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Obesity and Health Education

The problem of obesity in adults was recognized a long time ago and it is obesity in children that has become alarming within the last years. A considerable number of parents do not recognize obesity as a disease, what is more, they do not consider it to be a problem and are even convinced that a chubby child equals a healthy child. On the contrary, overweight and obesity at a particular degree does constitute a health risk and it ought to be considered one of the chronic non-infectious diseases that have long been known as civilization diseases (Sikorska-Wiśniewska 2007). Currently, struggle with overweight and obesity in children and young adults has become one of the greatest challenges of the 21st century (Gawlik et al. 2009).

Obesity is a pathological increase in the amount of body fat, which, subsequently, leads to dysfunctions of a number of organs, and results in higher risk of developing diseases and disorders. In adults, obesity is diagnosed when the percentage of fatty tissue is greater than 30% of the normal body mass in females, and when it is 25% greater than the normal body mass in males; in children, the percentage of body fat is strictly dependent on age and sex.

For the purpose of determination of the degree of obesity and proper presentation of the anthropometric data distribution, centile charts and Body Mass Index (BMI) are typically applied. The body fat callipers that measure the subcutaneous fat amount are now less frequently used by paediatricians. Centile charts indicating proper body mass in relation to age, height in relation to age, and mass in relation to height facilitate graphic presentation of a selected parameter located on the chart, and verification against the normal size values (Sikorska-Wiśniewska 2007).

Body Mass Index (BMI), also known as Quetelet index, is defined as the individual's body mass provided in kilograms, that is then divided by the square of their height given in meters (Chapter 75, 2008). Any values ranging from 20 to 25 are considered to be normal, i.e. healthy weight. One observes overweight when BMI values range from 25 to 30, whereas obesity is diagnosed when the BMI values exceed 30. In children, the values received from BMI are compared with the

data presented on a centile chart. Despite the fact that both the values provided by BMI measurement and centile chart parameters allow for proper evaluation of a child's nutrition condition, which is considered to be an ideal method of obesity diagnostics, the BMI measure is not frequently used by paediatricians who seem to apply body mass proportion charts in their medical practice on a daily basis. For the purpose of anthropometric evaluation in younger children, Cole index is preferred (LMS, Least Mean Square) (Cole 1990).

In 1997, the World Health Organization (WHO) officially recognized obesity as a global epidemic diagnosed in children and adults that poses one of the greatest threats to health of common humanity. The number of obese individuals is growing rapidly. It is believed that the world suffers from a pandemic of obesity which is no longer considered to be a problem of highly developed countries, but is now also observable in low income countries (Galal, Hulett 2005). The data published by Haslam and James (2005) indicate that about 10% of the global underaged population, i.e. individuals aged 18 and younger, is overweight or obese. Research programmes done in North America on a group of more than eight thousand children and young adults, completed in 2002, show that about 30% of the research participants had excessive body mass (Hedley et al. 2004). Furthermore, the global data including small children is even more alarming; it is estimated that more than 22 million of children aged 5 and younger are obese (Kosti, Panagiotakos 2006). European researchers estimate that, in Europe alone, about 20% of children manifest an excessive body weight, out of whom 5% is diagnosed with obesity (International Obesity Task Force). In Poland, obesity in children and young adults is estimated at 2.5% to 12% depending on a region. Among three thousand children aged 7 to 9 in the Silesian region, more than 15% were overweight, whereas 4% were obese (Małecka-Tendera et al. 2005).

The most comprehensible and extensive data on the global incidence of obesity come from research MONICA conducted by the WHO (MONItoring of Trends and Determinants in Cardiovascular Diseases Study) (WHO MONICA Project 1989). The MONICA research findings along with data from a number of countries indicate an increase in obesity incidence in the majority of European countries by 10 to 40% in the last 10 years, particularly by 10 to 20% in males, and by 10 to 25% in females (World Health Organisation 2000). The most alarming increase was noted in Great Britain, where more than two third of adult males and more than 50% of females are obese or overweight (Ruston 2004). In England alone, between 1995 and 2002, obesity incidence in boys increased twofold, i.e. from 2.9% to 5.7% of the population, and in girls, an increase from 4.9% to 7.8% was recorded. One boy out of five, and one girl out of four suffer from either overweight or obesity. Among young males aged 16 to 24, obesity incidence rose from 5.7% to 9.3%, whereas among young females, the numbers increased from 7.7% to 11.6% (Sproston, Primetesta 2002). The problem of obesity is monitored worldwide by the International Obesity Task Force organization on a daily basis.

An international study on economic obesity-related costs show that they constitute between 2 to 7% of all medicare costs, and the differences occurring in these costs evaluation are strictly dependent on the method of an applied analysis (World Health Organisation 2000).

Trade unions including government organizations, health care, schools, mass media and consumers should promote proper and healthy nutrition as well as increased physical activity. All of these groups ought to feel obliged to propagate healthy eating which is characterized not only by low fat content, but is also rich in complex carbohydrates, and significant numbers of fresh fruits and vegetables.

The greatest emphasis is to be put on promoting physical activity in free time, which is particularly of crucial importance in the light of advancing urbanization, aging society and sedentary lifestyle.

The main objectives of modern education pertain to the basic school programmes on general education, teaching programmes and education quality. It is where one observes the main change in the approach towards school and social knowledge. To promote responsibility for one's own health and the health of others, and understanding the relations between humans and their environment (Potyrała 2011) is one of the chief elements of this knowledge. One of the greatest projects schools now embark on is health education whose main aim is to encourage children and young adults to take care of their own health and the health of others, and to allow for conditions in which health can be maintained (MEN 2009). Health is considered to be the basic notion in education, and 65% of adult Poles consider it to be one of the ingredients of a happy life (Woynarowska 2007).

School constitutes one of the main communities which play an essential role in the process of shaping healthy attitudes among children and young adults. The health education is a process based on scientific principles ensuring the possibility of learning about health and taking conscious decisions impacting health. Families, the schooling system and the society are greatly responsible for this process. Health education should be a part of a child's daily life, health being the basic condition allowing for affective process of education which should ensure that all students' basic health needs be satisfied depending on individual predisposition. It is commonly believed that this kind of education taking place at schools is the most effective one (Potyrała, Walosik 2007). According to Woynarowska (2007), health education includes, *inter alia*, body care, balanced diet, and physical activity. Schools, in fact, should influence not only children, but also their families because obesity diagnosed in children and young adults may reflect the health conditions of the adults (Gawlik et al. 2009).

An opinion that diseases and disorders resulting from an unhealthy lifestyle can be related to adults and internal medicine only is no longer valid. One needs to believe that effective preventive actions will not only result in a decrease in the number of overweight children, but that they will improve the general health condition of the already obese ones, and will reduce further incidence and death rates among the adult population (Fichna, Skowrońska 2008).

The introduction of the documentation encapsulating the main objectives of schooling programme, effective since 1st September 2009, draws attention to the fact that one of the important tasks of the school is health education, with its purpose being promotion of an attitude in children to care about their own health and the health of others, and teaching how to ensure conditions in which health is maintained (MEN 2009). This note places health education among the most crucial objectives that schools face. In addition, the new schooling programme draws particular attention to students' education, especially, to encouraging proper attitudes towards their health. Traditional school programmes seemed to concentrate more on sharing information relating to various aspects of health, mainly the physical one. Currently, one believes that these guidelines should involve numerous purposes depending on the needs of the group in question, as it has been proved on a number of occasions that this knowledge is not always validated by individuals' actions and behaviours. For instance, although doctors and nurses are fully aware of the negative consequences of smoking, a considerable number of them do smoke (Woynarowska 2011). The new schooling programme introduced a change in the health education that concentrates on helping students get to know themselves, how to monitor the process of physical development as well as how to identify and solve health problems, also known as *know yourself*. Students are to learn about and improve their self-esteem and potential, the sense of responsibility for their own health and that of others. Teachers' task includes encouraging young people to act for the benefit of health and create a healthy environment at home, school and in the local community.

At school, a child with excessive body mass often not only becomes a subject of malicious comments and has no friends, but is also believed to tell lies more frequently, be generally lazy, and not as intelligent as their normal size peers. This all results in their being very reluctantly accepted as partners in common plays or social gatherings (Wardle et al. 1995; Sobal et al. 1995).

Obese children are discriminated by their peers, have lower levels of self-esteem and self-confidence, at times, they manifest depressed moods, and the greater the BMI values, the greater the degree of accompanying depression, (Goodman, Whitaker 2002). Such social discrimination and rejection seem to go together with eating disorders including anorexia nervosa and bulimia (Szajewska 2002).

Therefore, it is crucial that good rules for healthy eating and lifestyle be promoted from the early years, and that bad eating habits be noticed as early as possible. Furthermore, one needs to limit or exclude fast food, crisps, bars and, instead, incorporate fresh fruits and vegetables into the daily diet in order to ensure that a child eats regularly, is provided with the proper amount of nutrients adjusted to age, and is encouraged to physical activity and does not spend time sitting in front of a TV or a computer. It is also important to note that, in overweight individuals, the weight loss must not be abrupt but gradual, and under no condition should a pharmacological treatment be initiated without a prior medical consultation.

Nowadays, one notices an ever greater necessity to educate children, young adults as well as parents towards a healthy attitude. Teachers and mass media should, consequently, stress the importance of proper, balanced diet and promote active life style. Such an approach should be delivered not only to obese people, but also to those with normal weight because the normal body mass in childhood or adolescence periods does not exclude weight increase in the future.

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Abstract

A general perception of obesity in children has been changing over a period of time. Particularly in our culture, it is essential that proper health education be implemented and that school and government organizations as well as the mass media are the key propagators of the good attitude towards health. In this respect, school should act prophylactically in relation to students' health and promote a healthy life style. Currently, one observes an increasing number of overweight and obese individuals suffering from weight-related disorders, which has now become a global problem. One of the purposes the health education serves is to alert young individuals to potential health problems that result from both unbalanced diet and unhealthy life style.

Key words: overweight, obesity, health education, school programmes

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