

Body image dissatisfaction among adolescents from a small town: Association with gender, age, and area of residence

Insatisfação com a imagem corporal em adolescentes de uma cidade de pequeno porte: associação com sexo, idade e zona de domicílio

Yara Lucy Fidelix ¹
Diego Augusto Santos Silva ¹
Andreia Pelegrini ^{1,3}
Adelson Fernandes da Silva ²
Edio Luiz Petroski ¹

Abstract – A high prevalence of body image dissatisfaction has been observed among adolescents over the last decades. The aim of this study was to evaluate the association between body image dissatisfaction and demographic factors in adolescents. The sample consisted of 405 boys and girls (247 from an urban area and 158 from a rural area) aged 14 to 17 years enrolled in public schools of a small-sized municipality. The demographic variables analyzed were gender (male, female), age (14-15 years, 16-17 years), and area of residence (urban, rural). The perception of body image was evaluated using a figure rating scale. The prevalence of body image dissatisfaction was 56.5%. Both girls (26.5%) and boys (39.5%) wished to have a larger body silhouette. An association was observed between body image dissatisfaction and gender, with boys showing a 1.24 times higher chance (95%CI: 1.05-1.47) of body image dissatisfaction than girls. The prevalence of body image dissatisfaction is high even among adolescents from small-sized municipalities. Body image dissatisfaction is more prevalent among boys. Healthcare workers and teachers should be aware of the importance to encourage youngster to better understand themselves and their body and to reflect about current body images.

Key words: Body image; Adolescents; Health; Social conditions.

Resumo – Nas últimas décadas, prevalências elevadas de insatisfação com a imagem corporal em adolescentes têm sido observadas. O presente estudo teve por objetivo verificar a associação entre a insatisfação com a imagem corporal e os fatores demográficos em adolescentes. A amostra foi composta por 405 escolares (247 domiciliados na área urbana e 158 na rural), de ambos os sexos, de 14 a 17 anos, do ensino público de um município de pequeno porte. As variáveis demográficas analisadas foram sexo (masculino, feminino), idade (14-15 anos, 16-17 anos) e área de domicílio (urbana, rural). A percepção da imagem corporal foi avaliada por meio da escala de silhuetas corporais. A prevalência de insatisfação com a imagem corporal foi de 56,5%. Tanto os escolares do sexo feminino (26,5%) quanto o masculino (39,5%) desejam apresentar uma maior silhueta corporal. Observou-se associação do sexo com a insatisfação da imagem corporal, revelando que os rapazes apresentaram uma probabilidade 1,24 (IC95%: 1,05-1,47) vezes maior de insatisfação com a imagem corporal que as moças. A prevalência de insatisfação com a imagem corporal é elevada, mesmo em adolescentes residentes em municípios de pequeno porte, sendo mais evidente no sexo masculino. Recomenda-se que profissionais da área da saúde e educação atentem para a importância de incentivar os jovens a conhecerem melhor a si mesmos e ao seu corpo e a refletirem sobre os padrões corporais atuais.

Palavras-chave: Imagem corporal; Adolescentes; Saúde; Condições sociais.

1 Universidade Federal de Santa Catarina, Centro de Desportos, Programa de Pós Graduação em Educação Física, Núcleo de Pesquisa em Cineantropometria e Desempenho Humano, Florianópolis, SC, Brasil.

2 Universidade Estadual de Montes Claros. Januária, MG, Brasil.

3 Bolsista CAPES.

Received:

15 August 2010

Accepted:

22 November 2010



INTRODUCTION

Body image dissatisfaction is defined as the negative assessment of one's physical appearance¹ and is generally diagnosed by means of figure (body silhouette) scales and questionnaires². The beautiful body concept has undergone various transformations over the years. Beauty standards, which are influenced by the media, require increasingly thinner anthropometric profiles for women and stronger profiles for men³. Growing attention is paid to bodies shaped by physical exercise, plastic surgery, and esthetic technologies⁴.

According to the Brazilian Society of Plastic Surgery⁵, Brazil occupied second place after the United States in terms of the annual number of plastic surgeries performed in 2004. A worrisome fact is that most interventions were due to esthetic reasons and 11% of these procedures were performed in adolescents aged 14 to 18 years.

The phase of adolescence is characterized by numerous physical and mental changes. Among these transformations, an ideal prototype of the body (thin for women and athletic for men) has been established⁶, with body image satisfaction being directly related to better self-esteem⁷. Studies on adolescents have shown that body image dissatisfaction is highly prevalent during this phase of life, with rates of about 60% being reported⁸⁻¹⁰. Women generally desire to lose body weight, whereas men want to gain weight especially to achieve an athletic build¹¹. In this respect, some studies reported greater body dissatisfaction among women^{8,12}. However, Pelegrini and Petroski¹³ found greater body image dissatisfaction among men compared to women.

The prevalence of body image dissatisfaction is also related to the area of residence. Triches et al.¹⁴, studying female schoolchildren from two municipalities in the state of Rio Grande do Sul, observed a higher prevalence of body image dissatisfaction among girls living in urban areas (65.6%) compared to those living in rural areas (52.6%). In contrast, Welch et al.¹⁵ found no significant association between body image perception and geographic location.

Adolescents are influenced by social and cultural trends¹⁶ and are under the pressure to materialize the ideal body of the culture to which they belong¹⁷. Body image dissatisfaction, which used to be more frequent in large urban centers, is now also observed in small- or medium-sized towns. In the study of Adami et al.¹, 67% of schoolchildren

(9 to 16 years) from the capital of Santa Catarina were dissatisfied with their body image, whereas a higher prevalence (82%) was observed among schoolchildren aged 8 to 11 years from the capital of Rio Grande do Sul¹⁸. Variations in prevalence rates have also been reported for small towns, with rates ranging from 63.9% to 85%^{14,19}. With respect to age, body image dissatisfaction is observed among all age groups^{20,21}.

Adolescents are constantly worried about their weight, seeking a beauty ideal, and the lack of acceptance of the body makes them feel excluded from society²². In addition, controversies exist among studies investigating body image dissatisfaction in adolescents (girls and boys, residence in rural or urban areas). Therefore, the objective of the present study was to evaluate the prevalence of body image dissatisfaction according to gender, age, and area of residence among adolescents from a small town.

METHODOLOGICAL PROCEDURES

This study investigating the association between body image dissatisfaction and demographic factors in adolescents is part of a cross-sectional study entitled "Analysis of physical activity and health-related physical fitness in rural and urban schoolchildren" approved by the Ethics Committee of Faculdades Unidas do Norte de Minas (FUNORTE) (protocol 129/09). A representative sample of adolescents from state public schools, who lived in the urban and rural areas of the municipality of Januária, northern region of the state of Minas Gerais, southeastern Brazil, was studied. The municipality of Januária is a small municipality with an estimated number of 67,516 inhabitants²³. The town was founded on June 30, 1833, and comprises 65 districts divided into seven zones: north, south, east, west, south central, midwest, and north central.

Stratified sampling was used in which students from rural and urban areas were divided into classroom groups according to elementary and high schools. Only elementary and high schools were selected since they were the largest schools in the region and had the largest number of students. A lottery was done using a list provided by the institutions to define which schools would participate in the study. Rural students studying in the district where they lived were chosen and those using school or private transportation to schools in urban areas were excluded from the study. All 14- to 17-year-old adolescents who were present in

the classroom on the day of data collection were invited to participate in the study.

A prevalence of the outcome (body image dissatisfaction) of 80%, tolerable error of five percentage points, 95% confidence interval, and design effect of 1.5, adding 15% for possible losses and refusals, were adopted in the present study. Considering that 4,495 students were enrolled in the elementary and high schools of the region of Januária, Minas Gerais, a sample size of 402 adolescents was estimated. A total of 570 adolescents from northern Minas Gerais participated in the study. After receiving detailed information about the objective of the study and the procedures, the parents or legal guardians signed a free informed consent form authorizing the participation of the adolescents in the study.

Demographic data (gender: male and female; age: 14-15 years and 16-17 years; area of residence: urban and rural) and body image perception were analyzed. Body image perception was evaluated using the scale of nine body silhouettes proposed by Stunkard et al.²⁴. The set of silhouettes was shown to the adolescents, who responded to two questions: Which silhouette best represents your current (true) body appearance? Which silhouette would you like to have (ideal)? The adolescents were classified as satisfied when the difference between the true and ideal silhouette was zero, and as dissatisfied when it was different from zero. A positive difference (true – ideal) indicated a desire of the adolescents to reduce their body silhouette and a negative difference indicated a desire to increase their body silhouette.

The chi-square test was used to determine possible differences in frequency between variables. If the dependent variable (body image dissatisfaction) showed an elevated prevalence, Poisson regression with robust adjustment of variance was used to evaluate associations between the outcome variable and demographic factors. Prevalence ratios and confidence intervals were calculated. All variables were entered into the regression model. The level of significance was set at 5% (95% confidence interval).

RESULTS

One-hundred sixty-five students were excluded from the sample since they did not complete the body image questionnaire. Thus, the final sample consisted of 405 adolescent boys and girls, including 247 from urban areas and 158 from rural areas.

The prevalence of body image dissatisfaction was 56.5% and was higher among boys (63.5%) than among girls (51.7%; $p < 0.05$). When body image dissatisfaction was dichotomized into the desire to reduce or to increase body silhouette size, both boys (39.5%) and girls (26.5%) wanted to increase their body size (Table 1).

Table 1. Distribution of the sample according to body image perception. Januária, Minas Gerais (n = 405).

Variable	Satisfied		Desire to reduce		Desire to increase	
	n	%	n	%	n	%
Gender*						
Boys	61	36.5	40	24.0	66	39.5
Girls	115	48.3	60	25.2	63	26.5
Age (years)						
14-15	93	42.5	58	26.5	68	31.1
16-17	83	44.6	42	22.6	61	32.8
Area of residence						
Rural	77	48.7	33	20.9	48	30.4
Urban	99	40.1	67	27.1	81	32.8

* $p < 0.05$; $\chi^2 = 5.554$.

Table 2 shows the prevalence ratios (crude and adjusted) between body image dissatisfaction and demographic variables (gender, age, and area of residence). Crude and adjusted analysis showed that gender was the only variable associated with body image dissatisfaction. Boys presented a 1.24 times higher chance of body image dissatisfaction upon adjusted analysis than girls.

Table 2. Crude and adjusted prevalence ratio between body image dissatisfaction and demographic variables. Januária, Minas Gerais (n = 405).

Variable	Crude PR (95% CI)	Adjusted PR** (95% CI)
Gender		
Boys	1.23 (1.04-1.45)*	1.24 (1.05-1.47)*
Girls	1	1
Age (years)		
14-15	1.04 (0.88-1.23)	1.02 (0.86-1.21)
16-17	1	1
Area of residence		
Rural	1.17 (0.97-1.40)	1.18 (0.98-1.42)
Urban	1	1

PR: prevalence ratio; 95% CI: 95% confidence interval.

** PR adjusted for all variables in the model.

* $p < 0.05$ (Poisson regression).

DISCUSSION

The prevalence of body image dissatisfaction was 56.5%. A similar rate has been reported by Vilela et al.¹⁰, who observed body image dissatisfaction in 59% of students (7 to 19 years) from Porto Alegre, Rio Grande do Sul. On the other hand, Pinheiro and Giugliani¹⁸ found a higher prevalence (82%) for schoolchildren aged 8 to 11 years from the same city. These results suggest an increase in body image dissatisfaction among children and adolescents of similar age from the same city within a short period of time (2004-2006, respectively).

In the present study, adolescent boys (63.5%) showed greater body image dissatisfaction than girls (51.7%). In the study of Pelegrini and Petroski¹³ involving adolescents (14 to 18 years) from public schools in Florianópolis, Santa Catarina, 72.6% of adolescent boys and 61.8% of girls were dissatisfied with their body image. Similar prevalence rates of body image dissatisfaction in boys and girls have been reported by Graup et al.⁹ for students (9 to 16 years) from public and private schools (67.5% for boys and 67.6% for girls), demonstrating a balance in body image dissatisfaction between genders when compared to the present study. In contrast, no gender difference in body image dissatisfaction has been reported by Graup et al.⁹ for students (9 to 16 years) from public and private schools (67.5% for boys and 67.6% for girls).

Branco et al.¹², using different instruments for the evaluation of body image dissatisfaction in adolescents from São Paulo (14 to 19 years), observed that girls tended to be more dissatisfied than boys. According to Graham et al.²⁵, body image dissatisfaction seems to be a female trait, especially in adolescence, a phase when the body establishes its shape. However, recent studies^{9,13,26} show that body image dissatisfaction is increasingly affecting males; however, further studies on this topic are needed.

Dichotomization of body image dissatisfaction into the desire to reduce or to increase body silhouette size showed a desire to increase body size in both adolescent boys and girls; however, the frequency of this desire was higher among boys (39.5%) than among girls (26.5%). These findings disagree with Pinheiro and Giugliani¹⁸ who observed that 55% of adolescent girls wanted a thinner body and 28% of boys wanted to increase their body size.

Even presenting some type of dissatisfaction, boys wanted larger body silhouettes, possibly desiring a more muscular body. These results agree with

the literature showing that girls generally desire to reduce their body silhouette²³, whereas boys want stronger bodies¹⁰. These findings might be related to cultural factors, with boys being encouraged to perform activities that stimulate physical and muscle development, whereas girls are urged to exercise and lose weight to improve their esthetic appearance²⁷.

No association between body image dissatisfaction and age was observed in the present study. Triches et al.¹⁴ also found no significant association between these two variables; however, the desire to lose weight tended to increase with age. The present results showed that all adolescents were prone to body image dissatisfaction, irrespective of age. Within this context, the literature demonstrates that body dissatisfaction can manifest throughout all phases of life, including children²⁰, adolescents²⁸, adults²¹, and the elderly²⁹.

The present study was unable to demonstrate an association between area of residence (rural and urban) and body image dissatisfaction. The prevalence of body dissatisfaction was similar among adolescents from rural (51.3%) and urban areas (59.9%), in agreement with a study conducted on 13- to 17-year-old adolescents from southern Brazil living in rural and urban areas (rural: 64.2%, urban: 62.8%)²⁸. In contrast, Triches et al.¹⁴, studying students from two different small municipalities who lived in rural and urban areas, found different levels of body dissatisfaction, with greater dissatisfaction among those from urban areas. This dissatisfaction mainly consisted of the desire to reduce the body silhouette. A similar prevalence of body image dissatisfaction (67%) was observed among 9- to 16-year-old adolescents enrolled in public and private schools in Florianópolis, Santa Catarina, with dissatisfaction mainly being related to excess body fat⁹. These findings demonstrate that the prevalence of body image dissatisfaction is high among both adolescents from small towns and those from large urban centers.

A higher prevalence of body dissatisfaction was expected for adolescents living in urban areas who, in theory, are more exposed to a culture of thinness since they have better access to means of communication and media. Thus, body image dissatisfaction probably affected adolescents irrespective of the place of residence.

The main limitation of the present study is related to the instrument used for the evaluation of body image which, although widely reported in the literature, has not been validated for the young

Brazilian population. In addition, the body figures are two-dimensional, a fact leading to distortions in total body representation and weight distribution. The small size of the municipality of Januária may have also influenced the results regarding area of residence since the rural and urban areas are close to one another, with all adolescents thus having access to information. Further studies are needed that measure anthropometric variables in order to better reproduce the body composition of adolescents and to associate these variables with body image dissatisfaction.

CONCLUSIONS

The prevalence of body image dissatisfaction was high among the adolescents studied and was similar to that reported for other Brazilian cities. Boys were more dissatisfied with their body image, desiring a stronger and more athletic body. Age and area of residence were not associated with body image dissatisfaction. Parents, teachers and health professionals should be aware of the high prevalence of body dissatisfaction among adolescents and of the need for strategies designed to improve body satisfaction in this group.

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Address for Correspondence

Yara Lucy Fidelix
Universidade Federal de Santa Catarina
Centros de Desportos
Núcleo de Cineantropometria e Desempenho Humano – UFSC/CDS/NuCiDH
Campus Universitário – Trindade –
Caixa Postal 476
CEP 88040-900 – Florianópolis, SC, Brasil.
E-mail: yarafidelix@hotmail.com