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Some Applications of the Dembo-Rubinstein Self-Esteem Scale in Anthropological Research

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Abstract

Introduction. The relationship between body image perception and self-esteem is an urgent factor in the formation of the physical and psychological status of modern young people. A new approach to studying this issue is to apply the Dembo-Rubinstein Self-Esteem Scale in complex anthropological studies and to analyze the relationship between bodily characteristics and self-esteem, which makes it possible to identify the implicit component of specific self-evaluations and to understand more about the structure and age- and gender-related characteristics of self-esteem in school and university students. **Methods.** The study included five consecutive samples of school and university students aged 11 to 12 and 22 to 30. The Dembo-Rubinstein Self-Esteem Scale and specific self-evaluation tests (appearance, intelligence, etc.) were used in all samples. The relationship between appearance and self-esteem was studied by analyzing the correlation between bodily characteristics and self-esteem using the Pearson correlation coefficient. **Results.** The analysis showed a direct correlation between a reduction in self-esteem and an increase in negative relationships between self-esteem and bodily characteristics, and, on the contrary, between the stabilization of self-esteem and the absence of a correlation between bodily and psychological characteristics. The patterns revealed are related not only to body image perception, but also to other specific self-evaluations. The level of self-esteem and the correlation vector for self-reported happiness in almost all age samples differ from those observed for other specific self-evaluations. **Discussion.** The level and vector of the relationship between bodily characteristics and self-esteem can be considered as indicators of psychological well-being in a particular age- or gender-related sample. The results of the study allow us to speak about the different significance of individual self-assessments and about the special nature of self-assessment of happiness.

Keywords

body image perception, self-esteem, Dembo-Rubinstein Scale, bodily characteristics, psychological well-being, associations with physical appearance characteristics, gender-related characteristics, correlation analysis, self-assessment of happiness, anthropological research

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Introduction

Over the past 15 years, the Department of Anthropology at the MSU Faculty of Biology has been conducting research into the associations between bodily characteristics, appearance characteristics, and self-esteem in school and university students (Bakholdina, Stupina, & Kovylin, 2010; Bakholdina & Stupina, 2013; Bakholdina, Blagova, & Samorodova, 2017; Bakholdina & Blagova, 2020a, 2020b). The relationship between body image perception and self-esteem plays an important role in the formation of the physical and psychological status of modern young people who are constantly exposed to a wide range of social stereotypes of "ideal" appearance (Khafizova, 2021; Khafizova & Negasheva, 2019). As many studies in this field show, the degree of self-acceptance of individual appearance, the so-called "body image", affects many aspects of young people's lives through self-esteem. Research shows that low self-esteem can lead to serious eating disorders such as bulimia (Al-Musharaf et al., 2022; Mallaram et al., 2023) and general social anxiety (Tsartsapakis et al., 2003), which requires the development of special strategies for the treatment of adolescents and young adults (Braun et al., 2016; Linardon et al., 2021; Meland et al., 2021). These strategies include methods for overcoming certain social stereotypes affecting adolescents' and young people's self-esteem. Such stereotypes include gender differences in family parenting traditions (Alikin & Lukyanchenko, 2012; Himaz & Aturupane, 2021) or a widespread belief about male intellectual superiority (Galvez et al., 2019; Starr, 2018; Storage et al., 2020).

Approaches to studying the relationship between physical appearance and self-esteem vary considerably depending on methods and results obtained by researchers (Birndorf et al., 2005; Harter, 2006; Lacroix et al., 2023; Supervía et al., 2023). The questionnaires used for this purpose aim to identify the interdependence between real bodily characteristics and self-assessment of physical appearance (Stunkard, 2000; Tylka, & Wood-Barcalow, 2015), to determine the role of physical appearance in various situations (Cash, 2002) and the influence of self-assessment of physical appearance on certain areas of human life (Cash, Jakatdar & Williams, 2004). Researches by Russian psychologists also explore the relationship between self-assessment of physical appearance and subjective psychological well-being, and the problems of the importance of body image, analyzing the complexity, lability, and ambiguity of identified relationships (Kohn, 1980; 2009; Kochetkova, 2022; Labunskaya, 2022, 2023).

The results of psychological research can be used to evaluate the explicit component of an individual's body image – a conscious attitude towards his/her bodily characteristics. At the same time, an implicit component of body image and self-esteem in general remains poorly understood. Parallel applications of the scale of self-esteem and anthropometry enable research in this direction, followed by the use of statistical methods to determine the level and direction of the relationship between self-esteem and bodily characteristics. In this case, the associations between physical appearance and self-esteem assessed by statistical correlation analysis allow to identify implicit and clearly unconscious connections between them. In our studies (Bakholdina & Blagova, 2020a, 2020b; Bakholdina, Blagova, & Samorodova, 2017; Bakholdina & Stupina, 2013), we used the self-esteem scale developed by T. V. Dembo and supplemented by S. Ya. Rubinstein, which allowed us to quantify several specific self-evaluations and a relatively independent indicator – the feeling of being happy.

As is well known, trends in the relationship between physical and psychological characteristics are most evident in the period of growth and development (Khrisanfova, 1990; 2003). In the course of the work conducted under the supervision of the author (Bakholdina & Blagova, 2020a, 2020b; Bakholdina, Blagova, & Samorodova, 2017; Bakholdina & Stupina, 2013; Bakholdina, Stupina, & Kovylin, 2010), several samples of modern Moscow young people of different ages were studied – secondary and high school students, as well as younger and older university students at the University of Moscow. In the research conducted, the emphasis was primarily placed on the morphological and body constitution characteristics of school children and students. In addition, studies of school students have examined the relationship between physical appearance and average self-esteem, which, according to research, has less informational significance than the total number of specific self-evaluations (Molchanova, 2021). Comparative analysis of youth self-assessment data from the studied samples remains in the shadows and largely outside the scope of the reports. Meanwhile, materials collected on self-esteem in the course of research are undoubtedly of independent importance and merit an independent study. Of particular interest is the opportunity to conduct a parallel

comparison of the level and differences in self-esteem and the structure of identified associations with bodily characteristics. The data are provided in the text to avoid a large number of additional tables overloading the article.

This paper aimed to study age- and gender-related variability of self-esteem in the context of the dynamics of the structure of psychosomatic associations.

Methods

The comparison included data on Moscow school students (112 males and 109 females aged 11-12; 99 males and 95 females aged 13-15; 51 males and 50 females aged 16-17) and students of Lomonosov Moscow State University (51 males and 106 females aged 18-21 and 70 males and 64 females aged 22-30 years).

The anthropometric research program included body length, body weight, shoulder and pelvic diameters, transverse and sagittal chest diameter, circumference measurements of the chest, waist, shoulder, forearm, thigh, and shin, and fat-fold thickness on the body and limbs. Ecto-, endo-, and mesomorphy indices were also calculated using the Heath-Carter anthropometric somatotype (Heath & Carter, 1967).

The Dembo-Rubinstein Self-Esteem Scale (Rubinstein, 2007) was used in all samples. The advantage of this method is the possibility of introducing different self-evaluations of individual characteristics into the study. In the process of examining school student samples, a number of specific self-evaluations included self-evaluations of health, self-confidence, others' attitudes, appearance, intelligence, and happiness. We should note that happiness is now regarded as an independent phenomenon (Gardiner et al., 2022; Rivera et al., 2024), and its inclusion in the general self-esteem scale, as indicated below, only confirms the validity of this approach. The self-evaluation of health was used as an initial feature to guide participants in the diagnostic tool and was not considered further. In the university student samples, the range of specific self-evaluations was broader. In general comparison analyses, the results of which are presented in this paper, however, the criteria were the same as those of school student samples. According to the Dembo–Rubinstein Scale, the level of specific self-evaluations was determined in scores that were quantifiably proportional to the distance in millimeters from the lower point of a 100 mm vertical segment to the point where the marking was made by participants in the study (Rubinstein, 2007). The control of the distributions of self-evaluation scores for normality showed that the corresponding graphs approximate the normal distribution, allowing the use of parametric statistical methods, including Pearson correlation analysis and Student's T-test, in the processing of statistical data. For all samples examined, the Cronbach alpha coefficient exceeded 0.8, showing a high degree of internal consistency between the indicators.

All studies were conducted in accordance with the rules of bioethics and approved by the MSU Committee on Bioethics. The collected materials were depersonalized during the subsequent processing.

Results

Tables 1-5 show data on the scores of specific self-evaluations on the Dembo-Rubinstein Scale for school students aged 11–12, 13–15 and 16–17, as well as university students aged 18–21 and 22–30. Figures 1–5 show graphs illustrating age dynamics and gender differences in specific self-evaluations.

In all indicators, schoolboys aged 11 to 12 have lower self-esteem scores than schoolgirls of the same age (Table 1, Fig. 1).

Table 1

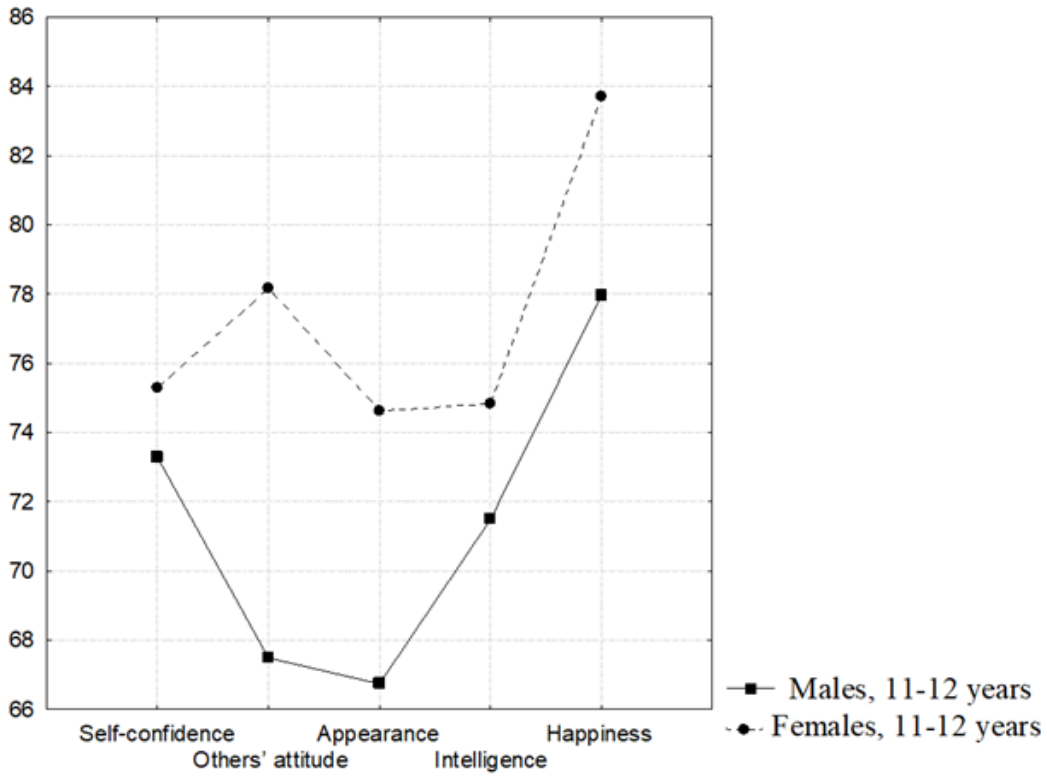
Descriptive statistics for specific self-evaluations, school students aged 11-12

Specific self-evaluations	Males, 11–12 years (M = 11.44)					Females, 11–12 years (M = 11.48)				
	N	M	Min	Max	SD	N	M	Min	Max	SD
Self-confidence	112	73.29	20.00	100.00	21.48	109	75.28	0.00	100.00	24.04
Others' attitude*	112	67.49	9.00	100.00	23.90	109	78.16	17.00	100.00	19.08
Appearance*	112	66.74	3.00	100.00	22.82	109	74.63	8.00	100.00	23.07
Intelligence	112	71.49	25.00	100.00	18.37	109	74.83	25.00	100.00	18.82
Happiness*	112	77.96	17.00	100.00	20.67	109	83.72	24.00	100.00	18.70

Notes. *N - sample size; M - means; Min – minimum scores; Max – maximum scores; SD – mean square deviation; * – differences between the genders are statistically significant according to the Student's t-test at $p < 0.05$*

Significant differences were observed in specific self-evaluations of appearance and attitudes of others, whose levels were significantly lower among schoolboys. There was a particularly notable difference between schoolboys and schoolgirls aged 11-12 in self-evaluations of other people's attitudes towards them. Despite differences in specific self-evaluations, however, the level of happiness for this age is the highest, both for schoolboys and especially for schoolgirls.

Figure 1
Specific self-evaluations of school students aged 11-12



The structure of correlations between physical characteristics and self-esteem at this age was neutral, i.e. it showed the absence of significant correlations, or, according to some indicators, it is positive (correlations were positive). In both male and female samples, statistically significant positive correlations of a low level (r of 0.20 to 0.30) between self-reported happiness, body circumference measurements, and degree of fat deposition (average fat thickness and endomorphy index) were found. In other words, adolescents with endomorphic characteristics of the body are psychologically more comfortable in this age group.

In the next age range, from 13 to 15, the overall proportion of the level of self-esteem of males and females remains (Table 2). The general configuration of the curves in the diagram is maintained (Fig. 2).

Table 2

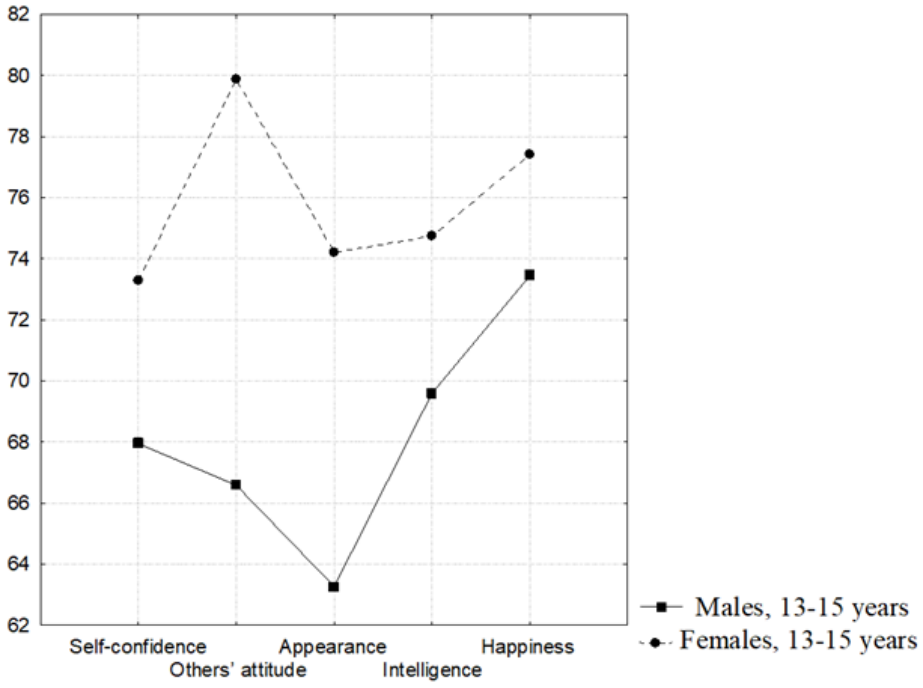
Descriptive statistics for specific self-evaluations, school students aged 13-15

Specific self-evaluations	Males, 13-15 years (M=13.67)					Females, 13-15 years (M=13.66)				
	N	M	Min	Max	SD	N	M	Min	Max	SD
Self-confidence	99	67.95	0.00	100.00	21.23	95	73.29	17.00	100.00	19.37
Others' attitude*	99	66.59	15.00	100.00	19.54	95	79.87	25.00	100.00	16.83
Appearance*	99	63.27	18.00	100.00	19.75	95	74.21	0.00	100.00	20.23
Intelligence*	99	69.60	11.00	100.00	19.97	95	74.74	33.00	100.00	14.98
Happiness	99	73.45	14.00	100.00	23.63	95	77.44	10.00	100.00	22.00

Notes. *N - sample size; M - means; Min – minimum scores; Max – maximum scores; SD – mean square deviation; * – differences between the genders are statistically significant according to the Student's t-test at $p < 0.05$*

Figure 2

Specific self-evaluations of school students aged 13-15



The self-esteem level at the age of 13–15 is slightly lower than in the previous age group, and schoolboys have lower self-esteem than schoolgirls. Significant gender-related differences persist in self-evaluations of appearance and other people's attitudes. In addition, differences in intelligence self-evaluations are significant, and schoolboys of this age still have lower scores compared to schoolgirls, as in the previous age stage. Adolescents of both genders also experience a decline in their feelings of happiness.

For schoolboys of this age, there are significant positive correlations between intelligence self-evaluations and happiness self-reports with endomorphy and mesomorphy indices and body circumference measurements (correlation coefficients r range from 0.20 to 0.41 for endomorphy and mesomorphy indices, at a significance level of $p < 0.05$, and from 0.21 to 0.29 for body circumference measurements, at a significance level of $p < 0.05$).

In the sample of schoolgirls aged 13-15, the relationships between morphological characteristics and self-esteem lose their neutral characteristics of previous age, and individual correlation coefficients reach the statistical significance level. Compared to the previous age range, the vector of morphological and psychological relationships changes. Body weight, chest circumference, waist circumference, and hip circumference are associated with negative reliable correlations (0.20–0.30) with self-evaluations of appearance and other people's attitudes. At the same time, the circumference measurements of shoulders and hips remain positively related to self-reported happiness.

In late adolescence, there is a significant change in the ratio of self-esteem levels between males and females (Table 3, Fig. 3).

Table 3

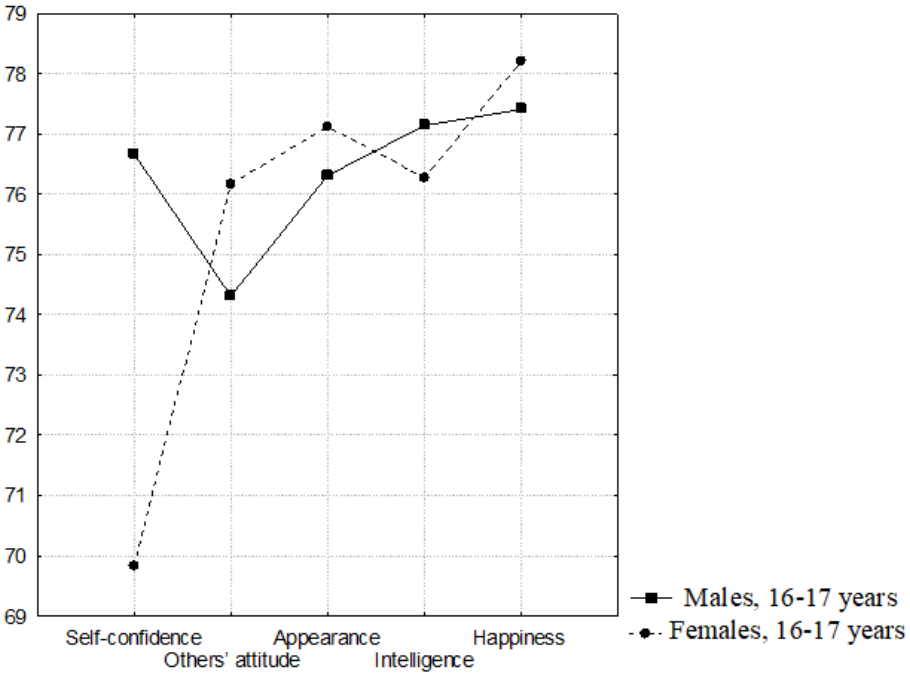
Descriptive statistics for specific self-evaluations, school students aged 16-17

Specific self-evaluations	Males, 16-17 years (M=16.46)				Females, 16-17 years (M=16.54)				
	N	M	Min	Max	N	M	Min	Max	SD
Self-confidence	51	76,67	22,00	100,00	50	69,84	6,00	100,00	21,19
Others' attitude	51	74,31	0,00	100,00	50	76,16	32,00	100,00	17,35
Appearance	51	76,31	0,00	100,00	50	77,12	35,00	100,00	16,97
Intelligence	51	77,14	15,00	100,00	50	76,28	48,00	100,00	12,51
Happiness	51	77,41	9,00	100,00	50	78,22	7,00	100,00	20,27

Notes. *N - sample size; M - means; Min – minimum scores; Max – maximum scores; SD – mean square deviation*

Figure 3

Specific self-evaluations of school students aged 16-1



Schoolgirls aged 16 to 17 have a lower level of self-confidence compared to schoolboys, but higher levels of self-evaluations of appearance and other people's attitudes. Schoolboys have a higher level of intelligence self-evaluation compared to schoolgirls; the difference in this indicator persists even at an older age. At the same time, the feeling of happiness of both genders remains quite high.

The correlation between physical characteristics and self-esteem in schoolboys aged 16 to 17 is low, and the correlation coefficients do not reach the reliability level.

The structure and direction of the relationship between physical characteristics and self-esteem in schoolgirls aged 16-17 are different. The degree of fat deposition, the severity of endo- and mesomorphy are negatively correlated with self-confidence. The correlation coefficients are as follows: for the degree of fat deposition, $r = -0.33$; for endomorphy, $r = -0.29$; for mesomorphy, $r = -0.31$ at a significance level of $p < 0.05$. In other words, at this age, schoolgirls with developed fat and muscle components, with a tendency to corpulence, are most unconfident. The correlations between physical characteristics and self-evaluations of appearance are numerous, negative and reach high scores. The coefficients of correlations between self-evaluations of appearance and body weight, sagittal diameter of the chest, chest circumference, circumferences of waist, shoulder, forearm, thigh, shin, fat-fold thickness, mean epiphyseal width, endomorphy and mesomorphy indices are equal, respectively, -0,44; -0,55; -0,41; -0,41; -0,44; -0,34; -0,31; -0,40; -0,46; -0.36; -0.32; -0.29 and -0.39 at a significance level of $p < 0.05$.

The physical status of schoolgirls of this age impacts their intelligence self-evaluations. A significant negative relationship was found between intelligence self-evaluation and the endomorphy index ($r = -0.36$ at $p < 0.05$); there was a positive relationship between intelligence self-evaluation and the general index of ectomorphy ($r = 0.28$ at $p < 0.05$), i.e., gracefulness and a thin body shape. There was no significant correlation between physical characteristics and self-reported happiness in schoolgirls of this age group.

The level of self-esteem of younger students is similar for both genders (Table 4); the shape of the corresponding curves is similar (Fig. 4).

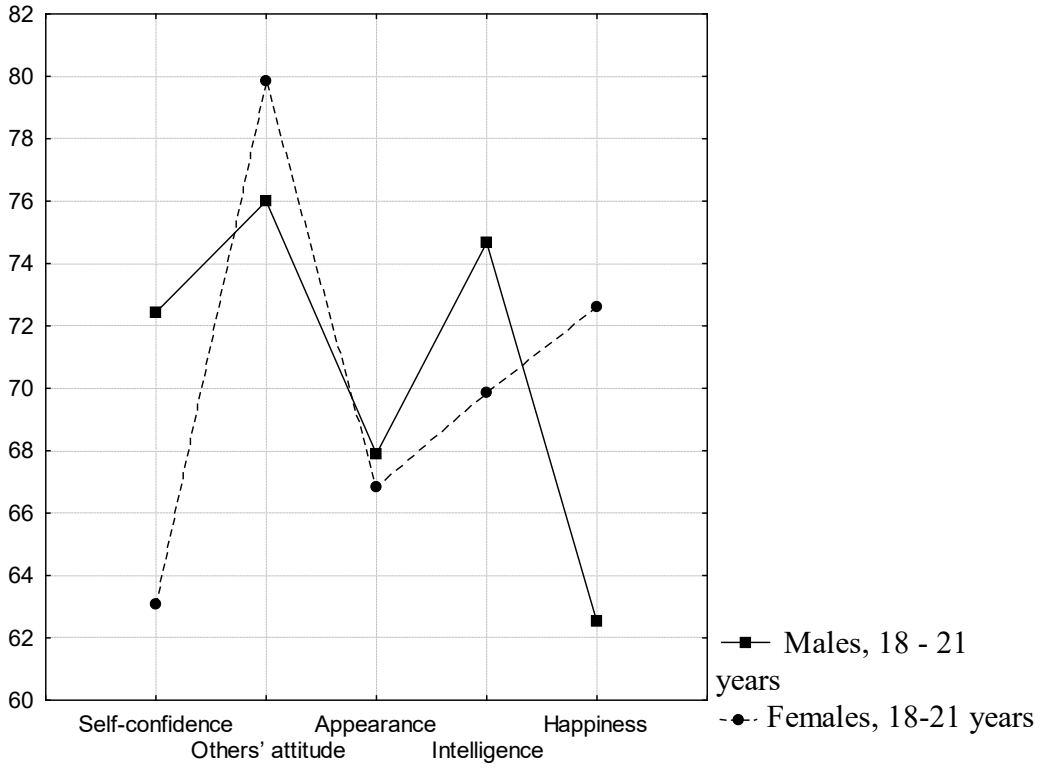
Таблица 4

Описательные статистики для частных самооценок студентов 18 – 21 года

Specific self-evaluations	Males, 18 – 21 years (M=19.75)					Females, 18-21 years (M=19.44)				
	N	M	Min	Max	SD	N	M	Min	Max	SD
Self-confidence*	51	72,43	27,00	100,00	21,66	106	63,07	5,00	100,00	21,52
Others' attitude	51	76,00	26,50	100,00	14,25	106	79,83	24,00	100,00	15,29
Appearance	51	67,90	37,00	100,00	17,81	106	66,82	4,00	100,00	18,65
Intelligence	51	74,67	22,00	100,00	18,03	106	69,88	3,00	100,00	18,21
Happiness*	51	62,51	0,00	100,00	29,81	106	72,63	2,00	100,00	21,91

Notes. *N - sample size; M - means; Min – minimum scores; Max – maximum scores; SD – mean square deviation; * – differences between the genders are statistically significant according to the Student's t-test at $p < 0.05$*

Figure 4
Specific self-evaluations of university students aged 18–21



Self-evaluations of self-confidence in female students of this age are significantly lower than those of male students. However, girls maintain a high level of self-evaluation of other people's attitudes towards them. Male and female students have a relatively low level of self- evaluation of their appearance, which is even lower in females than in males. Female students still have a lower level of self-evaluation of their own intelligence.

In the 18-21-year-old female sample, negative correlations between physical appearance and self-esteem persist. The correlation coefficients for self-confidence and transverse chest diameter, self-evaluations of other people's attitudes and pelvic diameter are equal to -0.23 and -0.19, respectively, at a significance level of $p < 0.05$. However, the correlation coefficient of the forearm circumference with self-reported happiness is positive ($r = 0.25$, at $p < 0.05$), and the ectomorphy index is negative ($r = -0.19$, at $p < 0.05$), which indicates a different vector of morphological and psychological correlations in the "happiness" indicator compared to other specific self-evaluations. In male students of the same age, a correlation structure is formed that reflects the importance of masculine body characteristics, including negative correlations with the level of fat deposition, as well as with the main body circumference measurements, and positive correlations with mesomorphy characteristics that reveal reliable positive correlations

with the level of happiness. The correlation coefficients between self-evaluations of other people's attitudes and the average fat-fold thickness, hip circumference, and endomorphy index in the male sample are -0.43, -0.39, and -0.49, respectively, at a significance level of $p < 0.05$. At the same time, the correlation coefficients between self-evaluations of intelligence and the width of the distal radial epiphysis and self-reported happiness with the width of the distal tibial epiphysis are positive and equal to 0.47 and 0.33, at a significance level of $p < 0.05$.

Data for older students (Table 5) and the corresponding graph (Fig. 5) are characterized by a convergence of the levels of specific self-evaluations for both genders. The differences between males and females are small and statistically not significant. The shapes of the curves in the graph are virtually identical.

Table 5

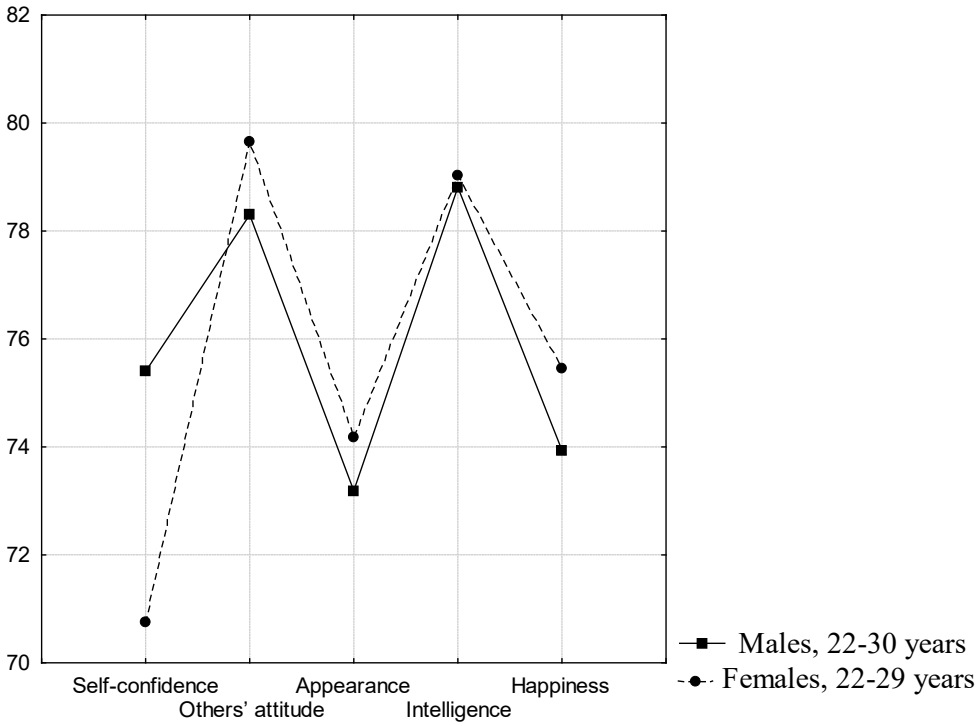
Descriptive statistics for specific self-evaluations, university students aged 22–30

Specific self-evaluations	Males, 22-30 years (M=23.68)					Females, 22-29 years (M=23.44)				
	N	M	Min	Max	SD	N	M	Min	Max	SD
Self-confidence	70	75,40	18,00	100,00	19,52	64	70,75	11,00	100,00	22,68
Others' attitude	70	78,30	0,50	100,00	20,07	64	79,66	28,00	100,00	17,26
Appearance	70	73,19	25,00	100,00	18,55	64	74,19	17,00	100,00	19,39
Intelligence	70	78,81	30,00	100,00	15,15	64	79,03	27,00	100,00	16,14
Happiness	69	73,94	0,00	100,00	23,31	63	75,46	8,00	100,00	22,44

Notes. *N - sample size; M - means; Min – minimum scores; Max – maximum scores; SD – mean square deviation*

Figure 5

Specific self-evaluations of university students aged 22–30



Females also have less self-confidence at this age. However, other indicators, including intelligence and self-reported happiness, are slightly higher than those of males. According to Tables 4 and 5, female older university students have higher intelligence scores compared to younger ones (79.03 and 69.88, respectively). In the sample of older students, self-evaluation of appearance is also higher. For younger students it scores 67.9 (males) and 66.82 (females), and for older ones – 73.19 (males) and 74.19 (females).

Morpho-psychological associations in the sample of older students also show a general stabilization in perception of their own physical characteristics and a reduction in their influence on young people's self-esteem. In males, negative correlations between self-esteem and fat accumulation indicators persist and positive relationships with masculine characteristics increase. In females, all negative correlations between physical attributes and self-esteem become positive.

Discussion

The lower self-esteem of schoolboys aged 11 to 12 compared to schoolgirls of the same age probably reflects more critical attitude of adults, especially parents, towards boys and, as many researchers have pointed out, and a more tolerant attitude towards

girls, which also forms a different level of psychological comfort for young adolescents of both genders (Alikin & Lukyanchenko, 2012; Himaz & Aturupane, 2021). An indirect confirmation of this assumption can be significant gender differences at this age in self-evaluations of other people's attitudes, which are higher among schoolgirls. At the same time, the scores for self-reported happiness for both schoolboys and schoolgirls are high. These results are in line with data on the existence of a certain period of psychological well-being, a kind of "calm" on the eve of puberty shocks. According to some researchers, "from the fourth grade there is an increase in self-confidence, which remains high in most adolescents, and there is a bright, extensive emotion that shows a good mood, a feeling of joy in existence, feelings of pride and self-confidence" (Molchanova, 2021, p. 225). According to our results, the highest levels of self-esteem are in schoolgirls aged 11-12 years in contrast to the lowest levels of self-esteem in schoolboys, which differs from the data of some authors concerning the highest levels of self-esteem in boys in young adolescence (Birndorf et al., 2005; Harter, 2006). However, these results are consistent with other data from recent extensive research (Supervía et al., 2023). Our results can also be considered as a manifestation of the general pattern of puberty when age-related changes in girls are slightly ahead of the age dynamics in boys, and this progress manifests itself, among other things, in the formation of complex forms of self-awareness (Kohn, 2009).

Data on the presence of a positive relationship between self-reported happiness and the endomorph body type identified between 11 and 12 years of age are in some contradiction with the works of other authors. Thus, male endomorphs have more problems in relationships with their peers, are often ridiculed and have fewer friends (Cohn, 1980). However, the relationships among boys can depend on the type of community they live in. Thus, contacts with peers "in the playground" can be significantly different from school, where a different value system dominates. Another possible explanation is the complex nature of such a phenomenon as the feeling of happiness, which, as our research shows (Bakholdina & Blagova, 2020a, 2020b), does not always reflect the vector and level of self-esteem. Furthermore, such a correlation vector can be associated with the influence of certain social factors, especially the financial well-being of parents.

The next age group, 13-15-years-olds, is characterized by a slight decrease in self-esteem and feelings of happiness in both gender samples, while maintaining a lower level in schoolboys. However, if positive associations of self-esteem and feelings of happiness with endomorphic and mesomorphic indicators persist in the male samples, the vector of connections becomes negative in the female samples, and the degree of development of individual physical characteristics is inversely related to self-evaluations of appearance and other people's attitudes. At the same time, some physical characteristics in the sample of 13-15-year-old schoolgirls maintain positive correlations with self-reported happiness. This may also indicate some autonomy in self-reported happiness compared to other individual self-assessments.

There are significant changes in gender differences in self-esteem in older adolescents, reflected in a decline in self-esteem of schoolgirls aged 16-17 and an increase in self-esteem of males of this age. According to the results obtained, the high self-esteem of schoolboys is not directly related to their bodily state, and the correlation coefficients between physical characteristics and self-esteem do not reach statistical reliability. The validity of this conclusion is confirmed by data from other researchers, according to which apparently important features such as body height or length do not play an important role in the formation of self-esteem in older adolescents (Kohn, 2009).

In the sample of schoolgirls aged 16-17, the correlations between self-evaluations of appearance and intelligence with physical characteristics are negative and high in absolute terms. This shows the critical perception of schoolgirls of their own physical characteristics.

The levels of self-esteem of female and male students aged 18-21 are similar. We should note that female students maintain a lower self-evaluation of their own intelligence. Perhaps this is due to the influence of social gender stereotypes relating to the idea of intellectual superiority of men. The reason for the effectiveness of these stereotypes is that they are widely spread in society and tend to be internalized, i.e. they are perceived by girls and women themselves, which affects their self-esteem and self-confidence (Gálvez et al., 2019; Starr, 2018; Storage et al., 2020).

The formation of the structure and vectors of self-esteem of young people of this age, younger students, is affected by a number of social factors, including adaptation to university studies, unusual life in a dormitory, and a change in the normal kind of nutrition. It is not a coincidence that the feeling of happiness at this age is not very high for both genders and is significantly lower for males than for females (the differences reach the statistical significance level). The stress factors listed may also affect the structure of the correlations between self-esteem and physical characteristics, which remain negative in female students aged 18 to 21. An exception is self-reported happiness, for which positive correlations are found with some circumference measurements, indicating a different nature of this indicator.

The level of self-esteem of females and males is almost the same, but in several indicators, including self-evaluations of intelligence and self-reported happiness, females show a higher level of psychological well-being. An increase in self-evaluations of intelligence in female older students compared to younger ones can be a result of the influence of the social university environment, which helps them overcome negative social stereotypes about intellectual differences between genders. The results obtained also show that both male and female older students have higher levels of appearance self-evaluation than the younger ones, which is consistent with the data from psychologists' studies on higher levels of appearance self-evaluation in the age group of 26-36-years-olds, close to the age of the older student sample (Labunskaya, 2023).

The correlations of appearance characteristics and self-esteem in the sample of older students also show a general stabilization in the perception of their own physical characteristics and a decrease in their influence on the self-esteem of young people.

The results of the study also provide grounds for reflection on the possible "implicit" or "explicit" nature of specific self-evaluations. Therefore, self-evaluation of the attitude of others towards an individual has an important explicit component that reflects real social relationships with others. Age- and gender-related dynamics in self-evaluations of other people's attitudes, revealed in the study, can indicate their dependence on changes in the social context at different stages of ontogenesis. Self-confidence is also complex in nature, subject to significant age-related dynamics, varies between the two genders, and may also depend on biological and social factors.

Conclusion

The analysis concludes that a decline in self-esteem leads to an increase in frequency and strengthening of negative relationships between self-esteem and appearance characteristics, leading to young people's negative perception of their physical status. We should note that this process affects not only appearance self-evaluation, but also other specific self-evaluations. On the contrary, stabilizing self-esteem leads to an increase in "self-acceptance" at the physical level.

Another result of the study is that new data are collected on the heterogeneity of the structure of self-esteem and the different importance of self-reported happiness compared to other specific self-evaluations. The level of other specific self-evaluations and self-reported happiness, as well as the vector of correlations with physical characteristics, can vary significantly, which is observed in all studied age groups, except the older ones. Thus, in the sample of young adolescents, schoolboys have a fairly high level of happiness despite their low self-esteem. In schoolgirls between the ages of 13 and 15 years, statistically significant negative correlations of self-evaluations of appearance and other people's attitudes with the main circumference measurements are combined with positive correlations of circumference measurements with the happiness score. With a high degree of negative correlation in general, no reliable correlation with happiness was found in schoolgirls aged 16–17 years. In female students aged 18–21 years, the correlations of physical characteristics with specific self-evaluations and happiness are negative.

Therefore, the results of the study show that self-reported happiness is not directly related to self-esteem. It is an independent category that requires separate research.

The data obtained using the Dembo-Rubinstein Self-Esteem Scale to complex anthropological studies complement the existing ideas on the nature and structure of self-esteem and its relationship to the physical status of young people and can be used by various specialists, including psychologists, sociologists, and teachers.

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Conflict of Interest Information

The author has no conflicts of interest to declare.