Social skills: a factor of protection against eating disorders in adolescents

Abstract The purpose of this study is to provide a review of the literature on the relationship between eating disorders and social skills in adolescents. A search was made on the Medline, SciELO and Lilacs databases, for items combining the terms 'eating disorders', 'anorexia nervosa', 'bulimia nervosa' and 'food behavior', with the terms 'social psychology' and 'social isolation', and with the keywords 'social competence', 'social skill' and 'interpersonal relations'. The following were included: studies on adolescents; in Portuguese, English and Spanish; published in the years 2007 through 2012. The search resulted in 63 articles, and 50 were included in this review. The majority of the studies were made in Brazil and the United States. Of the total, 43 were original articles. The studies aimed to understand how emotional state could influence the establishment of eating disorders, interpersonal relationships and peer relationship. The articles also discussed the influence of the media and of society in this process. Based on the analysis of the studies, it was observed that the greater an adolescent’s repertory of social skills, the greater his or her factor of protection against the development of eating disorders.

Key words Social psychology, Social skill, Eating disorders, Adolescent health, Adolescent behavior
Introduction

Feeding or eating disorders are behavioral syndromes of which the diagnostic criteria have been widely studied in the last 30 years. They predominantly affect young women, with an average male-female prevalence ratio of 1:10 during adolescence, causing marked biological, psychological and social harm. They have the highest mortality rates of all psychiatric disorders: 5.6% per decade.

The worldwide incidence of eating disorders has practically doubled over the last 20 years, and has been highest in adolescence – the reason for this being that this phase of life has intense transformations in the process of growth and development, with an increase of dissatisfaction with body dimensions, and a desire to lose weight. According to Lofrano-Prado et al., the prevalence of anorexia and bulimia nervosa in adolescents is between 1% and 4%, but it is estimated that 20% to 56% of girls and 31% to 39% of boys develop these disorders. Vilela et al. found a prevalence of 13.3% in eating behaviors suggestive of anorexia nervosa, and 11% of bulimia nervosa, in adolescents of both genders. Alves et al. found a prevalence of 15.6% of eating behavior suggestive of anorexia nervosa, in female adolescents.

A survey in secondary schools in Minnesota, USA, with more than 80,000 participants, found that 56% of the girls and 28% of the boys in the first year of secondary education reported elementary disorder behaviors such as vomiting, fasting or compulsive eating. In this same survey, students in the last year of secondary education showed slightly higher percentages: 57% of the girls and 31% of the boys had behaviors that suggest eating disorders. A study in the north of Italy found that 28% of girls aged 15 to 19 reported unhealthy eating habits. Two recent studies in Germany showed that more than a third of the female secondary school students and 20% of the boys in the same age group scored significantly high on the Eating Attitudes Test, an instrument widely used for assessment of eating disorders.

Eating disorders have a multifactorial etiology – they may be caused by genetic, psychological or socio-cultural factors, and are thus characterized as biopsychosocial disorders. The eating disorders most studied are anorexia nervosa (AN) and bulimia nervosa (BN). In AN, an intense, and intentional loss of weight is described, with major physical and psychological distress. Due to the distortion of perception of body image, people do not see themselves as thin, but always fat, which exacerbates their restraints on eating. In BN, the subject usually remains close to normal body weight, or even is slightly overweight. It is characterized by repeated over-eating events, alternating with inappropriate ways of compensating to control weight, such as induced vomiting, abuse of medications, restrictive diets and extenuating physical exercises.

It is known that the model of beauty imposed by today’s society is that of a thin body, but without taking into account the aspects relating to health and the differences of physical constitution in the population. Body standards and eating habits are reinforced by the media, which influences the values and choices of children, adolescents and young adults.

There is no consensus on the concept of social skills, indeed there is a veritable lacuna on the subject, since a number of dimensions have not been established. Components chosen in accordance with the intuition of each investigator, and the absence of a model to guide any research on social skills, are problems that have not yet been resolved.

There are many challenges in defining what constitutes skillful social behavior. There are innumerable definitions on what characterizes this behavior; it is known that factors such as age, gender, education and social class interfere in its constitution. Further, the behavior that is considered appropriate in one situation may be inappropriate in another. Hence there cannot be an absolute criterion of social skill; the probability of occurrence of any skill in any critical situation is determined by factors that are environmental, and/or personal, or have to do with the interaction between the two.

According to Caballo:

Socially skillful behavior is a group of behaviors practiced by an individual in an interpersonal context that expresses the feelings, attitudes, desires, opinions or rights of that individual in a manner that is appropriate to the situation, while respecting the same types of behavior in others, and which usually resolves the immediate problems of the situation while minimizing the probability of future problems.

This being so, and due to the scarcity of research studies that relate to the influence of social skills on the occurrence and maintenance of eating disorders in adolescents, the aim of this study is to provide a review of the literature on both subjects, so as to establish the relationship between them in this population.
Method

To identify articles published in scientific magazines, three bibliographical databases were consulted: The Medical Literature Library of Medicine On-Line (Medline), via PubMed, and the Scientific Electronic Library Online (SciELO) and Literatura Latino-Americana e do Caribe (Lilacs), via the Virtual Health Library (Biblioteca Virtual em Saúde – BVS).

The descriptive phrases ‘eating disorders’, ‘anorexia nervosa’, ‘bulimia nervosa’ and ‘food behavior’, were crossed with the phrases ‘social psychology’ and ‘social isolation’, and with the keywords ‘social competence’, ‘social skill’ and ‘interpersonal relationship’. The search was limited to the subject ‘human’, the age group ‘adolescent’, the Portuguese, English and Spanish languages, and publication in the years 2007–2012 inclusive.

Original articles, review articles (bibliographical, systematic, and ethnographic) and editorial comments were included, covering the following subjects: Eating disorders and social skills. Articles that were not in line with the subject of the survey, or were not available in full, and repeat studies using the same databases, were excluded.

So as to detail and systematize the results found, a table was made containing the information on the authors, the year of publication, and the country of the study; the study’s objective; the type of article; and the variables analyzed in the study. To discuss the studies, various factors were taken into consideration: The breadth of the concept of social skills; the relationship between eating disorders and the emotions involved; the influence of peers, and the interference of the media and society in this process.

63 studies were identified by the search in the databases. Of those identified, 13 were excluded during the checking for eligibility for the studies: 7 were not in line with the subject of this survey, in spite of the search method described above; 4 were duplicating the bases of data used; and 2 were not available in full. Figure 1 illustrates the process of search, selection and inclusion of the articles, which resulted in 50 articles included in the revision.

Results and discussion

Of the 50 studies included in this review, 13 took place in Brazil, 13 in the United States and 10 (20%) in London. The remainder of the studies were carried out in other locations. As to the types of study, 43 were original and 4 were reviews of the literature. Other types of studies found were systematic review, ethnographic review, and editorial comment.

Analyzing the objectives of the surveys included in this review it is noted that the studies aimed to understand how the emotional state could influence the establishment of behavior of risk for eating disorders, and also how interpersonal relationships and peers could have the same influence. Similarly, the articles discussed the influence of the media and of society on the eating behavior of adolescents.

It is worth noting that only one article was found which, as well as discussing the variables in risk behavior for eating disorders in adolescents, reported the proposal for a prevention group to prevent these disorders, dealing with questions related to emotion, peers and the influence of the media and society. There is no definitive data on how and when social skills are learned, but infancy is without a doubt a period that is considered critical. Social behaviors are initially formed

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<th>Aims of the study</th>
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<tbody>
<tr>
<td>Scivoletto et al., 2010&lt;sup&gt;3&lt;/sup&gt; Brazil</td>
<td>To orient the initial conduct of psychiatric emergencies</td>
<td>Original article</td>
<td>Aggressive and suicidal behavior, anxiety disorders, eating disorders</td>
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<tr>
<td>Shomaker; Furman, 2009&lt;sup&gt;6&lt;/sup&gt; USA</td>
<td>To investigate interpersonal influences and eating disorders in adolescence</td>
<td>Original article</td>
<td>Eating disorders, body image disorders, pressure to be thin</td>
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<tr>
<td>Herpertz-Dahlmann et al., 2008&lt;sup&gt;9&lt;/sup&gt; German</td>
<td>To identify eating risk behavior and the relationship with body weight</td>
<td>Original article</td>
<td>Eating disorders, body image disorders, quality of life</td>
</tr>
<tr>
<td>Meyer; Gast, 2008&lt;sup&gt;11&lt;/sup&gt; USA</td>
<td>To investigate the effect of peer influence in eating disorders</td>
<td>Original article</td>
<td>Influence of peers and eating disorders in adolescents</td>
</tr>
<tr>
<td>Levy et al., 2010&lt;sup&gt;13&lt;/sup&gt; Brazil</td>
<td>To describe consumption and eating behaviors, associating them with social-demographic factors</td>
<td>Original article</td>
<td>Food consumption, eating behavior and social-demographic factors</td>
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<tr>
<td>Hamann et al., 2009&lt;sup&gt;14&lt;/sup&gt; USA</td>
<td>To relate the symptoms of bulimia with interpersonal sensitivities</td>
<td>Original article</td>
<td>Bulimia nervosa, depression and interpersonal sensitivity</td>
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<tr>
<td>Gan et al., 2011&lt;sup&gt;15&lt;/sup&gt; Malaysia</td>
<td>To relate social-cultural influences with eating disorders</td>
<td>Original article</td>
<td>Socio-cultural pressure, stress and eating disorders</td>
</tr>
<tr>
<td>Caglar et al., 2010&lt;sup&gt;17&lt;/sup&gt; Turkey</td>
<td>To assess whether social anxiety influences the behavior of adolescents</td>
<td>Original article</td>
<td>Social anxiety, eating disorders, perfectionism and body image</td>
</tr>
<tr>
<td>Reyna; Brussino 2011&lt;sup&gt;20&lt;/sup&gt; Argentina</td>
<td>To review the instruments for assessment of social skills</td>
<td>Systematic review</td>
<td>Instruments for evaluating social skills, and their reliability</td>
</tr>
<tr>
<td>Pereira et al., 2008&lt;sup&gt;21&lt;/sup&gt; Brazil</td>
<td>To relate self-concept and social skills with academic performance</td>
<td>Original article</td>
<td>Self-concept and social skills</td>
</tr>
<tr>
<td>Paulino; Lopes, 2010&lt;sup&gt;24&lt;/sup&gt; Brazil</td>
<td>To assess the correlations between verbal and non-verbal intelligence and risk behaviors</td>
<td>Original article</td>
<td>Perceptions of risk, verbal and non-verbal reasoning</td>
</tr>
<tr>
<td>Cia; Barham, 2009&lt;sup&gt;23&lt;/sup&gt; Brazil</td>
<td>To relate paternal development and the social development of the father’s children</td>
<td>Original article</td>
<td>Paternal involvement, social skills and social development</td>
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### Chart 1. continuation

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<tr>
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<tbody>
<tr>
<td>Cia; Barham, 2009 Brazil</td>
<td>To relate children’s social-emotional development to their academic development</td>
<td>Original article</td>
<td>Social skills and school performance</td>
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<tr>
<td>Silva; Murta, 2009 Brazil</td>
<td>To present a program of training in social skills for adolescents</td>
<td>Original article</td>
<td>Training of social skills in groups of adolescents</td>
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<tr>
<td>Bolsoni-Silva et al., 2010 Brazil</td>
<td>To evaluate children with behavior or social skill problems</td>
<td>Original article</td>
<td>Social skills and problems of behavior</td>
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<tr>
<td>Fitzsimmons; Bardone-Cone, 2011 USA</td>
<td>To assess the relationship between social support and the ability to resist/avoid eating disorders</td>
<td>Original article</td>
<td>Anxiety, difficulty of confrontation and eating disorders</td>
</tr>
<tr>
<td>Toral; Slater, 2007 Brazil</td>
<td>To obtain a deeper understanding of the factors determining eating habits and how they are formed</td>
<td>Review of the literature</td>
<td>Eating behavior, nutritional education, trans-theoretical model</td>
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<tr>
<td>Sarmento et al., 2010 Brazil</td>
<td>To investigate emotional and behavioral symptoms in obese adolescents</td>
<td>Original article</td>
<td>Social skills and problems of behavior</td>
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<tr>
<td>Aubalat; Marcos, 2012 Spain</td>
<td>To analyze strategies for dealing with and overcoming eating disorders in adolescents</td>
<td>Original article</td>
<td>Strategies for confrontation in eating disorders</td>
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<tr>
<td>Nilsson et al., 2007 Switzerland</td>
<td>To evaluate the causes of anorexia nervosa</td>
<td>Original article</td>
<td>Causes of eating disorders</td>
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<tr>
<td>Arkell; Robinson, 2008 London</td>
<td>To analyze the quality of life of patients with AN</td>
<td>Original article</td>
<td>Quality of life, depression and social skills</td>
</tr>
<tr>
<td>Aime et al., 2008 Canada</td>
<td>To assess dietary history, risk factors and emotional factors in eating disorders</td>
<td>Original article</td>
<td>Depression, use of drugs and alcohol, eating disorders, emotions</td>
</tr>
<tr>
<td>Grilo et al., 2012 USA</td>
<td>To analyze history of BN and behavioral eating disorders, in relation to stress</td>
<td>Original article</td>
<td>Remission of eating disorders, personal characteristics</td>
</tr>
<tr>
<td>Lam; McHale, 2012 USA</td>
<td>To examine concern about weight during adolescence</td>
<td>Original article</td>
<td>Concerns with weight and parental relationships</td>
</tr>
<tr>
<td>Hartmann et al., 2010 Germain</td>
<td>To relate interpersonal problems with eating disorders</td>
<td>Original article</td>
<td>Interpersonal problems and eating disorders</td>
</tr>
<tr>
<td>Davey; Chapman, 2009 London</td>
<td>Relation between disgust and eating disorders</td>
<td>Original article</td>
<td>Disgust and eating disorders</td>
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<tbody>
<tr>
<td>Groleau et al., 2012</td>
<td>Canada</td>
<td>To estimate and relate emotional abuse with BN</td>
<td>Original article</td>
<td>Eating disorders, trauma and emotional abuse</td>
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<tr>
<td>Fox, 2009</td>
<td>London</td>
<td>To develop methods for better understanding of the emotions of AN</td>
<td>Original article</td>
<td>Emotional skills in eating disorders</td>
</tr>
<tr>
<td>Presnell et al., 2009</td>
<td>USA</td>
<td>To evaluate the relationship between eating disorders and depression</td>
<td>Original article</td>
<td>Depressive symptoms and eating disorders</td>
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<tr>
<td>Limbert, 2010</td>
<td>London</td>
<td>To investigate the relationship between social support and eating disorders</td>
<td>Original article</td>
<td>Social support network and eating disorders</td>
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<tr>
<td>Vale et al., 2011</td>
<td>Brazil</td>
<td>To estimate the prevalence of eating disorders in the Northeast of Brazil</td>
<td>Original article</td>
<td>Prevalence of eating disorders in adolescents of the northeast of Brazil</td>
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<tr>
<td>Lavender; Anderson, 2010</td>
<td>USA</td>
<td>To evaluate difficulties in controlling emotions in relation to eating disorders</td>
<td>Original article</td>
<td>Emotional control and body dissatisfaction</td>
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<tr>
<td>Markey, 2010</td>
<td>USA</td>
<td>To comment on body image in adolescence</td>
<td>Editorial comment</td>
<td>Body image, development, eating disorders</td>
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<tr>
<td>Ioannou; Fox, 2009</td>
<td>London</td>
<td>To relate emotions with eating disorders</td>
<td>Original article</td>
<td>Anger, depression and feeling of threat in eating disorders</td>
</tr>
<tr>
<td>Fox; Power, 2009</td>
<td>London</td>
<td>To relate depression, emotions and eating disorders</td>
<td>Review of the literature</td>
<td>Emotions, influence of the environment and eating disorders</td>
</tr>
<tr>
<td>Goss; Allan, 2009</td>
<td>London</td>
<td>To relate shame with eating disorders</td>
<td>Review of the literature</td>
<td>Shame and eating disorders</td>
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<tr>
<td>Forney et al., 2012</td>
<td>USA</td>
<td>To assess the influence of peers on body image and eating disorders</td>
<td>Original article</td>
<td>Influence of peers, body image and symptoms of eating disorders</td>
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<tr>
<td>Schutz; Paxton, 2007</td>
<td>Australia</td>
<td>To relate body image and depression</td>
<td>Original article</td>
<td>Body image, eating disorders and quality of friendships</td>
</tr>
<tr>
<td>Hutchinson; Rapee, 2007</td>
<td>Australia</td>
<td>To relate friendship, eating disorders and the body image</td>
<td>Original article</td>
<td>Body image, eating disorders and quality of friendships</td>
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<tr>
<td>Thompson et al., 2007</td>
<td>USA</td>
<td>To evaluate the influence of peers on the body image, eating disorders and self-esteem</td>
<td>Original article</td>
<td>Body image, influence of peers, eating disorders and self-esteem</td>
</tr>
<tr>
<td>Scoffier et al., 2010</td>
<td>France</td>
<td>To evaluate the influence of the sporting environment and eating disorders in athletes</td>
<td>Original article</td>
<td>Competitive athletes, eating disorders and influence of the sporting environment</td>
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</table>
in the family environment, and later in the other environments in which the individual lives, such as school, church, clubs, among others. Children who do not make progress in school learning or who remain impulsive, aggressive or socially incompetent, are at a high risk for psychosocial disorders in adolescence.

Like social behavior, eating behavior has to do with attitudes related to feeding practices associated with social-cultural attributes, such as the intrinsic subjective aspects of the individual or the aspects that are particular to a given collective unit of society, that are involved with the act of eating or with the food itself. In the formation of eating behavior, there is influence of nutritional, demographic, social, cultural, environmental and psychological factors.

In these contexts, social skills appear to function as factors of protection, conditions that reduce negative impacts in infancy and offer a prognosis of positive development, in the sense of leading to widening of repertory, and inhibit-

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<tbody>
<tr>
<td>Bailey; Ricciardelli, 2010</td>
<td>Australia</td>
<td>To examine social comparisons, body image, self-esteem and eating disorders</td>
<td>Original article</td>
<td>Social comparisons, self-esteem, body image and eating disorders</td>
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<tr>
<td>Ruhl et al., 2011</td>
<td>Germain</td>
<td>To evaluate whether the behavior of sufferers from bulimia is influenced by exposure to thin body types as models</td>
<td>Original article</td>
<td>Bulimia nervosa, media</td>
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<tr>
<td>Ramos et al., 2011</td>
<td>Brazil</td>
<td>To analyze the identity culture of AN in the internet environment</td>
<td>Etnographic review</td>
<td>AN, lifestyle, the perfect body concept, belonging to a group</td>
</tr>
<tr>
<td>Fonseca et al., 2011</td>
<td>Brazil</td>
<td>To present representation of alimentary modernity for sociology and anthropology</td>
<td>Review of the literature</td>
<td>Food, social sciences and social phenomenon</td>
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<tr>
<td>Connan et al., 2007</td>
<td>London</td>
<td>To relate low social position with AN</td>
<td>Original article</td>
<td>Low social position and anorexia nervosa</td>
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<tr>
<td>Harrison et al., 2010</td>
<td>London</td>
<td>To evaluate interpersonal processes, anxiety and emotional regulation in eating disorders</td>
<td>Original article</td>
<td>Regulation of emotions, eating disorders</td>
</tr>
<tr>
<td>McEwen; Flouri, 2009</td>
<td>London</td>
<td>To investigate the regulation of emotions between parents and adolescents with eating disorders</td>
<td>Original article</td>
<td>Emotions, relationship between parents and adolescents with eating disorders</td>
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<tr>
<td>Bodell et al., 2011</td>
<td>USA</td>
<td>To relate social support, negative events and eating disorders</td>
<td>Original article</td>
<td>Social support, occurrence of negative events and eating disorders</td>
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<tr>
<td>Scime; Cook-Cottone, 2008</td>
<td>USA</td>
<td>To evaluate the efficacy of a group aiming to prevent eating disorders</td>
<td>Original article</td>
<td>Prevention group, body image and eating disorders</td>
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Source: Authors, 2013.
ing possible problems arising from non-adaptive behaviors. It is believed that children, who are frequently pressured in relation to their weight and the shape of their body, tend to develop eating disorders, depression, anxiety and a greater occurrence of negative thoughts in adolescence or in the adult phase.

During adolescence, there is a series of physical, cognitive, emotional and social changes, which can be understood by adolescents as factors of stress. In this period, internal resources, that the adolescent has and which are used to resolve the important development tasks of this phase, will significantly depend on the quality of the resolution of the significant tasks of infancy, such as school adjustment and performance, competence in relationships with others, and conduct governed by rules. This process will culminate in the acceptance of the rules of a society for moral behavior and pro-social conduct.

It seems to be clear that individuals who are socially skilled and unskilled have differences in behavior, cognition and physiology. However, since the basic components of a skillful behavior have not yet been established, there is a difficulty for surveys in this area. Unskilled subjects maintain less visual contact, and have higher indices of anxiety, little variation in facial expression, difficulty in conversing and smiling, a higher degree of negative self-verbalization, irrational ideas, and less self-confidence, and tend to have a higher probability of occurrence of unfavorable situations, standards of abnormal behavior, and pathological patterns of attribution of social successes and failures, among other factors.

A survey involving patients suffering from AN, more than 16 years after having been diagnosed, sought to elucidate what were the reasons, in the participants’ perception, that led them to develop the condition. At the end of the study, the researchers divided the answers obtained into three categories: a. individual characteristics: individual demands, perfectionism, internal crises, physical and emotional problems, corporal dissatisfaction, restrictive diets, low self-esteem; b. family problems: difficulties of interaction and communication with the family, stressful family events and high demand from the family; and c. social-cultural factors: problems with peers, at school and in practice of sport.

Similar categorizations were found in a study carried out in Germany, with 1,843 children and adolescents – 898 girls and 945 boys with average age of 14. It was observed that a third of the girls and 15% of the boys showed changes in eating behavior, suggestive of eating disorders, and those that did suffer the disorder had alterations in three facets of their lives: physical, emotional and social.

### Emotions

Many studies are being carried out for better understanding of how eating disorders are affected by the emotions. Approximately 20% of the patients suffering from eating disorders have the chronic form of the disorder, which can generate organic, psychological and social deficiencies. Often, psychiatric disorders such as anxiety, depression, obsessive-compulsive disorder and personality disorder are added.

The transition phase exposes the adolescent to risk factors that can be understood as personal or environmental variables, increasing the possibility of negative effects on health, wellbeing and behavior. Social-emotional problems – including a limited repertoire of appropriate social skills, unsatisfactory academic performance, conflicts in the relationship with parents, and disturbed transition periods in the process of development, become risk factors for a range of social and emotional problems.

Eating disorders are accompanied by psycho-social alterations, since the individuals suffering from them often have cognitive difficulties, difficulties in establishing relationships, interpersonal and psychological problems, such as low self-esteem and perfectionism. People suffering from AN have high levels of anxiety, consider themselves to be incapable of socializing and frequently have a behavior of submission to others. Patients with BN have feelings of depression, anger and disgust, as well as having difficulty in establishing healthy social relationships.

A study involving 652 female adolescents in the northeast of Brazil, for the purpose of characterizing eating behavior, found that 31.2% (n = 644) reported that when they feel anxious they eat a lot. It was asked whether they sought food for the purpose of relieving some type of discomfort, and 17.9% answered yes (n = 642).

It is important to point out that, although the majority of the studies emphasize eating disorders in the female gender, in the last decade much research has been done on the occurrence of these disturbances in eating behavior and body image in males. Dissatisfaction with the body
in men is associated with negative psychological consequences, including depression and low self-esteem, a fact which is observed also in females. While girls suffer more pressure to be thin, boys are influenced toward having low body fat and high muscular development.

Weak development of emotional skills, and a sense of confusion about the emotions, in particular difficulties with tolerance and management of anger and of sadness, were highlighted as important triggers for the development of eating disorders; feelings of anger are related to dissatisfaction with the body, commonly observed. Individuals with these disorders have difficulty in distinguishing their emotional states, reinforcing the emotional confusion cited by other researchers. The diagnosis of alexithymia is described in patients with eating disorders – corresponding to this confusion of feelings, difficulty of expressing emotions and bodily sensation; it is possible that alexithymia is related to the individuals’ mood, acting indirectly to maintain the disorder, as well as facilitating the installation of depressive symptoms, dissatisfaction with the body and low self-esteem.

Two relationships are established between the signals presented by individuals with eating disorders, and the emotions. Moments of restriction reflect the attempt to avoid the feelings; and purging and vomiting denote the intention to suppress the emotions, in that they have now been activated.

The feelings commonly associated with eating disorders are anger, anxiety, distaste, fear and disgust. Another feeling that recently is being related to the establishment of eating disorders is shame. It is not yet known whether this feeling gives a predisposition to the disorder or if it a consequence of it. It would be related both to dissatisfaction with the shape of the body, and also with the quantity of food ingested (a lot, or a little), being reflected in the individual’s self-isolation and less healthy relationships with his/her peers.

It is believed that the mechanisms by which the emotions occur take place in two phases. When the primary emotions such as anger or sadness are experienced, beliefs in relation to the difficulty of accepting them are released over the course of a desire to suppress the emotion by eating compulsively, or restriction on eating. As a result, the secondary emotions, such as blame or shame, are activated.

Peers

In adolescence, development of social skills does not depend only on the parents, since peers are important models and a source of reinforcement. The changes that take place over this phase affect the subject’s social, affective, behavioral, physiological and cognitive interaction. Especially, the physiological aspects can generate implications for the social-emotional development of adjustment of the individual.

The impacts of the biological process of puberty on the psychological and social factors of the individual are mediated by the context and by the way in which the other persons (family, colleagues, teachers) react to these transformations. Thus, the transformations of puberty set off important changes in self-image and in the way of relating to peers and other people, which interfere with the self-concept of the individual and in his capacity to face a very wide range of social situations.

Researchers postulate that in this phase peers are influential in the development of individual personality traits, physical characteristics and behavioral trends. The adolescent tends to become similar to his friends in appearance and social attributes, and also in interests, attitudes and behaviors. Peers fill a series of vital gaps for the adolescent: they build self-esteem; supply information and emotional support; contribute to the development of her/his identity; and carry out a function of protection against stressful events.

Between peers, similarities are shared in risk behaviors, such as, for example, using and experimenting with drugs. These similarities are considered to be important in the determination of interpersonal relationships. Concern with the body image and eating disorders can develop during adolescence; it is supposed that friends of adolescents can share these concerns, giving value to body image and tending to lead to the occurrence of eating disorders.

The majority of studies, which show the relationship between peers and the development of eating disorders, focus on how the perception that adolescents have about weight and eating behavior can influence friends. Another source of research that has been strongly explored is to ascertain the quality of this friendship, not only the beliefs and attitudes. Friendships that are healthy and of good quality by definition can be identified with the trust that one has in one’s friend: good communication and acceptance be-
tween peers are positive factors and highly related to the favorable construction of self-esteem and satisfaction with life. These characteristics provide acceptance about the body image of the adolescent, reducing the probability of development of eating disorders.47,24.

Meyer and Gast11 carried out a study with 200 adolescents – 83 boys and 117 girls, to assess whether peers influenced eating behavior. They concluded that, in the population studied, there was influence by peers on the eating patterns of the adolescents and that the girls were more vulnerable to this influence than the boys.

Another aspect of the relationship between peers that can come into conflict with satisfaction with the body and eating standards is the perception that being thin is important for personal realization and interpersonal relationships.11,56. Children and adolescents believe that they would be better accepted by peers if they were thin.37. Attributions relating to the importance of being thin are such as greater popularity and ability to find a girlfriend (or boyfriend); the fact of being thin is indeed a predictor of body self-esteem.17. Adolescents who report higher levels of concern with the body and changes in eating behavior also show concerns related to weight and the body image of their friends.

Media and society

Social-cultural factors such as the pressure exercised by society, family members and friends, to have a thin body, added to the negative influences exercised by the media, increase the chances of body image disturbances and eating disorders being established in adolescents, because in this phase, subjects attribute significant importance to the attitudes, beliefs and behavior of their peers, as well as being predisposed to present a characteristic dissatisfaction with the body, until development completes.17,22,47,54,58.

Today’s society, living in a large urban center, becomes the direct or indirect target of a siege by the communications media, with their interests in promoting products and information. The media transmits to us an infinity of criteria, prohibitions, standards and proposals for eating, that lead to the population’s food choices and prohibitions, standards and proposals for eating, that can come into conflict with satisfaction with the body and eating standards is the perception that being thin is important for personal realization and interpersonal relationships.11,56. Children and adolescents believe that they would be better accepted by peers if they were thin.37. Attributions relating to the importance of being thin are such as greater popularity and ability to find a girlfriend (or boyfriend); the fact of being thin is indeed a predictor of body self-esteem.17. Adolescents who report higher levels of concern with the body and changes in eating behavior also show concerns related to weight and the body image of their friends.

It is important to note that family and friends can not only supply factors of protection against the development of eating disorders, but also work in favor of their establishment, depending on the type of relationship that they have with an individual who has a predisposition to develop eating disorders.22,46. Those suffering from AN tend to belong to families with good relationships, but which avoid conflicts; for these families, when a need arises for hospitalization to deal with the disorder, it is a painful and complicated situation; people suffering from bulimia, on the other hand, tend to have conflicting family relationships, often with parents rejecting children.44.

Individuals with more elaborate social skills may present factors of protection for social adjustment, academic performance and their self-development.20,21. In counterpart, feelings of incompetence, less personal value and little support are associated with feelings of shame and doubt, disinterest and social isolation.25.

The development of social skills can prevent factors of risk to health, since it makes the adolescent capable of deciding for himself, refusing invitations that are damaging to his health, and disagreeing with the group or with society in situations of pressure – which can be seen as including the influence of society’s image of an ideal body type.44.

Many difficulties have been identified in individuals with eating disorders. Examples include: a high level of insecurity and difficulty in relating; limited social networks; submissive behavior, and unfavorable social comparisons, contributing to negative self-evaluation.37,38,49.

Forms of childhood anxiety play an important role in the etiology of eating disorders. The social anxieties related to the evaluation of children’s bodies have been associated with excessive concerns on food, shape and weight – they are known triggers for the establishment of these disorders.55.

A study in Turkey, involving 982 adolescents of both sexes, aged between 13 and 15, revealed that the participants with the highest indices of social anxiety related to their physical shape scored the highest in the EAT-40 Eating Attitudes Test, showing the relationship between the influence exercised by society, which generates anxiety in adolescence, and can increase the levels
of eating disorders in this population. The average score on the EAT–40 was 19.37 (standard deviation = 10.74) in the group with high social anxiety, while the group with low social anxiety presented an average of 15.22 (SD = 8.99)\textsuperscript{17}. Another interesting study, of 584 university students in Malaysia (59.4% women and 40.6% men), in the 18 to 24 age group, observed that the influence exercised by society in favor of having a thin body was an indirect factor in establishment of eating disorders, mediated by emotional disturbances such as stress and anxiety\textsuperscript{15}.

Interpersonal problems, which have a relationship with a repertory of poor social skills\textsuperscript{29}, have been considered as a fundamental component for developing, activating and maintaining eating disorders. Interpersonal problems cover a wide range of questions related to the person’s social interactions and involvement with others, such as the family and colleagues, suggesting a close link between such problems and difficulty in social adjustment\textsuperscript{34,38-40,60}.

This brings attention to the concept of social support, which relates to the individual’s feeling of being loved, cared for, valued and held in esteem by the society around her/him. It is considered an important factor of protection against emotional and eating disorders\textsuperscript{40}. Although the real quantity of support for people with eating disorders may be similar to that of healthy individuals, those with the condition show themselves to be really very dissatisfied with their support networks, perceiving them as deficient\textsuperscript{29}. This being so, antisocial adolescents have a higher probability of developing eating disorders\textsuperscript{65}.

The literature discusses forms of treatment and influences that give rise to eating disorders. Another very important point is to promote discussion on preventing these disorders from arising. On this point, an interesting experience is that of the prevention group called Girls’ Group, which aims to inform adolescent girls on what eating disorders are, what their risks are, how the media and society influence in their occurrence, and enable them to develop forms of corporal perception through the practice of yoga. The participants receive psychological and nutritional orientation and take part in discussions on the subject, later producing a review with the knowledge acquired. The data of the Girls’ Group showed that dissatisfaction with the body, and thoughts about the idealization of being thin, diminished, as did also eating restrictions or episodes of eating compulsion – while in counterpart, social self-esteem increased significantly\textsuperscript{65}.

**Final considerations**

Adolescents are part of a group at risk for development of eating disorders, since in this phase of intense development psychical, mental and physical changes take place which can cause dissatisfaction with the body, for as long as adolescence continues.

In adolescence the parents assume a differentiated position in the life of the individual, often causing a certain distancing of their children, while friends and the group in which the adolescent finds himself assume high importance, influencing and interfering in choices, values, social attributes and physical characteristics.

Social skills being to be formed in infancy. Their first formative environment is the family and, subsequently, environments such as the school, the church and the club. These abilities relate to a group of behaviors practiced by the individual in a given context, expressing her/his feelings, attitudes, desires, opinions and rights, in a way that is appropriate to the situation while respecting the behavior of others.

As commented in this article, the occurrence and sustaining of eating disorders can be influenced by current society’s standards of beauty, by messages and values transmitted by the media, by the influence of peers, and by emotions which, when not properly administered, exacerbate the situation creating a predisposition to the disorder.

Children and adolescents, when they have obtained the social skills to deal with situations that influence the causation of eating disorders, have a factor of protection against these disorders, since they will be able to behave appropriately in relation to these situations, not allowing themselves to be carried away by their surroundings, and thus avoid occurrence of the condition.

Individuals who receive training for social skills since their early days as children, whether in the school, at home, in the church or in the club, are able to deal with situations that are stressful or could have emotional influence in a more appropriate way, compared to those that have not received this treatment. It is possible to infer that, the greater the repertoire of the adolescent’s social skills, the greater is the protection against behaviors of risk for eating disorders. Thus, it is postulated that all those involved in dealing with children and adolescents, especially professionals in health and education, should be trained, aware and qualified to work on development of such skills among the people under their care, help-
ing in the formation of healthy individuals and, thus, individuals who are able to integrate effectively into society and into the culture to which they belong. These professionals would thus be helping with the children’s and adolescents’ development.

Collaborations

LG Uzunian participated in the study design, the survey of scientific articles, the drafting of the text, the review and final approval of the manuscript; MSS Vitalle participated in the study design, development, revision and final approval of the manuscript.
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