

Original Article

Body image, weight concerns and related practices by Portuguese adolescents

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ABSTRACT: The relationships between body image and weight management practices were assessed in 266 boys and 312 girls from two schools in Lisbon. Perceived and ideal body image were assessed using the method of Stunkard. Willingness to lose weight was assessed by the difference between perceived and ideal images. Prevalence of overweight/obesity was 22% in girls and 20% in boys ($p=NS$), but 47% of girls considered themselves as overweight/obese vs 27% of boys ($p<0.01$). Willingness to lose weight was higher in girls (48% vs 23% in boys, $p<0.001$). Girls willing to lose weight smoked and skipped meals more frequently, whereas no differences were found for extracurricular sports activities. Boys willing to lose weight skipped meals more frequently and reported lower extracurricular sports activities, whereas no differences were found for smoking. These results show that adolescents desiring to lose weight engage in unhealthy practices, and implicate that nutrition education starting at young ages is mandatory. (Nutritional Therapy & Metabolism 2009; 27: 189-92)

KEY WORDS: Body image, Weight concerns, Adolescence

INTRODUCTION

Obesity in children and adolescents carries negative connotations leading to important psychosocial sequelae, especially regarding body image (1). Body image concerns are related to several problems such as eating disorders (2), increased smoking (3) and meal skipping (4). Adolescents girls are more concerned with their body image than boys (5) and their willingness to lose weight is more pronounced (6). In this study, we assessed body image and related health behaviors in a sample of Portuguese adolescents.

MATERIALS AND METHODS

In April-May 2002, 2 schools of the city of Lisbon were surveyed. The schools participated in the *Desporto é Saúde* project of the Sports Department of the Lisbon City Hall (7). Authorization from the school and parents' boards was obtained to apply body image, dietary intake and dietary preferences questionnaires together

with the other tests of the project. As the evaluation of height and weight is part of the educational curriculum and compulsory for all schoolchildren in Portugal, it was not deemed necessary to obtain approval from an Ethics Committee, provided that adequate measures were taken to maintain the data anonymous. All adolescents (excluding those on sick leave or with any contraindications for physical activity, amounting to less than 5% of the total sample) were screened during physical education classes by trained evaluators. Data to compute age were collected anonymously: only the month and year of birth were collected and participants were considered as being born the 15th of the month.

Height was measured to the nearest 0.5 cm using a stadiometer and weight was measured to the nearest 0.1 kg using a digital scale (both from Seca[®], Hamburg, Germany) with the subject in light sports clothing and without shoes. Overweight and obesity were determined using body mass index (BMI) according to international criteria (8).

Body image was assessed using the method of Stunkard (9). The level of body dissatisfaction was expressed as the difference between the ideal and the

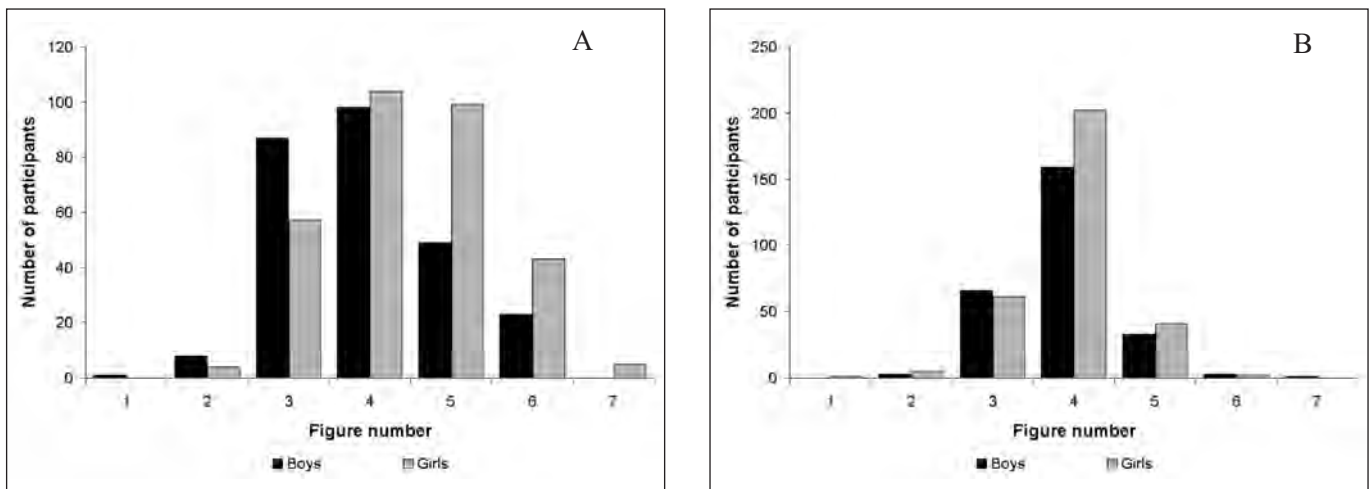


Fig. 1 - Distribution of current (left) and ideal (right) body image, by gender. The higher the number, the fatter the image.

current body figure (10). Participants were classified as desiring to lose weight if the ideal image was thinner than current, as desiring to gain weight if the current image was thinner than the ideal, and as desiring to maintain weight if the current image matched the ideal. Other data collected included current smoking status, participation in extracurricular sports, and meal skipping. No data was collected regarding psychological status. Dietary intake was assessed by a short food frequency questionnaire asking the weekly intake of selected foodstuffs.

Statistical analysis

Statistical analysis was carried out using SPSS version 15.0 (SPSS Inc. Illinois, Chicago, USA) for Windows. Data were expressed as number and percentage or as mean \pm standard deviation. Comparisons were performed using the chi-square and Student's t-test or Kruskal-Wallis test. Statistical significance was set at $p < 0.05$.

RESULTS

Overall, 266 boys and 312 girls, mean age 15.6 ± 1.3 years, participated in the study. The prevalence of overweight or obesity was 22.1% in girls and 19.5% in boys ($p > 0.05$). Almost half of the girls (47.1%) saw themselves as overweight or obese vs 27% of the boys ($p < 0.001$). None of the overweight or obese girls considered themselves as having normal weight, whereas some overweight or obese boys still considered themselves as having normal weight (not shown). Conversely, no differences were found between genders regarding ideal body image (Fig. 1).

The willingness to lose weight was higher in girls (48%, 41% and 11% for losing, maintaining and gaining, respectively, vs 23%, 56% and 21% in boys; $p < 0.01$). Similar findings were observed after stratifying for BMI categories: normal-weight girls: 38%, 48% and 14% for losing, maintaining and gaining, respectively, vs 25%, 63% and 12% in boys; ($p < 0.001$); overweight or obese girls: 93% and 7% for losing and maintaining, vs 25% and 75% in boys ($p < 0.05$).

Among both genders, participants desiring to lose weight skipped meals more frequently (Tab. I). Girls wishing to lose weight reported a lower consumption of meat, bread and soft drinks, while boys wishing to lose weight reported eating more soup (not shown). Girls who wanted to lose weight also tended to smoke more frequently, while boys who wanted to lose weight had a lower frequency of engaging in extracurricular activities (Tab. I).

DISCUSSION

To our knowledge, this is the first study to assess body image and related dietary and health behaviors among Portuguese adolescents. Our data indicate that a significant percentage of Portuguese adolescent girls are unhappy with their body image, a finding already reported in the literature (5).

In agreement with a worse evaluation of their body image, girls also showed a higher willingness to lose weight than boys, and this difference persisted after stratifying on BMI categories. Conversely, the percentage of boys willing to lose or to gain weight was relatively balanced. Possible reasons for such differences include media pressure that perpetuates the ideal of thinness and

TABLE I - HEALTH BEHAVIORS ACCORDING TO WILLINGNESS TO LOSE, MAINTAIN OR GAIN WEIGHT, BY GENDER

	Lose	Maintain	Gain	Test
Girls	n=150	n=127	n=35	
Cigarette smoking	27 (18.0)	9 (7.2)	2 (6.1)	8.70 *
Extracurricular activities	54 (38.0)	48 (40.7)	7 (21.9)	3.86 ^{NS}
Meal skipping	94 (63.5)	44 (35.8)	12 (36.4)	23.18 ***
Number of meals consumed	3.5 ± 1.0	3.9 ± 0.9	3.9 ± 0.8	9.92 **
Boys	n=60	n=150	n=55	
Cigarette smoking	3 (5.0)	11 (7.4)	12 (3.6)	1.14 ^{NS}
Extracurricular activities	31 (54.4)	108 (74.5)	37 (68.5)	7.69 *
Meal skipping	30 (52.6)	51 (34.9)	14 (25.5)	9.40 **
Number of meals consumed	3.5 ± 0.9	4.1 ± 1.0	4.2 ± 0.9	20.54 ***

Results are expressed as the number of subjects and (percentage) and as mean ± standard deviation. Statistical analysis by chi-square or Kruskal-Wallis test: ^{NS}, not significant; *, p<0.05; **, p<0.01; ***, p<0.001.

a negative stigma associated with being overweight in girls (11), whereas willingness to become more muscular might lead to desire of weight gain/maintenance in boys.

Participants who desired to lose weight reported significantly more unhealthy behaviors such as smoking, meal skipping and reduced participation in extracurricular activities. Meal skipping does not lead to weight loss (12) and the observed reduced consumption of carbohydrate-rich foods among girls might lead to an unbalanced dietary intake. The increased smoking is related to the widespread perception among youth that smoking contributes to weight loss (13) and might further aggravate unhealthy behaviors such as eating less fruit and vegetables or exercising less. Indeed, the fact that participants who were unhappy with their body image did not exercise was somewhat unexpected, as physical activity is one of the major determinants of weight loss (14). Our findings thus suggest that starting exercise might be a greater behavioral barrier to lose weight than skipping meals or smoking among adolescents in Portugal, the European country with the highest sedentary rates (15).

Dieting has a potential negative psychosocial impact, namely a higher likelihood of developing an eating disorder (16). Hence, adolescents wishing to lose weight should benefit from counseling about the

dangers associated with inadequate health behaviors, about alternative weight control methods, and about self-image promotion. Both teachers (17) and health professionals should engage in the prevention of eating disorders; furthermore, nutrition professionals should be involved in developing and implementing school-based programs promoting a healthy diet, regular physical activity behaviors, and a positive body image among adolescents and their peers.

CONCLUSIONS

Portuguese adolescents who desire to lose weight engage frequently in unhealthy practices. Educational measures are urgently needed in order to curb such unhealthy behavior.

Conflict of interest: none declared.

Financial support: none.

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Received: June 8, 2009
Accepted: August 4, 2009