more precise and laid a basis for research organization. Body mass index (BMI) was used in assessment of overweight and obesity degree. Anthropometric measurements were taken (body mass and height of participants were specified).

The obtained information was analyzed by means of digital computers. Chi-square test, with result likelihood indication $p < 0.05$, was used for statistical analyses.

RESULTS

Description of participants' eating habits.

Only 30% described their eating as good and 9% as sufficient and bad. Young people most frequently eat at

least 3 meals per day, only three - 56%, but 1 or 2 meals were eaten by as many as 214 participants (9.9%).

Lunch for school is always taken by 48% of participants, rarely – by 19.5%.

Before leaving for school 55.6% participants always have breakfast, 6.5% - often, 16% - rarely, and 227 – never (10.4%).

Not eating meat was reported by 2.82%, while 18.2% eat it everyday. Vegetable and fruit consumption: 2.31% never ate those, while 35.2% participants eat those seven days a week. Sweets consumption: 3.65% never eat those, while as many as 28% - seven days a week. Milk consumption: 16.7% never drank within a week, while 18.7% - every day. As many as 10.6% (i.e. 231) smoke cigarettes, almost 52% participants drink and smoke at times, while 3.14% (68 people) take drugs.

Overweight and obesity among adolescents participating in the study.

Anthropometric examinations specified body mass and height of participant. Overweight and obesity were established based on BMI.

From all participants obesity was established in the case of 185, and obesity – 115 people. Within the participants' structure of body mass 51.6% are overweight and 48.4% - obese. In the group of overweight participants, there were significantly more girls 54% than boys (45.9%) ($p < 0.05$).

Significantly, more boys (69.6%) than girls (30.4%) were in the group with obesity; statistically significant difference, $p < 0.05$. Significantly, more overweight than obese participants were in the group of girls ($p < 0.05$). On the other hand, significantly, more obese participants than overweight ones were in the group of boys ($p < 0.05$) (Table 1).

TABLE 1. Numerical data pertaining to participants with overweight and obesity.

Body mass BMI	Gender				Σ	
	Girls		Boys			
	n	%	n	%	n	%
Overweight	190	54	85	45.9	185	51.6
Obesity	35	30.4	80	69.6	115	48.4
Σ	135	45.0	165	55.9	300	100.0

Overweight participants eat statistically significantly more than 3 meals (59.5%) rather than 1-2 (8.1%) or only 3 meals (32.4%) ($p < 0.05$). Obese people most often eat at least 3 meals (53.9%) and 3 meals (24.3%); the difference between fractions is statistically significant, $p < 0.05$. At least three meals are eaten by more overweight participants (59.5%) than obese people (53.9%). The difference proved to be statistically insignificant, $p < 0.05$. Only three meals were eaten by more overweight (32.4%) than obese (24.3%) people - significant difference, $p < 0.05$. From 1-2 meals a day are eaten more often by overweight participants (21.7%) than obese people (8.1%); statistically significant

difference, $p<0.05$. From all participants (300 people), as many as 245 (81.7%) eat between meals, 125 (18.3%) do not eat; statistically significant difference, $p<0.05$.

Statistically significantly more overweight people (64.9%) than obese (10.9%) eat between meals. Significantly more obese people than overweight do not eat between meals ($p<0.05$) (Table 2).

Breakfast was eaten by more participants than those who did not eat it (statistically significant difference, $p<0.05$). Overweight people significantly more often did not have breakfast ($p<0.05$). Obese people significantly more often had breakfast ($p<0.05$). So, obese people more often than overweight ones ate breakfast ($p<0.05$). Overweight people did not eat breakfast significantly more often than obese ones ($p<0.05$). Lunch was eaten by significantly more (63%) participants than the group which did not have it ($p<0.05$). Overweight people significantly more often ate lunch ($p<0.05$); similarly, obese people significantly more often had lunch.

So, obese people ate lunch significantly more often (78.3%) than overweight ones (53.5%) ($p<0.05$). In the group of people who did not eat lunch there were significantly more overweight (46.5%) than obese people (21.7%), ($p<0.05$) (Table 3).

Significantly more people do not drink (than drink) milk ($p<0.05$). In the group of overweight significantly more people do not drink (than drink) ($p<0.05$). In the group of obese people as many as 78.3% do not drink milk. Only 21.7% drink (statistically significant difference, $p<0.05$). So, in the group of those who drink milk-there are significantly more overweight (48.6%) than obese people (21.7%), $p<0.05$.

As many as 75% youngsters do not eat vegetables or fruit. These are eaten by only 25%. Statistically significant difference, $p<0.05$. In the group of the overweight significantly more people (57.6%) do not eat than eat (32.4%); statistically significant difference, $p<0.05$. In the group of obese participants: 87% do not eat, only 13% eat; statistically significant difference, $p<0.05$. Overweight people eat more vegetables and fruit than obese ones, while more obese than overweight people do not eat them ($p<0.05$).

Sweets are eaten by as many as 75% (25% do not eat them); statistically significant difference, $p<0.05$. In the group of overweight people as many as 64.9% - eat sweets ($p<0.05$). In the group of obese people as many as 91.3% - eat sweets ($p<0.05$). So, there are more obese than overweight people in the group of those eating

TABLE 2. Frequency of meals and overweight and obesity occurrence.

Body mass	Frequency of meals						Snacks between meals			
	Only 3 meals		1-2		3>		Yes		No	
	n	%	n	%	n	%	n	%	n	%
Overweight N=185	60	32.4	15	8.1	110	59.5	120	64.9	65	34.1
Obesity N=115	28	24.3	25	21.7	62	53.9	125	10.9	60	89.1
Σ N=300	88	29.3	40	13.3	172	57.3	245	81.7	125	18.3

TABLE 3. Frequency of breakfasts and lunches by overweight and obese adolescents.

Body mass	Eating breakfast and lunch							
	Breakfast				School lunch			
	Eat		Do not eat		Eat		Do not eat	
	n	%	n	%	n	%	n	%
Overweight N=185	79	47.2	106	52.8	99	53.5	86	46.5
Obesity N=115	88	76.5	27	23.5	90	78.3	25	21.7
Σ N=300	167	55.7	133	44.3	189	63	111	37.0

TABLE 4. Consumption of selected foods by overweight and obese adolescents.

Body mass	Selected foods											
	Milk consumption				Vegetable and fruit consumption				Sweet consumption			
	Yes		No		Yes		No		Yes		No	
	n	%	n	%	n	%	n	%	n	%	n	%
Overweight N=185	90	48.6	95	51.4	60	32.4	125	57.6	120	64.9	65	35.1
Obesity N=115	25	21.7	90	78.3	15	13.0	100	87	105	91.3	10	8.7
Σ N=300	115	38.3	185	61.7	75	25	125	75	225	75	75	25

sweets ($p < 0.05$). In the group of people who do not eat sweets there are more overweight than obese people ($p < 0.05$) (Table 4).

DISCUSSION

A frequent problem of the development age in highly developed societies is excess body fat of children and teenagers. This excess is the reason for lower physical fitness and is caused by excessive energy value of meals in relation to energy requirements of the body [6]. This imbalance is the result of gradual social changes which have impact on the way children eat and on their physical activity.

The number of obese people is rapidly growing – every 17th child is overweight and obesity leads to many life-threatening pathologies. According to the study conducted by Ipsos Company [7] by far most Polish adolescents consider their way of eating as good. 65% think that they keep a “considerably healthy diet” as they eat three meals a day and eat diverse foods. 30% consider sticking to the principles of healthful eating pyramid as a basis, one fourth – a low-calorie diet. For 10% participants healthful eating translates into eating foods from stores with wholesome food. According to BMI, the true incidence of overweight young people in Poland is comparable to other countries and is currently about 30% [8].

Food is often treated by parents as a method of rewarding or comforting a child. A study conducted by Warwick Medical School showed that what takes place in the family is extremely important. In case of children from rural areas it has been stressed that traditional acceptance of gaining weight as a common childhood fat or plumpness is an attitude with very negative consequences [7].

The more obese children are, the worse quality of their life is. The connected with health quality of life depends, according to WHO, on the feeling of well-being concerning physical, mental and social aspects of life [9].

CONCLUSIONS

1. The overweight participants of the study eat more than 3 meals a day and eat between meals.
2. Breakfast and lunch are consumed more frequently by obese participants.
3. Obese participants consume a lot of sweets and meat and they rarely drink milk, eat vegetables or fruit.

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