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Teenage girls perception of underweight *vs* obesity in terms of a disease[1]

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Adipose tissue is an important component of the human body. Its thickness in girls increases significantly in adolescence, which naturally results in an increase in the body mass. Alarmed by this fact, teenage girls sometimes lose control over satisfying their nutritional needs, the more so because they grow up in a culture that promotes overconcentration on the size and shape of the human body, especially of the female body. As a consequence, the issue of a body mass that deviates from correct values is in the eyes of the teenage girls and their environment more often perceived in aesthetic or cosmetic categories rather than health-related. Meanwhile, both obesity and underweight with comorbid malnutrition are currently classified as diseases. The author of the paper conducted a study in which an attempt to diagnose cognitive representations of an incorrect – extremely low *vs* extremely high body mass in girls with underweight and obesity at the turn of the first and second stadium of adolescence was made.

Key words: adolescence, correct body mass, incorrect body mass, obesity, underweight, malnutrition, cognitive representation of disease, perception of disease

1. INTRODUCTION

On the threshold of adolescence, the teenage body undergoes many transformations and, as a consequence, it often starts to be perceived, both by teenagers and their environment, as unattractive, clumsy and uncoordinated (which *de facto* does not find its reflection in fitness of young people – see Malina, 1990; after: Bee, 2004). For, during this period of life there take place processes (referred to as the pubescent leap) that temporally disturb the anthropomorphic harmony of the body. At the same time, we need to remember that transformations of the body – normative for the period of adolescence – are accompanied by an increase in adipose tissue (and/or a danger – in the eyes of teenage girls – of its uncontrollable increase, see Steinberg, 1996; Ong et al., 2006). Meanwhile, Ellyn Kaschack (2001) claims that in the process of identity formation the body has much more important meaning for girls and young women than for males, whereas its mass is one of the most significant determinants of physical attractiveness, deciding about widely understood happiness in life (Buczak & Samujło, 2013). All this, along with a simultaneous intensification of interest in one's appearance observed in adolescence (see Brytek-Matera, 2008), may lead – especially in girls – to experiencing sense of low physical and, as a consequence, social attractiveness, implicating various attempts to control the weight. Therefore, young people in the period of puberty constitute, due to the acceleration of increases in the body height and weight, a group most exposed to negative effects of nutritional errors caused either by undereating or overeating and by an improperly balanced diet (Chabros, Charzewska, Wajszczyk & Chwojnowska, 2011). It has been shown (Wolska-Adamczyk, 2015) that young women who exhibit irrational eating habits are seven times more prone to the occurrence of eating disorders in comparison to women who observe the rules of healthy eating.

Analyzing the mechanism of consolidation of unfavorable attitudes towards own body and eating in individuals with an incorrect body mass, we can notice that one of the factors that strengthen unconstructive behaviors and set dysfunctional thinking patterns, is approaching the issue of one's weight more from the perspective of

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aesthetic categories rather than health-related phenomena. Such a tendency is consolidated by the fact that consumer culture promotes identity patterns based on a perfect image and affluent life, which can become a source of internal conflicts and a risk factor for undertaking irrational behaviors, aimed at endless enhancement of the body (Giddens, 2001).

The above theses have inspired the author of the present work to verify whether at all, and if yes, then to what degree, teenage girls with an incorrect body mass perceive their state as a disease, as does it WHO (2005, 2006) both with respect to obesity and underweight with co-occurring malnutrition. The purpose of this text is to present the problem of an incorrect BMI in the light of issues connected with cognitive representation of disease, and to compare the perception of one's body mass in a group of teenage girls with obesity versus with underweight, which – as it has been assumed – can have an influence on their current and future development, and on their present and future adaptation.

2. CHANGES DURING THE PERIOD OF ADOLESCENCE AND THE PROBLEM OF BODY MASS

The period of maturation is one of the most significant periods in ontogenetic development. It constitutes a bridge between childhood and adulthood, and it is abundant both in many turbulent and often spectacular changes as well as in those implicit, inaccessible to the eye of an observer and/or to self-observation (Brzezińska, Appelt & Ziółkowska, 2016). Concerns about transformations of the body are experienced not only by the teenagers themselves, but they are also shared by their caregivers and relatives. Both of the above groups manifest a certain impatience and uncertainty with respect to the effects of these processes. It can be suggested that the society, consenting the youths – to a much higher degree than in the past, to search for their identity, to postpone identifying their place in the world and defining themselves, does not grant them, at the same time, moratorium for the realization of a gradual process of "becoming an adult, a completed body". Meanwhile, the person's particular conviction about the beauty of his or her *physis* influences the individual's psychological and social functioning, especially their attitude towards oneself and relations with other people. Moreover, this conviction can become one of the causative factors that lead to initiating by young women behaviors that discipline their bodies, for instance, by means of eating restrictions and intensified physical activity.

2.1. BIOLOGICAL MATURATION IN THE CONTEXT OF BODY MASS

„Indicators of entering by a child the period of adolescence, are significant changes in the body and its new functions. Symptoms of maturation appear quite unexpectedly, which is why the body, over which the young individual suddenly loses control, becomes alien to him/her and often difficult to accept. The cause of such revolutionary changes in the sphere of *soma* is an intensification of processes within the endocrine system" (Brzezińska, Appelt & Ziółkowska, 2010, p. 237; see Szilágyi-Pągowska, 2006). From the point of view of the problematic of the present publication, particularly important seems to be an increase in the proportion of adipose tissue in the human body. Its thickness is from birth greater in girls than in boys (Bee, 2004, p. 331), and in the period of adolescence, on average 2-3 years after the end of growing and reaching biological maturity, this difference becomes especially distinct. A natural consequence of the changes mentioned above is an increase in the body mass. The normative increase in the body mass in the period of adolescence is, on average, 18-20 kilograms during 3-4 years (Szilágyi-Pągowska, 2006, p. 316) and – what is important – it is greater than in any other period of life. Teenage girls, often very concerned with this fact, start to introduce unconstructive eating practices, forgetting at the same time that this significant weight gain is connected not only with an increase in the body fat, but also an increase in the bone and muscle mass and growth of internal organs (Woynarowska, 2008).

Despite the fact that the body mass remains an anthropometric category, it undeniably contributes to manner of perceiving oneself and forming one's identity, and it constitutes the basis for sense of one's distinctiveness, continuity, homogeneity and internal content (Krzemionka-Brózda, 2010, p. 29). Suzan Bordo (2003) claims that today the appearance constitutes not only an important dimension of the person's self-acceptance, but also social acceptance, providing the basis for inferring about the individual's disposition and mental characteristics. As a result, individuals whose appearance deviates from the acknowledged standard (especially obese persons) are nowadays, irrespectively of age and cultural context, perceived as being far below their developmental potential (see Głębocka, 2010; Ogden, 2010). Therefore, we can assume that both biological maturation and adolescence – although it might be too great a simplification – are accompanied by a feeling that appearance, beauty and image determine the position the person achieves in the contemporary world (see Thompson, 1996). Unfortunately, the price of taking part in such a rivalry sometimes takes the form of losing one's identity, a disorder or a disease.

2.2. PSYCHO-SOCIAL FUNCTIONING IN THE CONTEXT OF BODY MASS

In social relations, the person's appearance is both a communication tool and – as it has been already mentioned – a source of appraisal that influences the manner the individual is perceived and that indirectly shapes his/her self-esteem (Cash & Fleming, 2002; Jackson, 2002). Ipso facto individuals who meet the standards of attractiveness are ascribed a number of positive attributes from the sphere of professional competences, social skills and

personal characteristics, which, as a result, makes it possible for them to take part in a far greater number of positive interpersonal experiences than it is in the case of unattractive individuals (Buczak & Samujło, 2013).

J. Ogden and C. Evans (1996) in their empirical studies showed negative effects of comparing to weight norms in teenagers, manifested in lability of self-esteem and mood swings. Additionally, the authors claim that dissatisfaction with one's body is a fairly stable characteristic in comparison to self-esteem and mood, which undergo more frequent changes. Meanwhile, studies conducted over past decades (see e.g. Cash & Greek, 1986; Garner, 1997; Karolczak, Kulbat & Głębocka, 2002; Zarek, 2007) confirm that dissatisfaction of young people (especially of girls and women) with their appearance has been constantly increasing. One of the sources of these (often irrational) concerns is their body mass. It turns out that women with a low BMI are more satisfied with their looks than women with various indicators of obesity, but also than women who have certain unfavorable convictions about their current or past obesity (see Buczak & Samujło, 2013). „In longitudinal studies conducted among high school students, a strong relationship between negative opinions of other people about the participants' weight and low self-esteem and dissatisfaction with their appearance measured five years later was observed in 50% of the investigated females and in 30% of the investigated males (Eisenberg et al., 2006; after: Głębocka, 2010, p. 29). At the same time, it has been empirically documented that individuals with underweight perceive their silhouettes as being close to the attractiveness ideal, therefore beautiful and socially-desired (i.e. lacking traits of a disease – ed. BZ). Consequently, in the period of puberty, the intensively changing sizes of maturing youths' bodies and the formation of their somatic build type, create an internal context for an increased interest both in one's own silhouette and in the appearance of other people (Sikorska, 2010; Czajka & Kochan, 2011). The concentration on the body image is also intensified by the so-called *fat-talks* initiated in the family, which circle around topics associated predominantly with striving to possess an allowable amount of adipose tissue that ensures – in the opinion of the initiators of such talks and, consequently, the receivers of such messages – physical and social attractiveness (Nichter, 2009).

Not without meaning for the formation of sense of self-attractiveness is the somatotype image promoted in the mass media. Currently, a model silhouette, treated in many countries as a synonym of beauty and an evidence of success in life, is slim and athletic, and this is the very model the contemporary youths have been aspiring to. The deepening disproportions between the normatively, intensively developing bodies of teenage girls and the ideal body image, frequently cause frustration in young women and trigger in them constant concerns about their appearance (Melosik, 2001). It happens so the more because – first of all – the socio-cultural message strengthens the receivers' belief that not only do they have an influence on how they look, but they are even obliged to control their bodies, and – secondly – it induces shame when people fail to do so (Mirucka, 2006). As a result of the above, young people undertake various actions that are to approximate them to the promoted image and, at the same time, to make their present and future life more attractive (Stice & Shaw, 2002). Meanwhile, unconstructive attempts to control one's body mass and appearance can become a foundation and, simultaneously, a symptom of disorders in the sphere of eating and perception of one's body.

Concluding, the body mass, both as an objective and subjective (perceived individually) category, remains an issue dependent on many determinants; from biological factors, via developmental (including identity-related), personality-related (e.g. associated with the structure of needs, self-esteem, self-awareness), social (the context of both the closest family and the peer group) to culture-related influences.

3. PERCEPTION OF THE DISEASE AND THE PROBLEM OF A NON-NORMATIVE BMI

Health is a commonly appreciated value that induces certain emotions, provokes a certain manner of thinking and motivates to act; it is a universal value independent of religion, provenance, status or the level of civilizational development. Over a half of adult Poles (65%) mentions health as a condition of a successful and happy life (Woynarowska, 2007). In the population of Polish youths, the level of health consciousness is, unfortunately, extremely diversified, whereas the level of their health behaviors frequently proves to be unsatisfactory (Ponczek & Olszowy, 2013, p. 175). This is evidenced by the youths' lifestyle, in which one can observe – apart from many fixed unconstructive behaviors – incorrect eating habits (see e.g. Wycisk & Ziółkowska, 2009), of which a visible sign is either too high or too low BMI (see Ziółkowska, 2014). Meanwhile – as mentioned earlier – both malnutrition and underweight as well as obesity are currently classified as diseases that entail a number of secondary health-related consequences. However, do substantial irregularities in respect of BMI constitute a health problem in the eyes of public opinion, in social awareness and in individual convictions of young people?[2] Hence, do they initiate pro-health behaviors, aimed at controlling health condition and counteracting destructive consequences of an incorrect body mass? It turns out that in the population of girls and young

[2] One of the most frequently applied objective indexes of the body proportions is the body mass index – the BMI (Jackson, 2002). It is not the only index when it comes to defining weight norms, nevertheless in the present study the value of this very parameter has been used to classify the participants to the particular research groups: with underweight vs obesity, eliminating at the same time variables (e.g. practicing intensively sport) that could potentially have an influence on the body mass (e.g. muscle mass) but not on the amount of adipose tissue.

women this problem is very often analyzed exclusively in aesthetic or cosmetic categories; in some individuals an incorrect weight is not a problem at all.

3.1. BODY MASS IN THE LIGHT OF HEALTH AND DISEASE ISSUES

Unfortunately, it happens quite frequently that – on the one hand – health is not the most important (especially for young people) category in life, or it is understood in a highly subjective manner, i.e. incoherently with the acknowledged definitions of health. On the other hand – a low body mass becomes nowadays rather a source of satisfaction, a sign of self-discipline and the fundament of sense of own attractiveness, whereas overweight is often seen and analyzed exclusively in aesthetic categories and not through the prism of health-related issues, which is why it activates (if at all) different kinds of control actions. Moreover, both obesity as well as underweight and malnutrition can co-occur with incorrect eating habits or even eating disorders. Teenage girls and young women, frequently giving priority to their looks and caring for their bodies for aesthetic rather than health reasons, construct a personal eating schedule (in an extreme variant: *orthorexia nervosa*) and devise methods to control their body weight (in an extreme variant: provoking vomit, using slimming substances that contain toxins or parasites), which contradicts the rules of a healthy lifestyle. Meanwhile, one of the conditions of fixing this situation, i.e. becoming healthy and open to change, is readiness to see one's state of health, connected with an extremely incorrect BMI and expression of incorrect eating habits, as a disease. The clinical practice shows, however, that specialist help is most often sought very late, by already either extremely obese or extremely thin and malnourished individuals.

3.2. COGNITIVE REPRESENTATION OF DISEASE

The cognitive representation of a disease, also referred to as the image or theory of a disease, is a complex, dynamic cognitive scheme that includes the knowledge of and subjective judgements and beliefs about a given disease (Heszen-Klemens, 1979; Obuchowska, 2008; Starowicz, 2009); it can either be a vague, unclear idea or a conscious, verbalized notional structure (Sęk, 2001). It plays, at the same time, a regulatory role in the process of adaptation to the disease and in social adaptation. "Paying attention to the role of personal factors in adaptation to a somatic disease serves as means of explaining differences in adaptation in individuals who suffer from the same disease with a comparable intensity" (Starowicz, 2009, p. 93). Among basic sources of cognitive representations of disease there are: 1) assimilated by the person information from past social experiences; 2) opinions adopted from the external social environment, including opinions of significant others and other authorities (doctors, parents); 3) acquired current and past personal experiences (somatic and cognitive) connected with the given disease. Also such factors as personality, culture-related variables or socio-demographic conditions can be of significance here (Hagger & Orbel, 2003).

Various models that illustrate health beliefs assume that "the cognitive representation of a disease decides about adaptation to the given condition by taking part in the regulation of the patient's behavior in the face of the disease and by influencing processing of incoming information and future health behaviors" (Starowicz, 2009, p. 93). The most commonly cited model is the model suggested by H. Leventhal, in which four fundamental traits of the cognitive representation of a disease have been distinguished: 1) identity, 2) cause, 3) consequences and 4) timeline. In turn, R. Lau and K. Hartman enriched this list with a fifth dimension – 5) control/cure (Maes, Leventhal & de Ridder, 1996; Law, Kelly & Huey, 2002; Hagger & Orbel, 2003; see Figure 1).

The first dimension includes beliefs about factors responsible for the occurrence of the particular illness, thus about its biological (e.g. genes, viruses, immunological system), emotional (e.g. stress, depression) and/or environmental (e.g. contamination of the environment) causes. The second one pertains to the person's beliefs about how his/her health condition will influence

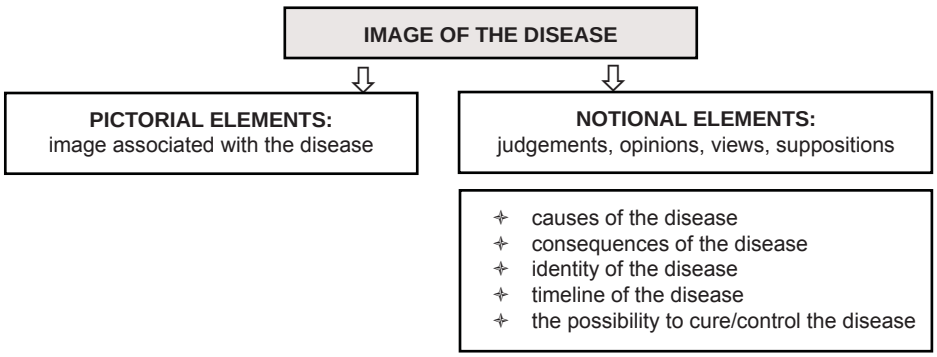

Figure 1. Construction of the image of one's disease
Source: prepared by B. Ziółkowska on the basis of Maes, Leventhal & de Ridder, 1996

his/her physical, psychological and social quality of life, and everyday functioning and fitness. The third dimension refers to the patient's knowledge of the essence of the disease and symptoms that confirm its existence. The fourth dimension includes the person's expectations about the manner and duration of treatment. And, finally, the fifth element pertains to the person's beliefs about the possibility to control the symptoms of the disease and to cure it.

In the Polish psychological literature, a significant contribution to the psycho-social approach to the issue of diseases in children and adolescents has been made by Professor Irena Obuchowska. A disease is understood by this author as a negative event in the course of physical and psychological development of a child, which has an influence on the child's position in the family, on the family itself, on its structure, atmosphere, etc. (Obuchowska & Krawczyński, 1991, p. 17).

According to Obuchowska, the most important factors that shape the image of the disease (see Table 1) have the character of cognitive appraisals that the ill person assigns to external and internal phenomena; they include: awareness of the disease, the knowledge of the disease, assessment of losses and gains caused by the disease, evaluation of the role of the parents and of oneself in its etiology, expression and maintaining of the symptoms. As a result, the quality of the representation of one's disease may decide, on the one hand, about the manner of realizing by the person various adaptation tasks dictated by the disease, on the other hand – it influences the overall process of development, including the process of personality and identity formation and the quality of life.

Despite the fact that the cognitive representation of the disease, when assessed from the medical point of view, often turns out (at least partially) to be inaccurate or incomplete, it plays important regulatory functions. This has been confirmed by a number of researcher, irrespectively of nuances that differentiate their approaches, who documented the activating potential of this construct and its influence on directing the individual's actions in the process of recovery and re-adaptation (Heszen-Niejodek, 2000). A positive balance takes place when profits from the disease are particularly attractive, which translates into a low effectiveness of treatment

Table 1
Cognitive factors that influence the image of the disease in teenagers with an incorrect body mass

COGNITIVE FACTORS	MEANING FOR ADAPTATION
AWARENESS OF THE DISEASE	"Sense of being ill" appears in a person as a result of not feeling well which, in turn, is caused by a number of stimuli that come from the inside and are felt by the individual. The teenager him-/herself signalizes that s/he does not feel well; it is usually also noticed by their caregivers. Awareness of the disease depends on the severity of symptoms, their intensity or pace of regression, while, for instance, by breaking the rules of healthy eating and/or physical activity, the patient can contribute to worsening his/her health condition. Overweight/obesity vs underweight/malnutrition do not decide about the existence of sense of being ill and awareness of the disease. Whereas, on the existence of these two components depends undertaking actions aimed at restoring homeostasis of the organism.
KNOWLEDGE OF THE DISEASE	Acquiring by the teenager the knowledge of the disease is a process in which an important source of information are the parents; instructed by medical personnel, they pass over to the patient information about the disease, which constitute the basis for undertaking appropriate health behaviors. Teenagers also gain the knowledge of the disease in a direct manner, during personal encounters with a nurse, doctor, or from other patients, from books, the Internet, etc. However, this knowledge is neither sought nor internalized, if the teenager does not have a sense of being ill.
ASSESSMENT OF LOSSES AND GAINS CAUSED BY THE DISEASE	Losses caused by the disease consist in limitations in the sphere of: making decisions, freedom of movements and playing, contacts with peers, realization of important social roles and tasks associated with them. At the same time, the patient can see benefits resulting from the disease, for instance, a teenage girl with an extremely high vs low BMI avoids physical closeness that may trigger anxiety in her; she avoids social contacts because she is afraid of social appraisals, and she becomes trapped in the world of problems associated with her eating and body.
EVALUATION OF THE ROLE OF THE PARENTS AND OF ONESELF	The teenager can either partially or sometimes even in total make his/her parents responsible for tackling the disease. For instance, the person can consider his/her parents lost, scared or helpless in the face of the disease; sometimes the teenager overestimates the capacity of his/her parents to tackle the disease or, on the contrary – blames them for it, ascribing them various (e.g. eating-related) neglects and bad will, and in the case of hereditary diseases, s/he can accuse the parents for passing over the faulty genes on purpose. Conducive to recovering is an active attitude of the person towards the disease, which in teenagers is to the greatest extent modelled by their parents. Especially, when an incorrect BMI co-occurs with eating disorders, the ill person ascribes great meaning to parental attitudes and rearing styles in the process of developing and strengthening the disease symptoms. Most beneficial for ill teenagers is the situation of strong motivation to recover accompanied by gradual becoming independent of their parents; it is an attitude of efficient self-care.

Source: prepared by B. Ziółkowska on the basis of Obuchowska, 1991

and, sometimes, into a purposeful delaying of recovery. In turn, a zero-balance often results in maintaining the current lifestyle and giving up treatment.

Results of studies conducted on a population of teenagers (see Pilecka, 2011) indicate that adolescents who possess an invariably negative representation of the disease and themselves, shaped in their relations with adult caregivers, are unable to use their resources optimally, have little knowledge of them and look hopelessly at their future lives, which is visible, for instance, in building by them a vision of the future in a short-time perspective. In the case of adolescents with an incorrect body mass it can be suspected that frequently in their families the issue of an incorrect BMI, being either a sign of obesity or underweight, is not at all analyzed in terms of a chronic health problem (at least until it does not cause secondary somatic symptoms), whereas to a part of adult and adolescent women it appears to be mainly (or exclusively) a cosmetic defect. Meanwhile, the appraisal of one's health state, the perception of the disease and beliefs about it often turn out to be more important for the recovery than the gravity of the health problem itself or the doctor's competences. For, what we think about our ailments is a better prognostic of recovery than the overall medical condition, stress level and received social support.

4. OWN RESEARCH PROGRAM

The aim of own studies discussed in the present publication, was to verify whether, and if yes, then to what extent, teenage girls with a non-normative body mass perceive this incorrectness, i.e. obesity *vs* underweight, in terms of a disease. The research procedure was realized in two stages. During the first one – the screening stage – the girls were examined with the use of *Kwestionariusz zachowań związanych z jedzeniem* – KZZJ [*the Questionnaire of eating-related behaviors*] (Ogińska-Bulik, 2004) and *Wywiad dietetyczny* [*the Dietary interview*] (Człapka-Matyasik & Kostrzewa-Tarnowska, 2010; after: Ziółkowska, 2014). Moreover, a standard measurement of the height and body mass of the participants was conducted, and the BMI was calculated accordingly to their age, height and gender. Cases of girls who practiced sport intensively were excluded from the sample. As a result, to the second part of the study – the proper stage – 79 girls were classified, including 37 girls with underweight, documented by the BMI (min. 14,54), and 42 girls with obesity (BMI max. 36,10). Additionally, on the basis of the KZZJ results, girls with a proneness to incorrect eating behaviors (with a tendency to overeat or to starve themselves) were identified. In this stage, one of the applied research tools was the *Q-sort do badania poznawczej reprezentacji choroby* [*the Q-sort for the examination of the cognitive representation of the disease*] developed by the author (see pt. .4.3. and Appendix no. 1 and 2).

4.1. RESEARCH PROBLEM AND RESEARCH HYPOTHESES

„In order to stay healthy and develop correctly – especially in the period of childhood and adolescence (ed. BZ) – it is important for the person to try to achieve the ideal body mass (IBW), called proper or desired body mass (Matuszak & Suliborska, 2012, p. 105). Among many issues directly and indirectly connected with psychological aspects of eating, particularly interesting and valuable, both for theoretical and practical reasons, seems to be the problem of treating a non-normative BMI as a disease; specifically: differences in sense of disease that stem either from an excess or deficits in the body mass, and the characteristics of the image of the disease in the two groups.

The basic research problem and research hypotheses have been formulated in the following way:

Q1. Do teenage girls with a non-normative BMI have a sense of being ill that results from their incorrect body mass?

H1. Teenagers with an incorrect BMI have a tendency to see obesity vs underweight in terms of a disease.

H2. Teenage girls with overweight more often have a sense of being ill than teenage girls with underweight.

H3. Sense of being ill can be far more frequently encountered in the group of teenage girls that manifest incorrect eating behaviors.

4.2. CHARACTERISTIC OF THE RESEARCH SAMPLE

The period of adolescence is – as it has been already mentioned – particularly important for the problematics of an incorrect BMI because many developmental tasks during this period have either a direct or indirect relationship with the condition of the body and changes that take place in it. Moreover, it is girls who are under the pressure of creating their image, which is why their physis in adolescence becomes twice as difficult a problem, which has a significant influence on the perception of their state (connected with an incorrect BMI) in terms of a disease and on the formation of their attitude towards the disease, themselves and their future. In the period of adolescence, thus in a critical although normative situation, the problem of incorrectness of the body mass can be seen as a pathoplastic factor that modifies the development in such a way, that undertaking tasks and roles of adolescence (and, in consequence, of adulthood) is (seems to be) hampered and, sometimes, even impossible. Due to these facts, to take part in the present studies the author invited girls in the stadium of adolescence (between the age of 15 and 17). All girls lived in Poznan, Poland, and they were recruited via their high schools with profiles connected neither with the appearance and body mass (ballet schools, schools and classes with

a sport profile, acting and vocal schools, cosmetology and hairdressing schools, etc. were excluded) nor with cooking and nutrition (e.g. gastronomy school was excluded). The majority of the investigated girls (61.83%) attended the first grade of a comprehensive school, 26.01% – the second grade, and the remaining girls attended the third grade. The examination conducted with the use of the KZZJ additionally supplemented the characteristic of the girls with information about their proneness to eating disorders; it turned out that none of the girls with a low BMI manifested such a tendency (measured with the use of the mention tool), in turn almost the entire sample of the girls with an excessive body weight (39 individuals) showed irregularities in this respect.

4.3. RESEARCH TOOLS – THE Q-SORT METHOD

The Q-sort do badania poznawczej reprezentacji choroby [*the Q-sort for the examination of the cognitive representation of the disease*] consists of 20 statements appointed from the pool of 36 statements by competent judges (the final version of the tool has been included in Appendix no. 1 and 2). The statements describe four spheres that form the cognitive representation of the disease (1 – awareness of the disease and knowledge of it; 2 – gains and losses resulting from the disease; 3 – participation of oneself and of other people in the etiology and strengthening the symptoms; 4 – causes and treatment of the disease). An investigated individual, placing a drawn sheet of paper with a particular statement in one of the boxes: 0 – does not apply to me at all, 1 – does not apply to me almost at all, 2 – it happens rarely, 3 – it happens quite frequently, 4 – it happens always, defines the level the particular statement describes her way of thinking, her emotions and behaviors; the same procedure would be repeated in the case of all 20 statements. The tool has been developed in two parallel versions; for individuals with obesity and for persons with underweight.

4.4. RESULTS PERTAINING TO THE IMAGE OF THE DISEASE IN THE COMPARED GROUPS

H. Leventhal, D. Meyer and D. Nerenz (1980), constructing the concept of cognitive representation of disease, were guided by a need to analyze behaviors that seemingly appeared to be impossible to explain, such as the disproportion between the tendency to seek the doctor's advice and symptoms de facto manifested by patients. In line with this concept, it can be anticipated that answers in this sphere provided by investigated individuals would be determined by internal, personal beliefs about their health condition. Below, the results of the examination conducted with the use of the *Q-sort* method, pertaining to the cognitive representation of the disease in the groups of girls with extremely different body mass indexes, have been presented.

In the case of the statements no. 5, 7, 21, 22, 25, 28, 30, 32, 33, 35 and 37, significant ($p<.05$) and highly significant ($p<.01$) differences could be observed (see Table 2) between the group of girls with underweight and the group of girls with obesity.

In one case, i.e. in the statement no. 33, a higher result was observed in the group of girls with an over-normatively high body mass, whereas in the remaining cases higher results could be observed in the group of participants with an extremely low BMI.

The positions from 1 to 10 served the diagnosis of awareness of one's physical condition connected with an incorrect BMI. The fifth statement pertained to seeking information about obesity *vs* underweight. The results obtained in this sphere indicate that the girls with a lowered body mass to a much higher extent ($\bar{x}$=3.55) seek actively for information on this subject than the other girls ($\bar{x}$=2.59); these differences are statistically significant. The item no. 7 indicates that for the girls with underweight their low body mass is a significantly more serious source of emotional/psychological problems than for the girls with obesity. The mean values in this respect are $\bar{x}$=3.26 and $\bar{x}$=2.47, respectively. Generally speaking, regardless of the quality of irregularities within the BMI, the girls manifest a low level of sense of being ill, and only slightly higher results can be observed in the participants with underweight.

The next ten statements pertained to the knowledge of the investigated girls of their physical condition, specifically, to what degree the non-normative BMI may disturb their psychophysical development, resulting in many negative consequences. In this category none of the positions differentiated the investigated groups. Therefore, it can be surmised that regardless of the deviations in respect of the body mass, the girls possess a comparable, average knowledge of this issue.

The statements from 21 to 30 belong to the category "Losses and gains resulting from the disease". The obtained results indicate that five of these statements differentiate the girls from the compared groups on the statistically significant level. The first of these statements pertained to having a sense of being constrained in many domains of life, resulting from the non-normative BMI. In this sphere, the girls with underweight obtained a markedly higher result ($\bar{x}$=3.88), which means that this feeling is experienced by them to a greater extent than by the girls with the problem of obesity ($\bar{x}$=2.90). Statistically significant intergroup differences appeared also in the case of the next statement, which suggests that the girls with a non-normatively low BMI far more intensively than the girls with obesity experience and evaluate the fact that their incorrect body mass has a negative influence on their social relations. The mean results in this respect were $\bar{x}$=3.47 and $\bar{x}$=2.60, respectively. In the item no. 25, connected with excusing oneself with one's incorrect body mass in social situations, we could also observe statistically significant differences between the investigated groups. As documented by the obtained results, the girls with a lowered BMI significantly more often declared the fact of availing themselves of this argument in difficult/problematic situations ($\bar{x}$=3.31) than

Table 2
Distribution of the particular Q-sort items

VARIABLE		Group	DESCRIPTIVE STATISTICS							Manna-Whitney's U Test
			Mean	Standard deviation	Minimum	Bottom Quartile	Median	Top Quartile	Maximum	
AWARENESS	Q-sort – 1	1	2.60	1.17	3	4	4	6	7	.3107
		2	4.90	1.21	2	4	5	6	7	
	Q-sort – 2	1	4.13	1.81	1	2.5	4	6	7	.3735
		2	4.57	1.45	1	4	5	6	7	
	Q-sort – 3	1	4.00	1.39	1	3	4	5	6	.1643
		2	3.62	1.21	2	3	3	4	7	
	Q-sort – 4	1	3.09	1.30	1	2	3	4	5	.0881
		2	2.54	1.00	1	2	2.5	3	5	
	Q-sort – 5	**1**	**3.55**	**1.48**	**1**	**2**	**4**	**4**	**6**	**.0083**
		2	**2.59**	**1.32**	**1**	**2**	**2**	**3**	**7**	
	Q-sort – 6	1	3.78	1.54	1	3	4	5	6	.6221
		2	3.66	1.70	1	2	4	5	7	
	Q-sort – 7	**1**	**3.26**	**1.44**	**1**	**2**	**4**	**4**	**6**	**.0273**
		2	**2.47**	**1.20**	**1**	**1**	**2**	**3**	**5**	
	Q-sort – 8	1	5.13	1.28	2	4	5	6	7	.8543
		2	5.17	1.26	2	5	5	6	7	
	Q-sort – 9	1	4.78	1.41	2	4	5	6	7	.3979
		2	4.52	1.24	2	4	5	5	7	
	Q-sort – 10	1	3.97	1.22	1	3	4	5	6	.3264
		2	3.80	1.24	2	3	3.5	5	7	
KNOWLEDGE	Q-sort – 11	1	3.27	1.39	1	2	3	4	6	.4041
		2	3.00	1.28	1	2	3	3	6	
	Q-sort – 12	1	4.41	1.29	1	4	4	5	7	.1545
		2	3.83	1.56	1	2	4	5	6	
	Q-sort – 13	1	4.66	1.04	3	4	5	5	7	.7871
		2	4.48	1.68	1	3	5	6	7	
	Q-sort – 14	1	3.50	1.11	1	3	3	4	6	.1270
		2	3.27	1.76	1	2	3	4	7	
	Q-sort – 15	1	4.61	1.87	1	3	5	6	7	.0938
		2	3.90	1.72	1	2	4	5	7	
	Q-sort – 16	1	3.85	1.46	1	3	4	5	6	.0567
		2	3.08	1.67	1	2	2.5	4	7	
	Q-sort – 17	1	4.87	1.07	2	4	5	6	6	.6322
		2	4.93	1.31	2	4	5	6	7	
	Q-sort – 18	1	4.61	1.09	2	4	5	5	6	.2776
		2	4.33	1.15	2	4	4	5	7	
	Q-sort – 19	1	4.59	1.36	1	4	5	5	7	.3720
		2	4.20	1.52	1	4	4	5	7	
	Q-sort – 20	1	4.40	1.48	1	4	4	6	7	.3321
		2	4.77	1.25	2	4	5	6	7	

LOSES AND GAINS	**Q-sort – 21**	**1**	**3.88**	**1.48**	**1**	**3**	**4**	**5**	**7**	**.0057**
		2	**2.90**	**.98**	**1**	**2**	**3**	**4**	**5**	
	Q-sort – 22	**1**	**3.47**	**1.38**	**1**	**2**	**3**	**3**	**6**	**.0134**
		2	**2.60**	**1.38**	**1**	**2**	**2.5**	**3**	**7**	
	Q-sort – 23	1	4.27	1.80	1	3	4.5	5	7	.1686
		2	4.90	1.58	2	4	5.0	6	7	
	Q-sort – 24	1	5.40	1.30	3	4	6	6	7	.5887
		2	5.60	1.19	3	5	6	7	7	
	Q-sort – 25	**1**	**3.31**	**1.26**	**1**	**2**	**4**	**4**	**6**	**.0087**
		2	**2.47**	**1.38**	**1**	**1**	**2**	**3**	**6**	
	Q-sort – 26	1	2.72	1.25	1	2	2	4	5	.4102
		2	2.47	1.28	1	1	2	4	5	
	Q-sort – 27	1	3.06	1.61	1	2	3	4	7	.8793
		2	2.93	1.18	1	2	3	3.5	6	
	Q-sort – 28	**1**	**3.34**	**1.21**	**1**	**3**	**4**	**4**	**5**	**.0012**
		2	**2.32**	**1.22**	**1**	**1**	**2**	**3**	**6**	
	Q-sort – 29	1	3.35	1.56	1	2	3	4	7	.2845
		2	2.97	1.48	1	2	3	4	6	
	Q-sort – 30	**1**	**3.23**	**1.41**	**1**	**2**	**3**	**4**	**6**	**.0305**
		2	**2.43**	**1.26**	**1**	**1**	**2**	**3**	**5**	
ROLE OF THE PARENTS AND OF ONESELF	Q-sort – 31	1	4.53	1.41	2	3	5	6	7	.0703
		2	3.73	1.76	1	2	4	5	7	
	Q-sort – 32	**1**	**4.28**	**1.40**	**1**	**3**	**4**	**5**	**7**	**.0040**
		2	**3.27**	**1.28**	**1**	**2**	**3**	**4**	**7**	
	Q-sort – 33	**1**	**2.50**	**.94**	**1**	**2**	**2**	**3**	**5**	**.0229**
		2	**3.33**	**1.44**	**1**	**2**	**3**	**4**	**7**	
	Q-sort – 34	1	2.33	1.03	1	1	2	3	4	.1310
		2	1.93	.77	1	1	2	2.5	3	
	Q-sort – 35	**1**	**4.45**	**1.15**	**2**	**3**	**5**	**5**	**6**	**.0013**
		2	**3.30**	**1.34**	**1**	**3**	**3**	**4**	**6**	
	Q-sort – 36	1	3.03	1.31	1	2	3	4	5	.5725
		2	2.83	1.12	1	2	3	4	5	
	Q-sort – 37	**1**	**3.38**	**1.41**	**1**	**2.5**	**4**	**4**	**6**	**.0302**
		2	**2.72**	**1.36**	**1**	**2**	**3**	**3**	**7**	
	Q-sort – 38	1	4.39	1.58	1	3	4	6	7	.1589
		2	3.72	1.39	1	3	4	5	6	
	Q-sort – 39	1	4.94	1.15	3	4	5	5	7	.2558
		2	4.47	1.31	2	4	4.5	5	7	
	Q-sort – 40	1	3.53	1.48	1	2.5	4	4	7	.8971
		2	3.43	1.48	1	2	4	4.5	6	

* 1 – underweight, 2 – obesity
Source: the results of own studies

the girls with an excessive body mass ($\bar{x}$=2.47). The next statement (no. 28) enables to establish whether the investigated individual avoids contacts with representatives of the opposite sex because of her non-normative body mass. Also in this case the extremely thin girls obtained significantly higher results. The mean result in the group of the teenage girls with underweight was 3.34, whereas in the group of girls with obesity – 2.34. Statistically significant differences were also observed in the case of the item no. 30. It turns out that in the

perception of the girls with a lowered BMI their families forgive them more because of their problems with the body mass than do the families of the girls with obesity. The mean results here were, respectively, 3.23 and 2.43. To sum up, losses and gains resulting from an incorrect body mass differentiate significantly the analyzed groups. To a far greater extent they are experienced and taken advantage of by the girls with underweight.

The last category of statements (from 31 to 40) that constitute the tool for the examination of the cognitive representation of the disease, pertains to the role of the parents and of oneself in the history, expression and control over the disease. Four statements from this category differentiate the girls from the investigated groups on the statistically significant level. The first statement (no. 32) referred to the role of the parents in the development of an incorrect BMI in their children. It turns out that the girls with underweight to a greater extent ($\bar{x}$=4.28) than the girls with obesity ($\bar{x}$=3.27) consider their caregivers to be responsible for their incorrect body mass. The item no. 33 is connected, in turn, with assuming responsibility for current problems with the body mass. Also in this case the differences between the investigated groups are statistically significant; a visibly higher result ($\bar{x}$=3.33) obtained here the girls with an over-normative body mass index, whereas the mean result for the girls with underweight was 2.50. Reactions of the investigated girls to the statement no. 35 confirm that the girls with underweight to a significantly lower degree ($\bar{x}$=4.45) blame themselves for their incorrect body mass than the other investigated girls ($\bar{x}$=3.30). In turn, the results referring to the item no. 37 document that in the opinion of the girls with an excessive body mass, eating habits in their families do not play a meaningful role in their BMI ($\bar{x}$=2.27). Significantly greater responsibility in this respect is placed on the family members by the girls with a lowered BMI ($\bar{x}$=3.38). Thus, the girls with underweight blame for their incorrect body mass their environment, whereas the remaining girls (with obesity) see their own participation in the way their BMI is.

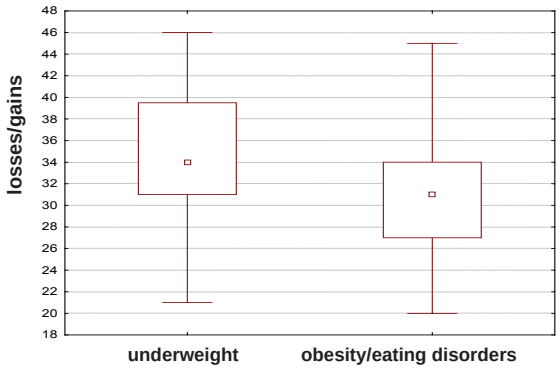

Figure 4. Distribution of the Q-sort results „Image of the disease – Losses and gains"
Source: results of own studies

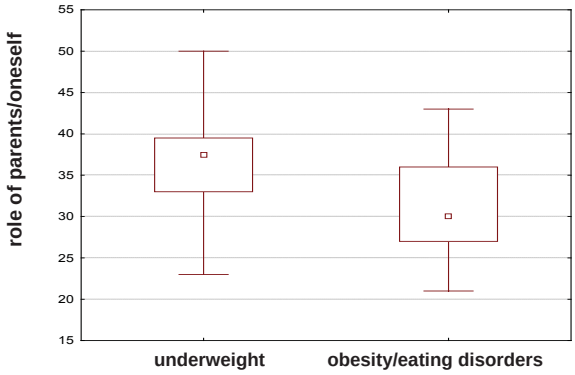

Figure 5. Distribution of the Q-sort results „Image of the disease – Role of parents and of oneself"
Source: results of own studies

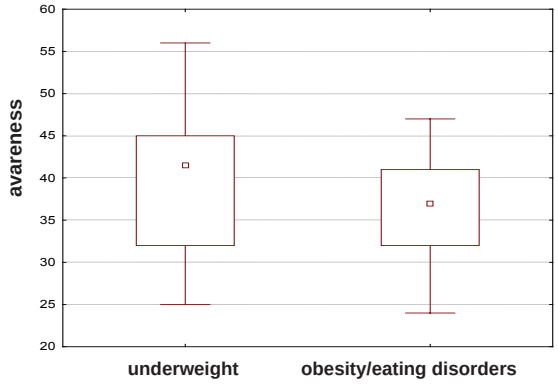

Figure 2. Distribution of the Q-sort results „Image of the disease – Awareness"
Source: results of own studies

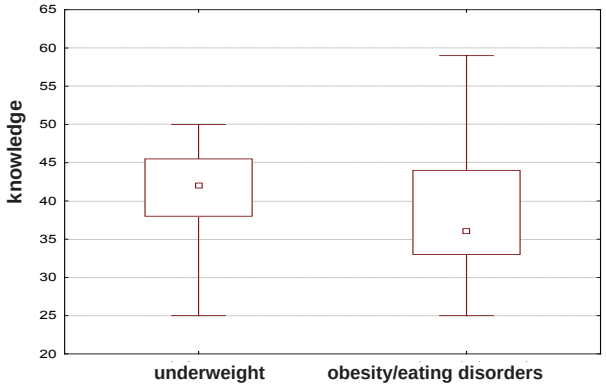

Figure 3. Distribution of the Q-sort results „Image of the disease – Knowledge"
Source: results of own studies

4.5. AWARENESS, KNOWLEDGE, LOSSES AND GAINS, AND THE ROLE OF THE PARENTS AND OF ONESELF IN UNDERWEIGHT AND OBESITY

As mentioned earlier, the items constituting the Q-sort tool for the investigation of the image of the disease, originate from four categories that in total form the cognitive representation of the disease. Below, a summary of the results, with the observance of the aforementioned division, obtained by the investigated groups, has been presented (see Figure 2 – 5). The graphic depiction of the obtained research material indicates that the mean results in respect of awareness of the disease and knowledge of the disease have comparable values in the two groups. Slightly differently looks the issue of the evaluation of losses and gains resulting from the disease and the role of the parents and of oneself in its etiology. The most spectacular difference between the results obtained by the girls from the two groups was observed in the case of the appraisal of losses and gains resulting from the disease.

Within this category – as it has been already noted – as many as five in ten statements turned out to be diagnostic, whereas the mean result enables to infer that losses *vs* gains resulting from the incorrect body mass are much strongly experienced by the girls with underweight than by the girls with an over-normatively high BMI. In turn, the girls with obesity to a significantly higher extent make themselves responsible for how they look as opposed to the girls with a low BMI. The latter group seeks the causes of their low body mass in external factors, here: family-related conditions.

5. DISCUSSION OF THE OBTAINED RESULTS IN THE LIGHT OF PREVIOUS STUDIES

In the present publication, it has been assumed that both obesity and underweight are disease units (see Tanumihardjo, Anderson et al., 2007), additionally – they are conditions that last for a longer period of time. Therefore, it seems legitimate to classify them as chronic health problems.

Under the first of the formulated hypotheses, it has been assumed that teenage girls' individual perception of their incorrect body mass in terms of a disease is not at all unequivocal. It has been demonstrated that both the teenage girls with obesity and with underweight manifest a similar – quite low – awareness of their own health condition. In other words, the investigated girls with extreme body mass indexes do not have a categorical conviction that their current state diverges from health norms and that it requires, as a consequence, medical treatment. Meanwhile, the formation of the disease image and activation of readiness to change one's situation are influenced by such personal factors as: identification of the disease, its subjectively perceived etiology, beliefs about its duration and course, perceived effects, the possibility to control and cure it (see Meyer, Leventhal & Gutmann, 1985; Bąk-Sosnowska, Oleszko & Skrzypulec-Plinta, 2013). Therefore, the first hypothesis, which states that teenage girls with a non-normative body mass do not manifest a tendency to perceive obesity *vs* underweight in terms of a disease, has been confirmed. At the same time, it turned out that sense of being ill did not differentiate significantly the participants, neither considering their extremely different body masses nor the presence of symptoms of eating disorders. Thus, the remaining two hypotheses were not confirmed. The observed phenomena constitute, unfortunately, potential risk factors in the development and health condition of the investigated girls: they are conducive to not activating the tendency to change the girl's behavior ("if I'm fine – I don't need treatment, I don't need to control the condition of my health") and/or they imply the occurrence of unconstructive behaviors that are to help the girls achieve an acceptable or desirable appearance ("I don't look good/I look different than attractive persons – I have to do something about it, no matter what").

One of the approaches that explain the process of coping with a disease and its cognitive processing, is the concept proposed by S. Maes, H. Leventhal and D. de Ridder (1996), based upon the theory of psychological stress developed by R. Lazarus and S. Folkmann (1984). The authors of this concept treat a disease as a situation in which an individual becomes confronted simultaneously with a number of challenges and dangers. Depending on the perception of one's health condition and undertaking remedial efforts aimed at coping with the undesired state, the individual preserves/establishes once again an appropriate level of emotional, social and physical functioning. Perhaps, in the investigated sample the participants, especially the girls with a high body mass index, did not experience too many limitations or dangers resulting directly from their non-normative weight. (The girls with overweight would most frequently declare that they did not experience any specific gains/losses resulting from their condition). Moreover, it can be assumed that they did not perceive their somatic ailments as secondary complications of their incorrect body mass (or they did not associate them with this fact), and they did not see them as a source of difficulties in the realization of everyday tasks and social roles.

Particularly favorable group of strategies that enable constructive coping with a disease are, in the light of identity issues inscribed in the stadium of adolescence, proactive strategies (see Pasikowski & Sęk, 2003). Their essence lies in the creation and development of self-constituting processes and effective self-regulation, which in the face of an insufficiency *vs* excess of control over the process of eating seems incredibly valuable for recovering from the disease and normalizing the eating habits. Of importance, proactive strategies are directed at the development of personal resources and long-term goals. Availing oneself of such strategies can, therefore, play a crucial role in building one's vision of the future and in the person's anticipated adaptation. The results of previous studies in this domain (see e.g. Greenglass, 2000; Greenglass et al., 2002) demonstrate that the ability of pro-

active coping correlates positively with personal health resources, among which most frequently mentioned are: sense of control, efficacy and self-efficacy. The results of the author's own studies suggest that even if the investigated girls have already started to project their future lives, they probably do not see their incorrect body mass as a potential source of problems in achieving life goals, or they have not yet activated in their thinking future orientation. Taking into consideration the age of the participants, especially the age of the younger participants, the latter explanation seems particularly probable.

S. Maes, H. Leventhal and D. de Ridder (1996) emphasize, moreover, the necessity to include important life events in the model of coping with a disease. For example: in the case of girls in the stadium of adolescence, a positive effect on their coping process will have gaining by them a meaningful place in their group of reference and participating actively in its life, experiencing a real and adequate support from their closest family; whereas sense of identity confusion and such events as changing the place of living or school may be detrimental and have a significant effect on the cognitive representation of the disease.

On the basis of the obtained research material we can infer that at the time of the study the functioning of the investigated girls with overweight/obesity was satisfying for them. It is also possible that potential failures in the sphere of social relations were associated by them with determinants other than their body mass/appearance, for example, with traits or competences of a subjective nature. The latter seems probable because with respect to their body mass these girls manifested, as opposed to the investigated girls with underweight, considerable sense of control.

Meanwhile, the girls with underweight to a much higher extent than the girls with obesity, experienced losses and gains resulting directly from their low BMI. On the one hand, they saw the reasons of their dissatisfaction with, for instance, their current social life, in their thinness, on the other hand – they used this argument in their interpersonal contacts, both those closest and more distant, for justifying uncomfortable, inconvenient or endangering situations. At the same time, it has been shown that the girls with a low body mass index manifested higher activity in seeking information about this issue. The applied diagnostic tool (the *Q-sort*) did not verify, however, the quality of these information. Therefore, we cannot know whether the investigated girls sought information about, for instance, ways of maintaining their overly slim silhouettes, which may announce proneness to disorders in the sphere of eating and perception of their own bodies, or on the contrary: they sought information about the possibility to increase their body mass. At this stage of research, this question has, however, a rhetoric character.

Another issue that has also remained unsolved, is the source of strong emotions that – according to the participants' declarations – were experienced predominantly by the extremely thin girls. On the one hand, they could experience fear of physical and psychosocial consequences of their extremely low body mass, on the other hand, fear of gaining weight, typical of individuals manifesting an incorrect attitude towards eating and one's own body. Yet, this last hypothesis seems to be contradicted by the surprising results of the examination conducted with the use of the KZZJ, which indicate that in the investigated sample the individuals with underweight did not manifest proneness to eating disorders. Nevertheless, there appears a question: first of all – does the tool successfully differentiates individuals with eating disorders *vs* without eating disorders; secondly: is it, therefore, possible that all girls with an extremely low body mass represented an inherited, constitutional kind of thinness? Moreover, an overly slim silhouette does not possess female attributes and proportions characteristic of the female body, which for teenage girls can be a source of frustration, especially in a situation of comparing oneself to other members of the peers group, under condition that the girls do not suffer from eating disorders, of which tackling with any visible attributes of womanhood is considered to be a rather typical trait (see Brytek-Matera & Rybicka-Klimczyk, 2009).

The results of own studies seem to indicate that – what is logical – due to the lack of sense of disease, the girls do not set in motion the remedial process, consisting in changing their lifestyle and eating habits, which could secondarily result in the normalization of their body mass and attitude towards health and eating. Perhaps, it happens so also because the participants with underweight to a significantly greater extent than the girls with an over-normatively high BMI blamed for their incorrect body mass their parents. A confirmation of the fact that caregivers take part in modeling attitudes towards one's body mass and the manner of perceiving it can be found, for instance, in studies conducted under the project *Trzymaj formę* (2010) [*Stay fit*]. It turns out that parents (who do take an active part in the proto-diagnosis of their children) and children with an incorrect BMI quite frequently evaluate the (child's) body mass in a divergent manner, perceiving it in an unrealistic way. In the opinion of many parents, obese children are not obese, but rather: "well-built", "temporarily overweight" or "they are just like that". Only one third of the investigated parents noticed the problem of their child's excessive weight and, at the same time, talked openly about it. In turn, almost 40% of the investigated caregivers did not notice that their child's body mass had exceeded the weight norm; 30% of the parents considered themselves either incompetent in respect of making this kind of judgements or did not provide an answer to this question. Considering the quality and size of discrepancies in the perception of the body mass by children and their parents, there can, as a consequence, come to blocking re-adaptation behaviors, aimed at re-

Table 3
Guidelines pertaining to the prophylaxis of non-normative body mass and eating disorders

Early prophylaxis	Supporting life patterns based on controlling one's health condition, for example, based on a healthy diet and recreation.
Primary prophylaxis	Educating about developmental processes of the period of adolescence (e.g. providing information to beneficiaries and receivers of preventive programs about the normative increase of the body mass, dangers to teenagers' self-esteem), mechanisms of functioning of visual advertisement, constructive strategies of coping with emotions, communication skills.
Secondary prophylaxis	Providing knowledge of the consequences of obesity and underweight, activating motivation to change unhealthy lifestyles and supporting the realization of such decisions, helping the beneficiaries verify their current eating habits, leisure activities and approach to issues connected with health and the body.
Tertiary prophylaxis	Restraining consequence of obesity, underweight with comorbid malnutrition and/or eating disorders, supporting motivation to monitor one's health state and to normalize eating habits, providing support in coping with everyday difficulties, helping the beneficiaries construct a positive and adequate self-esteem and supporting this process.

Source: own materials

ducing vs increasing the child's body mass, and limiting factors that have an adverse influence on the child's weight and on the process of coping by the child with negative consequences of the disease. It can also happen that caregivers, either underestimating or overestimating their child's body mass, can induce in the child a false sense of disease and, as a result, overconcentration on the body, eating, physical activity, etc.

Interpreting the above data, we can infer that the girls with obesity have a greater sense of control over and responsibility for how much they weigh and how they look, whereas the teenage girls with underweight are markedly more dependent on the psychological field. It is difficult to assume in their case that their low body mass is exclusively the result of genetic predispositions. If so, however, it is probably accompanied by the co-occurrence of serious problems in psychosocial functioning. The obtained research material can be considered a kind of guideline, in the first place, for constructing preventive actions at different levels – from preventing underweight and obesity and eating disorders to re-adaptation of individuals who experience these problems.

The results of own studies indicate that issues associated with the perception of one's incorrect body mass and seeing it as a disease, are not unequivocal in the case of teenage girls with obesity vs underweight. Therefore, what requires treatment from the medical perspective, does not appear to be a problem in the eyes of adolescent girls. An important direction of research into the way of thinking of teenage girls about this subject would be – in the opinion of the author – learning about their attitudes towards their health and exploring what elements this category comprises. Perhaps, verifying the contents of this construct and establishing what physical attractiveness is for young women and what role it plays in their everyday functioning, would aid defining directions of working with individuals with a non-normative body mass.

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Appendix no. 1

IMAGE OF THE DISEASE IN INDIVIDUALS WITH OBESITY – Q-SORT

Beata Ziółkowska

I. AWARENESS	
1	Obesity is an illness/a lack of full health
2	It treat my obesity as an illness / as a lack of full health
3	Obesity does not imply good health
4	I feel ill because of my high body mass
5	My bad mood/discomfort is caused by a high body mass
6	If it wasn't for obesity I would feel completely healthy
7	Obesity is a source of my emotional/psychological problems
8	I feel healthy and happy
9	Obesity is an aesthetic problem and not a health problem
10	When I tackle my overweight/obesity and its effects, I will be completely healthy
II. KNOWLEDGE	
1	My parents haven't told me that obesity is an illness/a lack of full health
2	I know where my obesity/overweight comes from
3	I know consequences of obesity/overweight that endanger my physical health
4	Doctors have never suggested that I "should do something with my weight"
5	I search for information about my illness in various sources
6	I have sought information about what can happen in the future if don't handle my weight
7	I know that obesity is a chronic health problem
8	I know a lot about problems with weight
9	I have found out about obesity from the Internet, newspapers, TV, etc.
10	I know consequences of obesity/overweight that endanger the way I feel and threaten my contacts with other people

III. LOSSES AND GAINS	
1	I feel that obesity constraints me
2	Because of obesity my social contacts are not the way I would like them to be
4	I spend time just like my peers
5	I excuse myself with my weight
6	Because of obesity I don't have to participate in physical education classes
7	My body mass makes me feel unhappy
8	Thanks to my weight I don't have to "deal with" contacts with boys
9	Because of my weight I cannot wear what I would like to wear
10	Since I have had problems with my body mass, my family forgives me more (e.g. my humors)
IV. ROLE OF THE PARENTS AND OF ONESELF	
1	My parents have an influence on how my body currently looks
2	My parents have nothing to do with my overweight/obesity
3	It is me who is responsible for my problems with the weight
4	I bear a grudge against my parents because of the fact that they did not intervene seeing me be coming fatter and fatter
5	My disease is independent of me / It is not me who is responsible for my weight
6	If it weren't for my mother's cuisine, I would have been slim
7	"Eating obsession" in our family led me to my current overweight/obesity
8	I have always liked eating
9	It is genes that are responsible for my silhouette
10	My obesity results from the tendency to "eat my sorrows/problems away"

Appendix no. 2

IMAGE OF THE DISEASE IN INDIVIDUALS WITH UNDERWEIGHT – Q-SORT
Beata Ziółkowska

I. AWARENESS	
1	Underweight is an illness/a lack of full health
2	It treat my underweight as an illness / as a lack of full health
3	Underweight does not imply good health
4	I feel ill because of my low body mass
5	My bad mood/discomfort is caused by a too low body mass
6	If it wasn't for underweight, I would feel completely healthy
7	Underweight is a source of my emotional/psychological problems
8	I feel healthy and happy
9	Underweight is in the first place an aesthetic problem
10	When I tackle my underweight and its effects, I will be completely healthy
II. KNOWLEDGE	
1	My parents haven't told me that underweight is an illness/a lack of full health
2	I know where my underweight comes from
3	I know consequences of underweight that endanger my physical health
4	Doctors have never suggested that I "should do something" with my too low body mass
5	I search for information about underweight in various sources
6	I have sought information about what can happen in the future if don't handle my too low body mass
7	Underweight is a chronic health problem
8	I know a lot about problems with weight/underweight
9	I have found out about underweight from the Internet, newspapers, TV, etc.
10	I know consequences of underweight that endanger the way I feel and threaten my contacts with other people

III. LOSSES AND GAINS	
1	I feel that underweight constraints me in many spheres of life
2	Because of underweight my social contacts are not the way I would like them to be
3	I practice whatever sports/activities I like
4	I spend time just like my peers
5	I excuse myself with my underweight
6	Because of my underweight I don't have to participate in physical education classes, go to parties, etc.
7	My too low body mass makes me feel unhappy
8	Thanks to my underweight I don't have to "deal with" contacts with boys
9	Because of my underweight I cannot wear what I would like to wear
10	Since I have had problems with my body mass, my family forgives me more (e.g. my humors)
IV. ROLE OF THE PARENTS AND OF ONESELF	
1	My parents have/had an influence on how my body currently looks
2	My parents have/had nothing to do with my underweight
3	I feel responsible (guilty) for my problems with the weight
4	I bear a grudge against my parents because of the fact that they did not intervene seeing me becoming thinner and thinner
5	It is not me who is responsible for my too low body mass
6	If it weren't for the attitude towards eating at my home, I would have had a normal body mass
7	"Eating/not eating obsession" in our family led me to such a low body mass
8	I have always liked eating
9	It is genes that are responsible for my silhouette
10	My underweight results from the tendency to refrain from eating when I'm sad, etc.