

# **EATING BEHAVIOR, SELF-CONCEPT AND BODY IMAGE IN PRE-ADOLESCENTS AS RISK FACTORS IN DEVELOPMENT OF EATING DISORDERS**

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During development, the subject learn about himself, in a process initiated on childhood, from the own individual differentiation to self-recognition that gradually leads to the self-concept definition. In adolescence, as a consequence of the cognitive development, arises an unrealistic idea about self-concept, resulting on a non-acceptance of subjects by themselves, causing a negative perception when they compare themselves to another individuals (Faria, 2005). Body Image is the sum of the mental representation, individuals perception and conceptualization of own body (Peres & Santos, 2006). Media and marketing worship a slender body image, ideal beauty standard transmitted to individuals by family and friends. As an unachievable beauty standard, body dissatisfaction became a generalized fact between adult and adolescent women, promoting idealization and search for an ideal body that sets as risk factors for eating disorders (Friederich et al., 2007). Eating disorders are psychiatric diseases characterized by changes on eating behavior, they are considered epidemic in industrialized societies that promote the 'body worship' (Borges, Sicchieri, Ribeiro, Marchini, & Santos, 2006). As pre-adolescents are deeply submitted to the influences of their parents, society and media, conflicts come up; those considered on a behavioral aspect, may cause body dissatisfaction, a great contestation as self-affirmation and inappropriate feeding practices that may be triggering eating disorders factors. The aim of this work was to investigate the eating behavior, the self-concept and the body image in pre-adolescents as factors for a possible development of eating disorders. There were 110 pre-

adolescents interviewed (64 girls and 46 boys), from nine to 12 years old, from a municipal school of Ribeirão Preto/SP. Anthropometric data were collected to estimate the Body Mass Index (BMI) and were applied: Eating Behavior and Body Image Test (EBBIT) (Galindo & Carvalho, 2007), a self-report questionnaire, composed by 42 items, with 4 answer alternatives. It was developed to assess eating behavior and body image in pre-adolescent girls. It is divided in three subscales: 1. Body image dissatisfaction and food restriction; 2. Binge eating behavior, and 3. Compensatory behavior associated with eating disorders (that subscale were dismissive by analysis orientation); Piers-Harris Children's Self-Concept Scale "the way I fell about myself", originally proposed by Piers and Harris in 1984, adapted and translated into Portuguese by Jacob and Loureiro (1999). It is a number of 80 dichotomous phrases scale. It is divided in six subscales, although in this study we only used the Physical Appearance and Attributes and Happiness and Satisfaction subscales; and an Infant Figure Rating Scale (IFRS) (Kakeshita, 2008), developed and validated to Brazilian children, from ten to 12 years old. It is composed by 11 silhouettes of each gender, presented in individual cards, with constant increments of 1.7 kg/m<sup>2</sup>, from leaner (BMI = 12 kg/m<sup>2</sup>) to the wider (BMI = 29 kg/m<sup>2</sup>) figure. The project was approved by the Council on Research Ethics of the University of Ribeirão Preto, process number 010/08. Statistic analysis was performed by a two way analysis of variance (ANOVA), to verify the difference among self-concept, body image perception and eating behavior between the genders and the nutrition status. *Newman Kewls, post-hoc* analysis, was used when appropriated ( $p < 0.05$ ). Concerning the nutrition status, it was observed that, despite half of the sample has being classified as eutrophic (50%), there was a high occurrence of overweight and obesity (39.09%). These are concern findings, because the increase in prevalence of overweight and obesity during childhood and adolescence may lead to a consequent increase in diseases associated with overweight, decreased life quality and possible psychosocial problems development. Considering the body image dissatisfaction, evaluated by the IFRS, it was found that there were differences between the genders [ $F_{(1, 102)} = 8.96$ ;  $p < 0.01$ ], featuring women as more dissatisfied. There were differences between the nutritional status groups [ $F_{(3, 102)} = 21.00$ ;  $p < 0.01$ ], overweight and obesity want to weigh less. The interaction between factors [ $F_{(3,$

$_{102})=2.86; p<0.04]$ , obese girls were more dissatisfied than all other groups. The willingness for losing weight observed in obese girls may be related to a possible triggering factor for eating disorders, since individuals who suffer from these disorders present body image dissatisfaction. Regarding Piers-Harris Children's Self-Concept Scale and its subscales of Physical Appearance and Attributes and Happiness and Satisfaction, it was found that these are dependent on gender [ $F_{(1, 100)}=6.45; p<0.01$ ], [ $F_{(1, 100)}=4.63; p<0.03$ ] e [ $F_{(1, 100)}=8.08; p<0.005$ ], respectively, girls have smaller self-concept, happiness and satisfaction and make worse judgments related to physical appearance and attributes. There were differences in the nutritional status [ $F_{(3, 100)}=3.34; p<0.02$ ], [ $F_{(3, 100)}=3.86; p<0.01$ ] e [ $F_{(3, 100)}=6.42; p<0.0005$ ], respectively, obese individuals have smaller self-concept, happiness and satisfaction and make worse judgments related to physical appearance and attributes. It has occurred interaction among these factors [ $F_{(3, 100)}=3.19; p<0.02$ ], [ $F_{(3, 100)}=2.82; p<0.04$ ] and [ $F_{(3, 100)}=4.28; p<0.006$ ], respectively, obese girls have smaller self-concept, happiness and satisfaction and make worse judgments related to physical appearance and attributes. Minor scores presented by obese girls on self-concept scale and its respectively subscales may be related to the fact that they have shown greater dissatisfaction with their body image. It is assumed that, due to media imposition by the lean body search, obese individuals are discriminated because of their body shape and weight, causing a negative perception of self-image, representing a risk for developing eating disorders. Considering the EBBIT results, it was found that the eating behavior and/or body image are not dependent on gender; all behave themselves similarly concerning about these aspects. Eating behavior and/or body image are dependent on nutritional status [ $F_{(3, 102)}=10.45; p<0.00$ ], overweight and obese individuals were different compared to eutrophic and low weight groups. There was interaction between these factors [ $F_{(3, 102)}=3.06; p<0.03$ ], obese girls were different compared to boys and girls from other groups. Body image dissatisfaction and food restriction subscale data showed that there were differences between the groups of nutritional status [ $F_{(3, 100)}=21.05; p<0.00$ ], overweight subjects showed a different behavior compared to other groups. Only the low weight group presented body image dissatisfaction and food restriction. Binge eating behavior subscale data showed no differences between genders, nutritional

status and the interaction among these variables, which means that all groups of both genders behave similarly in binge eating behavior. There is a considerable overweight and obesity incidence. The importance of these findings is underscored by the fact that obesity and low self-esteem constitute precipitating risk factors to eating disorders occurrence. Another important aspect found was the body image dissatisfaction, especially in overweighted and obese girls. That may indicate the concern with the body and/or body image dissatisfaction result from external pressures. Because the formation of self-image being one of the development aspects that suffers more influence of the environment, it is likely that this dissatisfaction indicates a widespread behavior in current society. It was also found that obese girls were more dissatisfied with self-concept compared to other groups. That can be explained by the fact that the obese people feel different because they are negatively evaluated by media or by their peers. On that age group there is a tenuous line between the normal and abnormal biopsychosocial behavior. Because it is a step in which the body design assumes not very clear forms, only recognized under separate contours, without a whole abstract figure body distinction, further the biological and emotional immaturity, it is difficult for health professionals and parents to realize this substantial change. However, it is suggested that there are important risk factors for developing eating disorders in this sample, underscoring the need for the identification of more vulnerable subjects, by their educators and parents, so they are submitted to a careful evaluation by the health professionals as a prevention care.

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