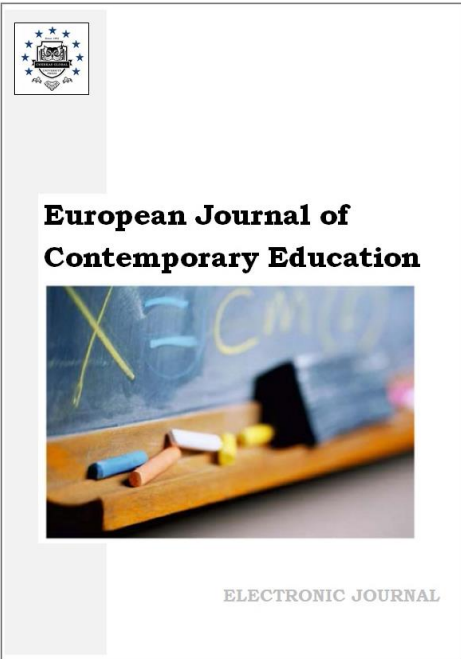




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## **(Dis)Satisfaction with the Body Image Among 13-14-Year-Old Students of Lithuanian Schools**

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### **Abstract**

The article focused on the evaluation of Lithuanian adolescents' (dis)satisfaction with their body image by performing self-evaluation of their body image components through their body parts. Due to major physical, social, emotional, and moral ongoing changes, adolescents' physical appearance becomes one of the top concerns. Dissatisfaction with physical appearance among girls is often reflected in a desire to be thinner, while among boys – a desire to be taller, become more muscular and have a nice body shape. However, there is a gap in research analyzing dissatisfaction with the body parts among adolescents. The aim of this research was to evaluate 13-14-year-old Students of Lithuanian Schools (dis)satisfaction with their body image by performing a self-evaluation of their body image components through their body parts. A 40-question authorial questionnaire was developed to measure (dis)satisfaction with one's body parts and validated in a representative sample. The sample consisted of 1,347 13-14-year-old students. As established, (dis)satisfaction with one's body parts was related to gender: the satisfaction of boys and girls with the image of their bodies differed ( $p = 0,000$ ). Adolescents were more unsatisfied with the body parts that depended on an individual's phenotype (in the lower area – with buttocks, hips, legs, thighs, and calves; in the middle area – with abdomen and waist; in the upper area – with shoulders, arms and chest), and they were more satisfied with individual morphological characteristics of the body (facial skin, feet, cheeks, ears, hair, chin, lips, eyes, neck), depending on an individual's genotype. The boys' satisfaction with their body parts among 13-14-year-old students was higher than that of the girls.

**Keywords:** body image, students, schools, satisfaction, dissatisfaction, physical appearance.

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## 1. Introduction

Body image is closely related to an individual's self-image (Berk, 2009). Body image and self-image are subjective phenomena (Murray et al., 2013; Trif, 2012; Watkins et al., 2008). Other researchers, e.g., Watkins et al. (2008), indicated that body image covered only one part of an individual as a whole, viz. the body (Watkins et al., 2008).

Body image is closely related to an individual's physical appearance. Based on the statements of Naumann et al. (2009) the physical appearance of an individual described their external looks (Naumann et al., 2009). Body image reflected an individual's physical appearance (Levine, Smolak, 2002). An individual's dissatisfaction with their own physical appearance suggested their having a negative body image, whereas one's satisfaction with their physical appearance indicated their having a positive body image (Stice, Shaw, 2002).

The findings of Raufelder et al. (2014) revealed that body image was especially actualised in early adolescence, as adolescents started paying more attention to their physical appearance (Raufelder et al., 2014). At that age stage, adolescents were maturing intensely. In the period of adolescence, the development and the changes were the fastest, and fast biological, psychological, physiological, mental, and social development and maturation took place. In adolescence, the height and weight were rapidly increasing, bones of limbs were growing fast, while muscles and limbs grew slower than bones (Brake, 2012). That is a kind of transition from childhood to youth. It was during that period that complex contradictions in physical and mental development took place that affected the formation of body image (Brake, 2012).

The rapid pace of development of Lithuania as a post-Soviet country and the socio-economic changes revealed the changes in the adolescent self-evaluation of their bodies particularly distinctly. After Lithuania became a free independent country, wide possibilities were created to follow the trends of global fashion and body aesthetics using the media, which influenced the perception of one's body image. The Lithuanian case study highlights the problems of adolescent perception of their body image and its consequences in adolescence. The insights in the scientific context can be relevant to the broader European and global community looking for solutions how to help adolescents to take a realistic view of their bodies and to be more satisfied with their body parts.

An individual at any age stage is characterized by a unique perception of the world, a unique relationship with the world, and a specific view of physical appearance. That is of special importance for the studies of body image of individuals in early adolescence and its objectivation and moulding. Therefore, first, we are going to emphasise the significance of objectivation seeking a positive body image formation in early adulthood (Derkontienė, 2015).

The aim of this research was to evaluate 13-14-year-old Students of Lithuanian Schools (dis)satisfaction with their body image by performing a self-evaluation of their body image components through their body parts.

### **Differences in the adolescent negative body image from the gender viewpoint.**

Negative body image is a specific characteristic of adolescence. The conclusion was based on numerous studies (e.g., Abbott, Barber, 2010) which proved that many adolescents had negative body image. The differences in body image in terms of gender were common not only among girls (Striegel-Moore, Franko, 2002), but also among boys (Murnen, 2011; Murray et al., 2013).

The research findings witnessed that quite a few adolescent girls were dissatisfied with their bodies, especially with their weight and attractiveness (Striegel-Moore, Franko, 2002; Murnen, 2011; Puhl et al., 2017). They spent a lot of time comparing themselves with their peers, tended to compare themselves with the images seen in the media, and imagined a big gap between the actual and the ideal body images (Murnen, Smolak, 2013). The findings of the research conducted by Murnen (2011) showed that girls tended to receive more comments on their physical appearance (both positive and negative) than boys (Murnen, 2011). The authors noted an important fact that negative comments were most often directed towards the physical appearance of girls, while in the case of boys, they were more often related to body functions (e.g., exercise and good preparation).

The bullying and substance use literatures, as well as tenets of sociocultural body image theories, suggest that during adolescence, girls may be at greater risk for substance use after victimization experiences, in comparison to boys (Davis et al., 2018; Johnston et al., 2018; Klinck et al., 2020; Ramseyer Winter et al., 2017), they are relatively more sensitive to appearance-related

feedback, placing them at greater risk for negative affective responses to appearance-related teasing (Puhl et al., 2017; Weissman, 2019).

Some authors stated that adolescent boys did not express concern about their physical appearance (Murnen, 2011). In fact, unlike girls, boys were more often dissatisfied with their bodies in adolescence, while in the process of maturation they were becoming increasingly satisfied with them until they acquired their ideal body shape (Bearman et al., 2006). Adolescent boys, as compared to girls, were more dissatisfied with the upper part of their bodies (Ata et al., 2007).

The boys' concern about their physical appearance was associated with a need to have a muscular body (Hargreaves, Tiggemann, 2006). The authors based the statement on the research, which led to the conclusion that a desire to have a muscular body was the main reason for boys' concern. They noted that adolescent boys tried to increase their muscles, and for that purpose they used different strategies aimed at moulding a muscular upper part and a slim lower part of the body.

**Causes and Consequences of negative body image in adolescence.** The research into body image proved that a number of factors were conducive to adolescents' formation of a negative body image, including the media (Ip, Jarry, 2008), the incompatibility between the Real and Ideal Self (Bearman et al., 2006), the body mass index (Goldfield et al., 2010), negative self-esteem (Budreikaitė, 2011; Franzoi, Shields, 1984), age (Finne et al., 2011), family influence (Ata et al., 2007).

Researchers pointed to various unwanted effects of negative body image. Appearance-related teasing during adolescence appears to confer risk for internalizing problems, eating disorder psychopathology (Puhl et al., 2017) and substance use (Johnston et al., 2018; Klinck et al., 2020). As stated by Goldfield et al. (2010) negative body image promoted the development of depression (Goldfield et al., 2010). Negative body image was associated with excessively active exercise, plastic surgery, and the use of various chemicals and promoted social avoidance, sexual dysfunction, and the use of cosmetic, surgical, and dermatological procedures due to irrational beliefs (Menzel et al., 2011).

Adolescent girls may be especially attuned to sexualized self-presentations, because the body and sexuality are both highly salient during puberty. Forming negative attitudes about another person based on a sexualized presentation is a form of objectification because the attitudes are based solely on the individual's body. It is reasonable to expect that this objectification of a sexualized other via negative evaluations could translate into negative behavior directed at girls (Daniels, Zurbriggen, 2016). Such an approach does nothing to address the underlying problematic issue of the widespread sexualization of girls and women in our culture.

**Background theory.** The Objectivism theory (Rand, Peikoff, 1982) argues that reality exists independently of consciousness. People are believed to have a direct contact with reality through perception. As proved by scientific theories and conceptions, most adolescents experience body image-related problems, which, if left unresolved, can disrupt the adolescent's personal development. DeLeel et al. (2009) noted the importance of understanding body image-related problems since the difficulties faced in adolescence can persist in adulthood (DeLeel et al., 2009). Those arguments led to the conclusion that it was especially relevant to correct the body image specifically in adolescence and thus have a positive effect on its moulding.

It should also be noted that early adolescence was particularly important in the process, since more attention was paid to physical appearance at that time (Raufelder et al., 2014). Consequently, in early adolescence, the process develops increasingly rapidly. If we want adolescents to learn to accept themselves as they are, we ought to remember that it is specifically in early adolescence that the body image objectification takes place, i.e. subjective activity and behaviour (unrealistic provisions and attitudes) transform into conscious and regulated activity (Derkintienė, 2015).

When looking for body image objectification factors of individuals in early adolescence, attention was drawn to a close link between objectification and conscious, regulated activity (or control and self-control). The control of pupils' activity has to promote self-control and the efforts to improve activity (Kontautienė, 2015). Self-control (inspection, evaluation, and correction) creates preconditions for the body image objectification and moulding (Derkintienė, 2015).

Scientific research (e.g., Lindberg et al., 2006) witnesses that the control of physical appearance is not sufficiently developed in pre-adolescence. The checking would provide both teacher and adolescent with the information about the body image. During the evaluation of the body image, the pedagogue and the adolescent understand whether the current body image is adequate. Such a system of inspection, evaluation, and correction helps adolescents to form a

positive body image. Self-evaluation of one's body parts is the first step towards the body image objectivation ([Derkintienė, 2015](#)).

## **2. Methodology**

**Sample.** Sampling is essentially predetermined by two factors: the sample is to be representative, i.e. to reflect the population from which it is composed as accurately as possible and to ensure a low sample error. The sample used in the present research is 1,347 adolescents, therefore, in terms of the sample size it should be considered as reliable and representative.

A probability cluster sample was chosen for the research. The probability cluster sample is obtained when the whole population is divided into similar groups – clusters in accordance with certain characteristics. A part is selected from the total number of clusters through simple random sampling, and all the elements of the selected clusters get into the sample. For the present diagnostic test, general education schools were randomly selected.

The authors used the SPSS programme to draw lots and received 24 educational institutions (progymnasiums), representing all five regions of Lithuania, where the test was to be carried out. In each school, we sought to survey all the Form 8 pupils.

The research sample consisted of  $n = 674$  boys and  $n = 670$  girls, i.e. in terms of gender, the sample consisted of similar numbers of boys (50.0 %) and girls (49.8 %). In terms of age, 13-year-old respondents accounted for 59.0 %, and 14-year-olds, for 41.0 %.

**Instrument.** A questionnaire developed by Derkintienė (2015) was used for the diagnostic research. It was developed on the basis of instruments used in the works of Lithuanian and other researchers ([Franzoi, Shields, 1984](#), [Jankauskienė, 2001](#); [Miškinytė, 2011](#), [Pajaujienė, 2012](#)).

Part 1. Questions for adolescents' self-evaluation of anthropometric indicators. Since satisfaction with the physical development indicators which could affect the adolescents' body image was important for the research, the respondents were asked to name the current and the desired height and weight indicators (4 questions).

Part 2. The scale of adolescents' satisfaction with their body parts. That section of the instrument included 40 questions. Three areas of the stature were identified: 1) the upper area of the body; 2) the middle area of the body; and 3) the lower area of the body. The areas cover 20 parts of the body ([Derkintienė, 2015](#); [Franzoi, Shields, 1984](#)). In the diagnostic instrument, a semantic differential scale was used: a 7 point scale with opposite characteristics at its end (like/dislike). Moreover, provided an adolescent marked 1 to 3 on the scale of satisfaction with parts of the body, (s)he was asked to comment on what (s)he disliked in that specific part of the body. The data of these answers are analyzed as a qualitative study - content analysis is provided.

**Validity.** A positivist strategy was chosen, based on which we believe that the investigated phenomenon can be measured. The following principles of the positivist strategy have been implemented: those of control, replication, forecasting, detailing the sample, randomness of the sample, visibility, and the establishment of universal behaviour rules and ways.

The internal validity was based on the fact that the obtained facts and the results of the statistical analysis justified the conclusions on the issue of dissatisfaction with body parts. Other information to be taken into account: the principle of triangulation was applied (methodologies, sources, theories and researchers: through the application of different data collection methods, similar data were obtained); the researcher was also a research participant; other people were involved in the data collection process: co-authors of the paper Budreikaitė, Kontautienė took part in the research conducting and the data analysis; gradual repeated data collection under different conditions (in the morning, in the daytime, during the school year, etc.) contributed to finding out whether the changes in the situation affected the stability of the data.

External validity indicates whether the research findings can be applied to the general set. According to the statistical portrait (2011, June) of Lithuanian schools based on the data of the Lithuanian Department of Statistics, Lithuanian schools had 34,400 pupils in Form 8 ([Lithuanian residents..., 2011](#)), and they represented the general set of the diagnostic test. The probability sample size for the test was calculated according to the Paniotto formula, with a 3.0 % error ([Kardelis, 2017](#)). The random probability research sample with a 3.0 % error consisted of 1347 participants ( $n = 1,347$ ).

**Reliability.** The developed research instrument was approved, seeking to check the clarity of the questions to the respondents. The procedures to establish the data stability were used



(the instrument was used twice under similar conditions: during the approval and in the research, and the ratio of the findings was close to 1 (in other words, the results were similar)). The internal compatibility of the questionnaire scales, or coherence, was checked. Cronbach's alpha was used to find out whether all the questions on the scale sufficiently reflected the investigated object, and to specify the number of required questions on the scale. After verifying the reliability of the developed scale, the Cronbach's alpha reliability was found to be  $\alpha=0,887$ , consequently, the scale was a reliable measuring instrument.

**Data selection procedure.** The empirical research started with a diagnostic test carried out in 2012. The questionnaires were filled in the classroom during a class meeting. At the beginning of the survey, the author of the paper distributed the questionnaires and explained to the respondents how to fill them in. The 8th formers were addressed in a clear and comprehensible way and were explained the goals of the research. The author answered all the relevant questions of the survey participants, related to the conducted research. It took the respondents from 30 to 45 min to fill the questionnaire. During the day, two to three classes were surveyed.

**Ethics.** The research ethics issues were discussed at a meeting of the Department of Physical Education of Klaipeda University (PF-46/09, 2012-02-20,). The research project was presented to the Lithuanian Research Council and received funding for the research. Prior to the investigation, written permissions were obtained from the heads of the municipal education departments, the headteachers, and the parents. Only those pupils who had submitted their parents' written consent for them to take part in the survey could participate. The pupils who had parental permission but did not wish to participate in the survey had the right not to respond to the questionnaire, thus ensuring the principle of volunteering.

The participants of the survey were informed that the information collected would not be accessible to anyone except the author of the research work, who was going to first encode the received data, and only afterwards publish the already conceptualized research outcomes. The survey provided anonymity to the respondents and adhered to other principles of research ethics.

Because adolescents (13 to 14 year-olds) were a specific group, i.e. minors under 18, the security principle was observed. The implementation of the principle of goodwill and respect for the individual's dignity (Kardelis, 2017; Rupšienė, Rutkienė, 2016) was ensured by the correct formulation of the statements of the questionnaire, which were presented respectfully and did not create preconditions for violating the privacy of the respondents. Voluntary and anonymous participation was guaranteed – the respondents were allowed not to participate in the survey if they did not want to.

**Statistical analysis.** For the analysis of the collected data, Statistical Package for Social Sciences SPSS 20 was used. In the diagnostic test, the following methods of statistical analysis were applied: to evaluate the questionnaire scale reliability and internal consistency, Cronbach's alpha reliability coefficient was used, characterized by the questionnaire inter-item correlation. The descriptive statistics method was intended for the analysis of the variables grouping traits, grouping intervals, and grouping types, for the evaluation of the data variation and concentration, and for the presentation of statistical data through graphs and tables. The meaningfulness of the differences between the adolescent satisfaction with elements of their statures was calculated using the Chi-square test, Friedman test, and Student's t-test. The Chi-square test was used to measure the differences in height and body mass by gender. The Friedman test was used to determine which body part the respondents were most dissatisfied with. The derived quantitative variables were created from the respondents' satisfaction variables with their body parts, the gender specific differences of which were calculated by applying the Student's t-test. To identify the differences between the boys and the girls' satisfaction with their body parts, the Mann-Whitney U test was chosen. Arithmetic averages, the largest (Max) and the smallest (Min) values were calculated. The method of content analysis was used for the analysis of qualitative data.

### **3. Results**

#### **Satisfaction with the physical development indicators by gender.**

In the analysis of the morphological characteristics (body shape and structure) of adolescents, the relevant indicators of physical development are height and weight. As satisfaction with the physical development indicators was important for the research because it could affect

adolescents' body image, the respondents were asked to indicate the current and the desired height and weight indicators.

**Height.** The results of the test revealed that 5.7 % of the boys and 12.3 % of the girls were satisfied with their current height, while the rest were dissatisfied. From among them, 80.8 % of the boys and 93.3 % of the girls wanted to be higher, and 6.8% of the girls and 1.0% of the boys wanted to be lower. On applying the Chi square ( $\chi^2$ ) criterion, the differences between the boys and the girls' answers were found to be statistically significant ( $\chi^2 = 51,592$ ;  $df = 2$ ;  $p = 0,000$ ). One can argue that the boys were more dissatisfied with their height.

**Body mass.** As witnessed by the analysis of the test data, only 4.7 % of the boys and 10.4 % of the girls were satisfied with their weight; the remaining 88.9 % of the boys and 49.2 % of the girls believed that their body mass was too small. 6.4 % of the boys and 40.4 % of the girls thought that their body mass was too large. Based on the Chi square ( $\chi^2$ ) criterion, the differences between the boys and the girls' answers were found to be statistically significant ( $\chi^2 = 257,866$ ;  $df = 2$ ;  $p = 0,000$ ). One can argue that the boys were more dissatisfied with their body mass.

### Results of the respondents' satisfaction with their body parts.

**General results.** On conducting a diagnostic test, we established the respondents' satisfaction with their body parts (Table 1). Based on the Friedman's test criterion, the differences between the adolescents' satisfaction with their body parts was found to be statistically significant ( $\chi^2 = 16329,475$ ;  $df = 25$ ;  $p = 0,000$ ). The respondents were more dissatisfied with the following body parts: in the lower area of their bodies, with buttocks, hips, legs, thighs, and calves; in the middle area of their bodies, with abdomen and waist; and in the upper area of their bodies, with shoulders, arms, and chest. The composition of above-mentioned body parts depended on environmental factors (economic and social conditions, the character and intensity of physical activity, nutrition, experienced diseases, etc.), i.e. on the phenotype that keeps changing throughout life and shows an individual's development at specific age stages.

**Table 1.** Results of the respondents' satisfaction with their body parts (rank averages are based on the Friedman's test criterion)

UBP – upper		MBP – middle		LBP – lower	
Neck	17,26	*Abdomen	5,24	Feet	15,83
Hair	16,22	*Waist	8,95	Buttocks	8,50
Ears	16,04			Calves	8,99
Chin	16,35			Thighs	7,12
Lips	16,39			Hips	8,09
Cheeks	15,85			Legs	6,37
Nose	10,41				
Eyes	17,26				
Face	10,01				
Arms	5,57				
Shoulders	5,58				
Chest	9,46				

The composition of body parts dependent on phenotype can be corrected by physical exercise. As witnessed by Table 1, the respondents were most satisfied with individual morphological characteristics of their bodies inherited from parents, i.e. feet, cheeks, ears, hair, chin, lips, eyes, and neck. Those characteristics depended on the adolescents' genotype.

**By gender.** On conducting a diagnostic test, we established the differences in the respondents' satisfaction with individual body parts by gender (Table 2).

During the analysis of the differences in the upper area of the body, the girls, as compared to the boys, were found to be more dissatisfied with their face ( $U = 172289,500$ ;  $z = -7,802$ ;  $p = 0,001$ ), nose ( $U = 163292,000$ ;  $z = -9,057$ ;  $p = 0,001$ ), cheeks ( $U = 206748,000$ ;  $z = -2,957$ ;  $p = 0,003$ ), hair ( $U = 205523,000$ ;  $z = -3,223$ ;  $p = 0,001$ ), chest area ( $U = 206717,000$ ;  $z = -2,875$ ;  $p = 0,004$ ). The above-mentioned body parts depended on the adolescents' genotype and could not be corrected by physical exercise.

**Table 2.** Results of the respondents' satisfaction with their body parts (rank averages were based on the *Mann–Whitney U* test: distribution by gender)

Upper body part			Middle body part			Lower body part		
UBP	Boys	Girls	MBP	Boys	Girls	LBP	Boys	Girls
Neck	673	674	*Abdomen	715	633	*Feet	714	634
*Hair	706	642	*Waist	708	640	*Buttocks	718	629
Ears	669	679				*Calves	744	604
Chin	699	649				*Thighs	737	611
Lips	685	662				*Hips	749	599
*Cheeks	704	644				*Legs	710	638
*Nose	768	580						
*Eyes	681	667						
*Face	755	593						
Arms	668	680						
Shoulders	684	664						
*Chest	704	644						

During the analysis of the middle area of the body (see [Table 4](#)), the girls, as compared to the boys, were found to be more dissatisfied with their waist ( $U = 203616,000$ ;  $z = -3,309$ ;  $p = 0,001$ ) and abdomen ( $U = 199037,000$ ;  $z = -4,016$ ;  $p = 0,001$ ).

During the analysis of the lower area of the body, the girls, as compared to the boys, were found to be more dissatisfied with the shape and volume of their legs ( $U = 202790,000$ ;  $z = -3,429$ ;  $p = 0,001$ ), hips ( $U = 176005,500$ ;  $z = -7,221$ ;  $p = 0,001$ ), thighs ( $U = 184430,500$ ;  $z = -6,053$ ;  $p = 0,001$ ), calves ( $U = 179827,000$ ;  $z = -6,704$ ;  $p = 0,001$ ), buttocks ( $U = 196810,500$ ;  $z = -4,288$ ;  $p = 0,001$ ) and feet ( $U = 199549,000$ ;  $z = -4,059$ ;  $p = 0,001$ ). The above-mentioned body parts depended on the adolescents' phenotype and could be corrected by physical exercise.

#### Results of the respondents' dissatisfaction with their bodies

Results of the content analysis. By means of the content analysis method, we identified the body parts that the adolescents were most dissatisfied with. It turned out that the greatest dissatisfaction ( $n = 193$ ) was caused by the abdominal shape and volume ([Table 3](#)).

**Table 3.** Characteristics of the respondents' dissatisfaction with their body parts

Category	Subcategory	Statements confirming the problem (answers of the respondents)
Dissatisfaction with body parts	Shape and size of arms ( $n = 82$ ) UBP	...scar on one hand; arm hair; arm moles; large, massive, not girly like; very thin; could be larger; veined; long; too large; little muscle; short...
	Shape and size of chest ( $n = 93$ ) UBP	...flat chest; thick layer of body fat; weak muscles, could be bigger; ribs stick out; small; bigger...
	Shape and size of stomach ( $n = 193$ ) MBP	...thick layer of body fat in stomach area; large stomach; weak muscles; no clearly evident abdominal muscles; could be flat; unattractive shape of belly; unattractive skin of belly...
	Shape and size of waist ( $n = 99$ ) MBP	...large; I am very thin and my bones stick out; large layer of body fat; could be thinner; no waistline; I cannot wear clothes that I like; do not like; weak muscles; no clear line; have no waist...
	Shape and size of legs ( $n = 165$ ) LBP	...plenty of body fat; unattractive skin; large; hairy; short; crooked; very thin; unattractive; weak muscles; wish they were longer and thinner; wish they were tighter; unattractive shape...
	Shape and size of	...plenty of cellulite; plenty of body fat; need more

thighs (n = 148) LBP	exercising; large; fat; could be smaller; too large; very thin; do not like; unattractive; wish they were more muscular...
<b>Shape and size of hips (n = 112) LBP</b>	...plenty of cellulite; could be narrower; could be broader; large; wide; round; could be larger...

Part of the respondents complained about excessive belly fat, a large belly, and weak abdominal muscles. In the lower area of the body, the respondents (n = 165) were especially dissatisfied with the shape and volume of their legs. They disliked their legs due to excess fatty tissue and weak muscles. The respondents (n = 148) were also dissatisfied with the shape and volume of their thighs: part of them indicated that was due to excess fatty tissue and weak muscles. In the lower area of the body, the respondents (n = 112) mainly disliked the shape and volume of hips: part of them complained about the hips being too large and wide. In the middle area of the body, the respondents (n = 99) mostly disliked the shape and the volume of their waist: part of them indicated a dense layer of fatty tissue in the lumbar region, non-existent waist, and weak muscles. In the upper area of the body, the respondents (n = 93) did not like the shape and volume of their chest: they complained about the chest being flat and having a dense layer of fatty tissue and weak muscles. In the upper area of the body, the respondents (n = 82) disliked the shape and volume of their arms: the arms were either too thick, with too little muscle mass.

The research findings indicated (Table 4) differences in the boys and girls' satisfaction with their bodies ( $t = 8,223$ ;  $p = 0,000$ ; Levene  $p > 0,05$ ). The boys were more satisfied with their bodies than the girls.

**Table 4.** Distribution of the results of the respondents' satisfaction with their body parts by gender

Derived variable	Gender	Min.	Max	Arithmetic mean	Standard Deviation
<b>Rating of satisfaction with the body parts</b>	Boys	22	154	105,30	19,05
	Girls	22	154	101,09	19,26

#### 4. Discussion

Lately an increasing number of Lithuanian and other countries' authors (Lamarche, Gammage, 2012; Mantilla et al., 2014; Pajaujienė, 2012; Pelegrini, Petroski, 2010; Trif, 2012) emphasize that adolescents' body image becomes a major part of their life. This is partially influenced by the biological changes undergoing in the adolescent's body, which, in their turn, change the adolescents' body image.

During the diagnostic research, attempts were made to rate the subjective satisfaction with anthropometric indicators among the adolescents at the age 13 through 14. Results have demonstrated that a majority of boys and girls are dissatisfied with their height. Expression of adolescent dissatisfaction with the height provokes a greater desire to be taller.

The present research has revealed that adolescents consider the body mass as a significant indicator. Results have shown that a high number of boys are dissatisfied with their weight as they wish to have a bigger body mass, i.e. be more muscular. The girls are more dissatisfied with their weight as they wish to have a lower body mass. These results are consistent with data that 51.3 % of boys were willing to gain, while 48.4 % of girls were willing to lose their weight (Pelegrini, Petroski, 2010).

Results obtained during the present research demonstrate that adolescents are more dissatisfied with such body parts, which are phenotype dependent. Body part self-assessment allowed to identify gender differences. The boys are more often dissatisfied with their body composition compared to the girls. The girls are more often dissatisfied with the middle and the lower areas of the body. These results are consistent with Pajaujienė (2012) research results, demonstrating that the girls are less content with the middle and the lower areas of the body compared to the boys (Pajaujienė, 2012). The above named results are consistent with the research results, which have revealed that adolescent girls starting from 40.0 % to 70.0 % are dissatisfied with two or more areas of their body (Levine, Smolak, 2002).

The research supports the assumption that girls more than boys are dissatisfied with their body shape, largeness, as well as body size and muscle weakness, features, which are phenotype



dependent. Similar results were observed in Watkins et al. (2008) research, which emphasize that girls and boys experience a great dissatisfaction with their body (Watkins et al., 2008). According to research results, the boys more often focus on an attempt to maintain their body shape and increase their muscle mass (Levine, Smolak, 2002). The present research has demonstrated a tendency that the boys wish to become larger, more muscular, while the girls – thinner. Results obtained during this research support Evans et al. (2008) statement that the boys often wish to be larger, taller and to have well-developed muscles, while dissatisfaction with the body for seven girls out of ten very often is reflected in an intention to become thinner (Evans et al., 2008).

The summarized data of the current diagnostic study, conducted with a Lithuanian adolescent sample, revealed that each individual had certain innate traits and specifics of body composition. The current paper presents the findings of the research in the satisfaction of 13-14 year old students with their body parts, as in that way an objective body image and satisfaction with one's physical appearance starts forming. The Lithuanian case study provides a better understanding of the psychological well-being of all adolescents and can help them to better understand and accept a realistic picture of their body image. It is a universal thing, not depending on nationality or country. The understanding which body parts one is dissatisfied with allows the adolescent to gain a greater sense of control and thus come to an understanding that they can become active and change what depends on the phenotype of their body appearance. Through getting to know and evaluate their physique, adolescents learn to develop a positive attitude towards it and to use special exercises and tools to correct their physical appearance, thereby promoting an objective approach to the body image. Self-evaluation can motivate adolescents to become physically active, because the inherited traits do not fatally determine a person's physique. Physical activity and sports is the essential condition for normal growth, development, the improvement of physical development and making an influence on the body image. That is especially important for modern adolescents, who tend to be physically passive and hypodynamic (Derkintiene, 2015).

Catunda et al. (2017) highlight the role of Physical Education in offering activities compatible with the level of motor development of adolescents, making them feel able to participate and perform tasks successfully. There is an expectation that Physical Education classes will influence development and provide a positive relation with body image, bringing improvements to self-esteem and positive self-assessment of their body image (Catunda et al., 2017).

On the other hand, self-evaluation can form a more objective understanding of the appearance of their bodies and to accept those body parts that are genotype dependent. Psychologically, it helps one to accept things that one cannot change and take away the guilt, the stigma, and the responsibility for what one is like. Accepting the characteristics of one's body can make one realize that it is one's uniqueness and part of one's unique image.

## **5. Conclusion**

Adolescents were less satisfied with the body parts dependent on the individual phenotype and more satisfied with individual morphological characteristics of their bodies (their facial skin, feet, cheeks, ears, hair, chin, lips, eyes, and neck) dependent on the individual genotype.

The 13-14 year old students' satisfaction with their body parts is related to gender. Boys and girls' satisfaction with their body image differed ( $p = 0,000$ ). Boys were more satisfied with their body image than girls.

The analysis of the differences in the upper area of the body revealed that the girls, as compared to the boys, were more dissatisfied with their faces, noses, cheeks, hair, breast, and feet; the analysis of the differences in the middle area of the body revealed that the girls, as compared to the boys, were more dissatisfied with their waist and abdomen; the analysis of the differences in the lower area of the body revealed that the girls, as compared to the boys, were more dissatisfied with the shape and volume of their legs, hips, thighs, calves, and buttocks.

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## 7. Conflict of interests

The authors declare no conflict of interest.

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