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Association between body dissatisfaction and bullying in children of socioeconomically vulnerable areas

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ABSTRACT

Aim: To analyze the association between dissatisfaction with body image and weight status and the roles assumed in school bullying in children and adolescents living in a socioeconomically vulnerable area.
Method: 409 children and adolescents with average age of 11 years, from Florianópolis, Brazil, participated in this study. The body image was self-assessed through the Body Silhouettes Scale, the weight state through the body mass index (BMI) and the roles of participation in bullying through the Olweus Questionnaire.
Results: It was verified a significant association between "dissatisfaction with thinness" and (i) weight status, (ii) sex and (iii) roles of participation in bullying. In addition, low weight, boys and bully-victims presented a greater odds of body dissatisfaction due to thinness. The variable "dissatisfaction with excess" was negatively associated with age and weight status. Participants aged 11–12 years and 13 and 16 years, as well as children and adolescents with low weight, had lower odds of having excessive dissatisfaction.
Conclusion: The associations found in this study are important tools for developing interventions to avoid or minimize the effects of early body dissatisfaction and consequently violence at school, especially in children with increased determinants such as those living in socioeconomically vulnerable areas.

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Introduction

Previous studies about body image indicate that body dissatisfaction has been increasingly recurrent during childhood[1,2] and adolescence.[3,4] Likewise, body dissatisfaction has been increasingly recurrent during childhood and adolescence. It is known that at this stage, girls and boys are more dependent on peer acceptance and approval. Thus, supportive relationships with friends can provide protection against feelings of dissatisfaction with the body,[5] while a low acceptance may predict greater dissatisfaction with body image and behaviors that are harmful to health.[6,7]

Evidence indicates that children and adolescents dissatisfied with their body image end up becoming more psychologically vulnerable and even though they do not have any physical differences, they are more easily victims of school bullying.[8,9] Although there are innumerable reasons for which children and adolescents become victims of bullying, several studies point out that one of the most frequent reason is the deviation of the ideal appearance, in which bodies differ from socially imposed norms.[9–11] In addition, it is also noted that body weight is reported by students as the main cause of school bullying, being more frequent than sexual orientation and ethnicity.[12,13]

On the other hand, body dissatisfaction seems to have a contrary sense in relation to the role of bully. Studies have pointed out that children and adolescents who take on this role in school bullying tend to be more satisfied with body Image,[14] besides having higher self-esteem,[6] and being classified by colleagues as being the physically strongest.[15] Thus, knowing that body image can be influenced not only by physiological but also psychological, social and environmental factors,[16] it is believed that the relationship between these variables deserves to be better discussed in the literature, especially with children and adolescents from different contexts such as those living in socioeconomically vulnerable areas.

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It is known that school violence can have greater impact in unfavorable social contexts. In Brazil, several metropolises present children and adolescents who live in this context. Thus, there are places characterized by higher levels of social inequality and access to services of lower quality and whose inhabitants are in a situation of social vulnerability, that definition corresponds "to the condition of not having or not being able to use material and immaterial assets which would allow the individual or social group to deal with the situation of poverty".[17]

The vulnerability experienced in these areas is complex and multifaceted, going beyond health, social life, educational contexts, symbolic organizations, ethnic issues, labor camps, and public policies in general, with regard to living conditions and social supports.[18] When combined with the low socioeconomic conditions, it provides great tension among the young, which hampers the processes of social integration, and can foment violent attitudes, such as the involvement in bullying.[19]

Until now, little is known about how body image behaves and what its relation with school bullying, in children and adolescents living in socioeconomically vulnerable areas, in which there is a negative result of the relationship between availability of material resources and access to social, economic and cultural structures and opportunities. Therefore, the present study aims to analyze the associations between body image dissatisfaction with weight status and the roles assumed in school bullying among children and adolescents living in a socioeconomically vulnerable area.

Method

Participants and methods of recruitment

Two public schools located in socioeconomically vulnerable areas were intentionally selected according to the indication of the municipality's Education Department. After the selection, all students from 3rd to 7th grade were invited to participate in the study. The only exclusion criteria adopted in the recruitment of participants was the presence of some type of intellectual disability that compromised the understanding of the instruments, as indicated by the Special Education Service of the schools.

Based on the number of children and adolescents participating in the social project that serves children and adolescents in situations of social vulnerability in the metropolitan region of Florianópolis, a sample size was calculated assuming an alpha of 0.05 and power of 50%. According to the sample calculation the minimum expected was a sample with 316 participants. As dropouts are common during the course of the studies, the final sample of 409 children and adolescents was considered.

Participated in the study a total of 409 students, 207 (50.61%) boys and 202 (49.39%) girls, aged between 8 and 16 years old, with an average age of 11.14 (SD = 1.6) years in boys and 10, 9 (SD = 1.8) years in girls. Participants were Caucasian 290 (70.9%), Black 103 (25.2%) and Brown 16 (3.9%). Regarding weight status, 168 (49.4%) were underweight, 153 (45%) with normal weight and 19 (5.6%) were overweight or obese. For the purpose of this study and attending to the low number (n = 19) of overweight or obese children and adolescents, this category was further grouped with normal weight.

Ethical considerations

This research is part of a broad project approved by the Ethics Committee for Human Beings Research at the (blind) (process 5439/2011).

Prior to the data collection, parents, children and adolescents received detailed information about the research. Only those students who expressed their willingness to cooperate with the investigation participated and presented a consent term signed by the parents. After delivery of signed consent terms, all participants were individually present at the two stages of data collection. In the first stage, the participants answered both questionnaires, self-reported their participation in bullying, and described their perceived and desired body image, while the second step consisted in the measurement of body mass and height.

Instruments

Body image was self-assessed through the Body Silhouettes Scale proposed by Stunkard, Sorensen and Schulsinger[20] which is composed of a set of human figures numbered from 1 to 9, representing a continuum from the thinness (silhouette 1) to severe obesity (silhouette 9). The figures were presented to the students on a single sheet, and then they answered the following questions: (1) Which silhouette best represents your current physical appearance (real silhouette)? (2) Which silhouette would you like to have (Ideal Silhouette)? Satisfaction with body image was identified by the discrepancy between the value corresponding to the actual silhouette and the value indicated as the ideal silhouette (real silhouette–ideal silhouette). Students who presented values equal to zero were classified as "Satisfied" with body image, and those who presented values different from zero were considered "Dissatisfied". When this difference was positive the individual was considered dissatisfied for being overweight, and when negative, dissatisfied for thinness. Regarding internal reliability, the Stunkard Body Silhouettes Scale presented a moderate internal consistency level, with a Cronbach alpha of 0.600.

Body mass and height were measured by persons previously trained and following the procedures described by Ross and Marffell-Jones.[21] At the time of the evaluation the children were in light clothing and barefoot. To measure the body mass, a digital scale with graduation of 0.1 kg was used, and for height a stadiometer with a resolution of 0.1 cm, the children were with the head in the Frankfort plane, arms along the body and united feet. Weight status was assessed by body mass index (BMI = body mass (kg)/height (m)^2). The BMI classification was performed according to the cut-off points established by Conde and Monteiro[22] for the Brazilian population, stratifying the participants into three categories: underweight, normal weight and overweight.

To describe the possible roles of participation in bullying were used two questions in the Olweus Questionnaire.[23] The first question asked how many times, in the last 3 months of school, the participant had been a victim of school bullying, while the second asked how many times the participant had been a bully. With the information obtained through those who responded that they were victims and bully three or more times, a "bully-victim" variable was created, classifying them in four categories of participation in bullying: "non participant", "victim", "bully" and "bully-victim". The Olweus Questionnaire presented a good level of internal consistency, with a Cronbach alpha equal to 0.750.

Statistical analysis

Initially an exploratory analysis of the data was performed, in order to summarize the information obtained in the study. The nominal variables were described in terms of absolute frequency and percentage, and the quantitative variables were described by mean and standard deviation. The Mann–Whitney U test was used to verify the difference between the means, while the chi-square test was used to verify the possible associations between the categorical variables. The association between body image and the others independents variables was analyzed using binary logistic regression. Two models were tested, one simple and the other adjusted for all the variables that presented a $p < 0.20$.[24] In all