

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

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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*

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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 adolescence¹, causing marked biological, psychological and social harm². They have the highest mortality rates of all psychiatric disorders: 5.6% per decade³.

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 weight⁴. According to Lofrano-Prado et al.⁵, 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 disorders⁶. Vilela et al.⁷ 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.⁸ 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 disorders⁹.

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)^{10,11}. 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 eating⁷. In BN, the subject usually remains close to normal body weight, or even is slightly overweight⁷. 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 exercises¹².

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 population¹³⁻¹⁵. Body standards and eating habits are reinforced by the media, which influences the values and choices of children, adolescents and young adults¹⁶⁻¹⁸.

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 resolved¹⁹.

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 two¹⁹⁻²².

According to Caballo¹⁹:

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 articles selected, the authorship, year of publication, country of origin, study objectives, type of article and variables analyzed were included in Chart 1.

Of the 50 studies included in this review, 13 took place in Brazil^{3,10,18-28}, 13 in the United States^{6,11,29-39} and 10 (20%) in London⁴⁰⁻⁴⁹. 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^{14,20,24,25,30,32,33,42,44-46,48-54} could influence the establishment of behavior of risk for eating disorders, and also how interpersonal relationships^{6,11,24,38,48-50,54,55} and peers^{21,24,34-37,50,54,56} could have the same influence. Similarly, the articles discussed the influence of the media^{24,27,31,50,54,57} and of society^{10,12,14,20,21,24,28,29,31,38,43,47,50,54,58} on the eating behavior of adolescents.

It is worth noting that only one article³⁹ 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^{19,23}. Social behaviors are initially formed

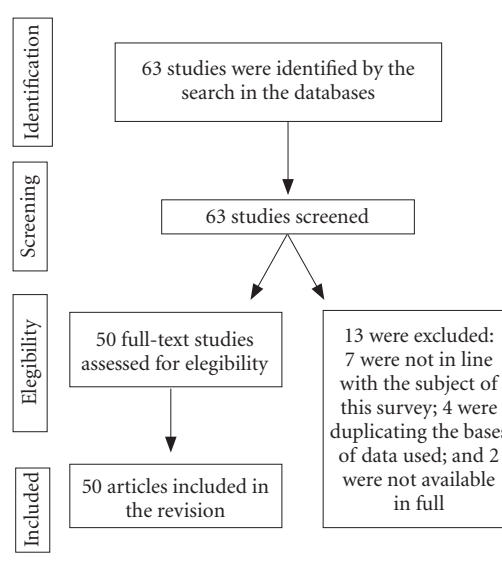


Figure 1. Flowchart of articles selection.

Source: Authors, 2013.

Chart 1. Studies on eating disorders and social skills published in 2007–12: characteristics.

Author and year Country	Aims of the study	Type of article	Variables analyzed
Scivoletto et al., 2010 ³ Brazil	To orient the initial conduct of psychiatric emergencies	Review of the literature	Aggressive and suicidal behavior, anxiety disorders, eating disorders
Shomaker; Furman, 2009 ⁶ USA	To investigate interpersonal influences and eating disorders in adolescence	Original article	Eating disorders, body image disorders, pressure to be thin
Herpertz-Dahlmann et al., 2008 ⁹ German	To identify eating risk behavior and the relationship with body weight	Original article	Eating disorders, body image disorders, quality of life
Meyer; Gast, 2008 ¹¹ USA	To investigate the effect of peer influence in eating disorders	Original article	Influence of peers and eating disorders in adolescents
Levy et al., 2010 ¹³ Brazil	To describe consumption and eating behaviors, associating them with social-demographic factors	Original article	Food consumption, eating behavior and social-demographic factors
Hamann et al., 2009 ¹⁴ USA	To relate the symptoms of bulimia with interpersonal sensitivities	Original article	Bulimia nervosa, depression and interpersonal sensitivity
Gan et al., 2011 ¹⁵ Malaysia	To relate social-cultural influences with eating disorders	Original article	Socio-cultural pressure, stress and eating disorders
Caglar et al., 2010 ¹⁷ Turkey	To assess whether social anxiety influences the behavior of adolescents	Original article	Social anxiety, eating disorders, perfectionism and body image
Reyna; Brussino 2011 ²⁰ Argentina	To review the instruments for assessment of social skills	Systematic review	Instruments for evaluating social skills, and their reliability
Pereira et al., 2008 ²¹ Brazil	To relate self-concept and social skills with academic performance	Original article	Self-concept and social skills
Paulino; Lopes, 2010 ⁴⁰ Brazil	To assess the correlations between verbal and non-verbal intelligence and risk behaviors	Original article	Perception of risk, verbal and non-verbal reasoning
Cia; Barham, 2009 ²³ Brazil	To relate paternal development and the social development of the father's children	Original article	Paternal involvement, social skills and social development

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Chart 1. continuation

Author and year Country	Aims of the study	Type of article	Variables analyzed
Cia; Barham, 2009 ²⁹ Brazil	To relate children's social-emotional development to their academic development	Original article	Social skills and school performance
Silva; Murta, 2009 ²⁴ Brazil	To present a program of training in social skills for adolescents	Original article	Training of social skills in groups of adolescents
Bolsoni-Silva et al., 2010 ²⁵ Brazil	To evaluate children with behavior or social skill problems	Original article	Social skills and problems of behavior
Fitzsimmons; Bardone-Cone, 2011 ⁵⁹ USA	To assess the relationship between social support and the ability to resist/avoid eating disorders	Original article	Anxiety, difficulty of confrontation and eating disorders
Toral; Slater, 2007 ⁵⁰ Brazil	To obtain a deeper understanding of the factors determining eating habits and how they are formed	Review of the literature	Eating behavior, nutritional education, trans-theoretical model
Sarmiento et al., 2010 ⁴⁰ Brazil	To investigate emotional and behavioral symptoms in obese adolescents	Original article	Social skills and problems of behavior
Aubalat; Marcos, 2012 ⁵¹ Spain	To analyze strategies for dealing with and overcoming eating disorders in adolescents	Original article	Strategies for confrontation in eating disorders
Nilsson et al., 2007 ³⁰ Switzerland	To evaluate the causes of anorexia nervosa	Original article	Causes of eating disorders
Arkell; Robinson, 2008 ³¹ London	To analyze the quality of life of patients with AN	Original article	Quality of life, depression and social skills
Aime et al., 2008 ⁵⁵ Canada	To assess dietary history, risk factors and emotional factors in eating disorders	Original article	Depression, use of drugs and alcohol, eating disorders, emotions
Grilo et al., 2012 ⁴¹ USA	To analyze history of BN and behavioral eating disorders, in relation to stress	Original article	Remission of eating disorders, personal characteristics
Lam; McHale, 2012 ⁵² USA	To examine concern about weight during adolescence	Original article	Concerns with weight and parental relationships
Hartmann et al., 2010 ⁴² Germain	To relate interpersonal problems with eating disorders	Original article	Interpersonal problems and eating disorders
Davey; Chapman, 2009 ³² London	Relation between disgust and eating disorders	Original article	Disgust and eating disorders

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Chart 1. continuation

Author and year Country	Aims of the study	Type of article	Variables analyzed
Groleau et al., 2012 ⁴³ Canada	To estimate and relate emotional abuse with BN	Original article	Eating disorders, trauma and emotional abuse
Fox, 2009 ²⁶ London	To develop methods for better understanding of the emotions of AN	Original article	Emotional skills in eating disorders
Presnell et al., 2009 ³³ USA	To evaluate the relationship between eating disorders and depression	Original article	Depressive symptoms and eating disorders
Limbirt, 2010 ³⁴ London	To investigate the relationship between social support and eating disorders	Original article	Social support network and eating disorders
Vale et al., 2011 ⁴⁴ Brazil	To estimate the prevalence of eating disorders in the Northeast of Brazil	Original article	Prevalence of eating disorders in adolescents of the northeast of Brazil
Lavender; Anderson, 2010 ⁴⁵ USA	To evaluate difficulties in controlling emotions in relation to eating disorders	Original article	Emotional control and body dissatisfaction
Markey, 2010 ⁴⁶ USA	To comment on body image in adolescence	Editorial comment	Body image, development, eating disorders
Ioannou; Fox, 2009 ³⁵ London	To relate emotions with eating disorders	Original article	Anger, depression and feeling of threat in eating disorders
Fox; Power, 2009 ³⁶ London	To relate depression, emotions and eating disorders	Review of the literature	Emotions, influence of the environment and eating disorders
Goss; Allan, 2009 ⁵³ London	To relate shame with eating disorders	Review of the literature	Shame and eating disorders
Forney et al., 2012 ⁵⁶ USA	To assess the influence of peers on body image and eating disorders	Original article	Influence of peers, body image and symptoms of eating disorders
Schutz; Paxton, 2007 ³⁷ Australia	To relate body image and depression	Original article	Body image, eating disorders and quality of friendships
Hutchinson; Rapee, 2007 ⁵⁸ Australia	To relate friendship, eating disorders and the body image	Original article	Body image, eating disorders and quality of friendships
Thompson et al., 2007 ⁵⁴ USA	To evaluate the influence of peers on the body image, eating disorders and self-esteem	Original article	Body image, influence of peers, eating disorders and self-esteem
Scoffier et al., 2010 ⁵⁷ France	To evaluate the influence of the sporting environment and eating disorders in athletes	Original article	Competitive athletes, eating disorders and influence of the sporting environment

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Chart 1. continuation

Author and year Country	Aims of the study	Type of article	Variables analyzed
Bailey; Ricciardelli, 2010 ²⁷ Australia	To examine social comparisons, body image, self-esteem and eating disorders	Original article	Social comparisons, self-esteem, body image and eating disorders
Ruhl et al., 2011 ²⁸ Germain	To evaluate whether the behavior of sufferers from bulimia is influenced by exposure to thin body types as models	Original article	Bulimia nervosa, media
Ramos et al., 2011 ⁴⁷ Brazil	To analyze the identity culture of AN in the internet environment	Ethnographic review	AN, lifestyle, the perfect body concept, belonging to a group
Fonseca et al., 2011 ⁴⁸ Brazil	To present representation of alimentary modernity for sociology and anthropology	Review of the literature	Food, social sciences and social phenomenon
Connan et al., 2007 ⁴⁹ London	To relate low social position with AN	Original article	Low social position and anorexia nervosa
Harrison et al., 2010 ³⁸ London	To evaluate interpersonal processes, anxiety and emotional regulation in eating disorders	Original article	Regulation of emotions, eating disorders
McEwen; Flouri, 2009 ³⁹ London	To investigate the regulation of emotions between parents and adolescents with eating disorders	Original article	Emotions, relationship between parents and adolescents with eating disorders
Bodell et al., 2011 ⁶⁰ USA	To relate social support, negative events and eating disorders	Original article	Social support, occurrence of negative events and eating disorders
Scime; Cook-Cottone, 2008 ⁶¹ USA	To evaluate the efficacy of a group aiming to prevent eating disorders	Original article	Prevention group, body image and eating disorders

Source: Authors, 2013.

in the family environment, and later in the other environments in which the individual lives, such as school, church, clubs, among others²⁹. 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^{24,25,59}.

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 factors⁵⁰.

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-

ing possible problems arising from non-adaptive behaviors^{22,24,25,29}.

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^{15,40,50}.

During adolescence, there is a series of physical, cognitive, emotional and social changes, which can be understood by adolescents as factors of stress^{13,51}. 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^{24,25,40}.

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^{19,29}.

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 sport³⁰.

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 social⁹.

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^{31,41,55}.

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^{21,40,52,55}.

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^{40,42}. 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^{32,42,43}. Patients with BN have feelings of depression, anger and disgust, as well as having difficulty in establishing healthy social relationships^{26,33,34,42,52}.

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)⁴⁴.

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^{45,46}. While girls suffer more pressure to be thin, boys are influenced toward having low body fat and high muscular development⁶.

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 observed⁵⁹. Individuals with these disorders have difficulty in distinguishing their emotional states, reinforcing the emotional confusion cited by other researchers^{26,41}. 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-esteem³⁵.

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 feelings³²; and purging and vomiting denote the intention to suppress the emotions, in that they have now been activated²⁶.

The feelings commonly associated with eating disorders are anger, anxiety, distaste, fear and disgust³⁶. 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^{32,45,53}.

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 activated³⁵.

Peers

In adolescence, development of social skills does not depend only on the parents, since peers are important models and a source of reinforcement¹⁹. 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^{21,46}.

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^{21,46,55}.

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^{11,56}. 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^{17,37,46}.

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^{6,11,54,56,58}.

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^{9,34}. Another source of research that has been strongly explored is to ascertain the quality of this friendship, not only the beliefs and attitudes³⁵. 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^{37,54}.

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 thin³⁷. 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-esteem¹⁷. 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^{6,27,28,55,57,59}, 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 practices⁴⁸.

Adolescents that practice sport have one more aggravating factor for development of eating disorders, since in some sports weight and the shape of the body are predictive for establish-

ing the status of athlete. The influence exercised by trainers and other adolescents in a particular sport are negative influences for the development of eating disorders; and parents can carry out a function of protection⁵⁷.

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 relationship, 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 children³⁴.

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 isolation²⁵.

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 type²⁴.

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 disorders⁵⁹.

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)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 anxiety¹⁵.

Interpersonal problems, which have a relationship with a repertory of poor social skills²⁹, 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^{6,34,38-40,42,60}.

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 disorders⁶⁰. 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 deficient⁵⁹. This being so, antisocial adolescents have a high probability of developing eating disorders⁵⁵.

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 significantly⁶¹.

Final considerations

Adolescents are part of a group at risk for development of eating disorders, since in this phase of intense development psychological, 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 Vitale participated in the study design, development, revision and final approval of the manuscript.

References

- Freitas S, Gorenstein C, Appolinario JC. Instrumentos para a avaliação dos transtornos alimentares. *Rev Bras Psiquiatr* 2002; 24(3):34-38.
- Nunes AL, Vasconcelos FAG. Transtornos alimentares na visão de meninas adolescentes de Florianópolis: uma abordagem fenomenológica. *Cien Saude Colet* 2010; 15(2):539-550.
- Scivoletto S, Boarati MA, Turkiewicz G. Emergências psiquiátricas na infância e adolescência. *Rev Bras Psiquiatr* 2010; 32(Supl. II):S112-S120.
- Ferriani MGC, Dias TS, Silva KZ, Martins CS. Auto-imagem corporal de adolescentes atendidos em um programa multidisciplinar de assistência ao adolescente obeso. *Rev Bras Saude Mater Infant* 2005; 5(1):27-33.
- Lofrano-Prado MC, Prado WL, Piano A, Tock L, Caranti DA, Nascimento CMO, Oyama LM, Tufik S, Mello MT, Dâmaso AR. Eating disorders in adolescents: correlations between symptoms and central control of eating behavior. *Eat Behav* 2011; 12(1):78-82.
- Shomaker LB, Furman W. Interpersonal influences on late adolescent girls' and boys' disordered eating. *Eat Behav* 2009; 10(2):97-106.
- Vilela JEM, Lamounier JA, Dellaretti Filho MA, Barros Neto JR, Horta GM. Transtornos alimentares em escolares. *Jornal de Pediatria* 2004; 80(1):49-54.
- Alves E, Vasconcelos FAG, Calvo MCM, Neves J. Prevalência de sintomas de anorexia nervosa e insatisfação com a imagem corporal em adolescentes do sexo feminino do Município de Florianópolis, Santa Catarina, Brasil. *Cad Saude Publica* 2008; 24(3):503-512.
- Herpertz-Dahlmann B, Wille N, Hölling H, Vloet TD, Ravens-Sieberer U. Disordered eating behaviour and attitudes, associated psychopathology and health-related quality of life: results of the BELLA study. *Eur Child Adolesc Psychiatry* 2008; 17(Supl. 1):82-91.
- Gonzalez A, Kohn MR, Clarke SD. Eating disorders in adolescents. *Aust Fam Physician* 2007; 36(8):614-619.
- Meyer TA, Gast J. The effects of peer influence on disordered eating behavior. *J Sch Nurs* 2008; 24(1):36-42.
- Cordás TA. Transtornos alimentares: classificação e diagnóstico. *Revista de Psiquiatria Clínica* 2004; 31(4):154-157.
- Levy RB, Castro IRR, Cardoso LO, Tavares LF, Sardinha LMV, Gomes FS, Costa AWN. Consumo e comportamento alimentar entre adolescentes brasileiros: Pesquisa Nacional de Saúde do Escolar (PeNSE), 2009. *Cien Saude Colet* 2010; 15(Supl. 2):3085-3097.
- Hamann DM, Wonderlich-Tierney AL, Vander Wal JS. Interpersonal sensitivity predicts bulimic symptomatology cross-sectionally and longitudinally. *Eat Behav* 2009; 10(2):125-127.
- Gan WY, Nasir MTM, Zalilah MS, Hazizi AS. Direct and indirect effects of sociocultural influences on disordered eating among Malaysian male and female university students. A mediation analysis of psychological distress. *Appetite* 2011; 56(3):778-783.
- Conti MA, Slater B, Latorre MR. Validity and reproducibility of Escala de Evaluacion da Insatisfacion Corporal para Adolescentes. *Rev Saude Publica* 2009; 43(3):515-524.
- Caglar E, Bilgili N, Karaca A, Ayas S, Asçi H. The psychological characteristics and health related behavior of adolescents: the possible of social physique anxiety and gender. *Span J Psychol* 2010; 13(2):741-750.
- Marins BR, Araujo IS, Jacob SC. Food advertising: advice or merely stimulation of consumption? *Cien Saude Colet* 2011; 16(9):3873-3882.
- Caballo VE. *Manual de Avaliação e Treinamento das Habilidades Sociais*. São Paulo: Santos; 2008.
- Reyna C, Brussino S. Avaliação de habilidades sociais de crianças na América Latina. *Psicol estud* 2011; 16(3):359-367.
- Pereira CS, Cia F, Barham EJ. Autoconceito, Habilidades Sociais, Problemas de Comportamento e Desempenho Acadêmico na Puberdade: Inter-relações e Diferenças Entre Sexos. *Interação Psicol* 2008; 12(2):203-213.
- Paulino JA, Lopes RFF. Relação entre percepção e comportamento de risco e níveis de habilidades cognitivas em um grupo de adolescentes em situação de vulnerabilidade social. *Psicol cienc prof* 2010; 30(4):752-765.
- Cia F, Barham EJ. O envolvimento paterno e o desenvolvimento social de crianças iniciando as atividades escolares. *Psicol estud* 2009; 14(1):67-74.
- Silva MP, Murta SG. Treinamento de habilidades sociais para adolescentes: uma experiência no programa de atenção integral à família (PAIF). *Psicol Reflex Crit* 2009; 22(1):136-143.
- Bolsoni-Silva AT, Marturano EM, Freiria LRB. Indicativos de problemas de comportamento e de habilidades sociais em crianças: um estudo longitudinal. *Psicol Reflex Crit* 2010; 23(3):506-515.
- Fox JR. A qualitative exploration of the perception of emotions in anorexia nervosa: a basic emotion and developmental perspective. *Clin Psychol Psychother* 2009; 16(4):276-302.
- Bailey SD, Ricciardelli LA. Social comparisons, appearance related comments, contingent self-esteem and their relationships with body dissatisfaction and eating disturbance among women. *Eat Behav* 2010; 11(2):107-112.
- Ruhl I, Legenbauer T, Hiller W. The impact of exposure to images of ideally thin models in TV commercials on eating behavior: an experimental study with women diagnosed with bulimia nervosa. *Body Image* 2011; 8(4):349-356.
- Cia F, Barham EJ. Repertório de habilidades sociais, problemas de comportamento, autoconceito e desempenho acadêmico de crianças no início da escolarização. *Estud psicol* 2009; 26(1):45-55.
- Nilsson K, Abrahamsoon E, Torbjörnsson A, Hägglöf B. Causes of adolescent onset anorexia nervosa: patient perspectives. *Eat Disord* 2007; 15(2):125-133.
- Arkell J, Robinson P. A pilot case series using qualitative and quantitative methods: biological, psychological and social outcome in severe and enduring eating disorder (anorexia nervosa). *Int J Eat Disord* 2008; 41(7):650-656.
- Davey GC, Chapman L. Disgust and eating disorder symptomatology in a non-clinical population: the role of trait anxiety and anxiety sensitivity. *Clin Psychol Psychother* 2009; 16(4):268-275.
- Presnell K, Stice E, Seidel A, Madeley MC. Depression and eating pathology: prospective reciprocal relations in adolescents. *Clin Psychol Psychother* 2009; 16(4):357-365.
- Limbirt C. Perceptions of social support and eating disorder characteristics. *Health Care Women Int* 2010; 31(2):170-178.

35. Ioannou K, Fox JR. Perception of threat from emotions and its role in poor emotional expression within eating pathology. *Clin Psychol Psychother* 2009; 16(4):336-347.
36. Fox JR, Power MJ. Eating disorders and multi-level models of emotion: an integrated model. *Clin Psychol Psychother* 2009; 16(4):240-267.
37. Schutz HK, Paxton SJ. Friendship quality, body dissatisfaction, dieting and disordered eating in adolescent girls. *Br J Clin Psychol* 2007; 46(1):67-83.
38. Harrison A, Sullivan S, Tchanturia K, Treasure J. Emotional functioning in eating disorders: attentional bias, emotion recognition and emotion regulation. *Psychol Med* 2010; 40(11):1887-1897.
39. McEwen C, Flouri E. Fathers' parenting, adverse life events, and adolescents' emotional and eating disorder symptoms: the role of emotion regulation. *Eur Child Adolesc Psychiatry* 2009; 18(4):206-216.
40. Sarmento ASL, Schoen-Ferreira TH, Medeiros EH, Cintra IP. Avaliação dos sintomas emocionais e comportamentais em adolescentes obesos. *Estud pesqui psicol* 2010; 10(3):833-847.
41. Grilo CM, Pagano ME, Stout RL, Markowitz JC, Ansell EB, Pinto A, Zanarini MC, Yen S, Skodol AE. Stressful life events predict eating disorder relapse following remission: six-year prospective outcomes. *Int J Eat Disord* 2012; 45(2):185-192.
42. Hartmann A, Zeeck A, Barrett MS. Interpersonal problems in eating disorders. *Int J Eat Disord* 2010; 43(7):619-627.
43. Groleau P, Steiger H, Bruce K, Israel M, Sycz L, Oullette AS, Badawi G. Childhood emotional abuse and eating symptoms in bulimic disorders: an examination of possible mediating variables. *Int J Eat Disord* 2012; 45(3):326-332.
44. Vale AMO, Kerr LRS, Bosi MLM. Comportamentos de risco para transtornos do comportamento alimentar entre adolescentes do sexo feminino de diferentes estratos sociais do Nordeste do Brasil. *Cien Saude Colet* 2011; 16(1):121-132.
45. Lavender JM, Anderson DA. Contribution of emotion regulation difficulties to disordered eating and body dissatisfaction in college men. *Int J Eat Disord* 2010; 43(4):352-357.
46. Markey CN. Invited commentary: Why body image is important to adolescent development. *J Youth Adolesc* 2010; 39(12):1387-1391.
47. Ramos JS, Pereira Neto AF, Bagrichevsky M. Cultura Identitária pró-anorexia: características de um estilo de vida em uma comunidade virtual. *Interface (Botucatu)* 2011; 15(37):447-460.
48. Fonseca AB, Souza TSN, Frozi DS, Pereira RA. Modernidade alimentar e consumo de alimentos: contribuições sócio-antropológicas para a pesquisa em nutrição. *Cien Saude Colet* 2011; 16(9):3853-3862.
49. Connan F, Troop N, Landau S, Campbell IC, Treasure J. Poor social comparison and the tendency to submissive behavior in anorexia nervosa. *Int J Eat Disord* 2007; 40(8):733-739.
50. Toral N, Slater B. Abordagem do modelo transteórico no comportamento alimentar. *Cien Saude Colet* 2007; 12(6):1641-1650.
51. Aubalat LP, Marcos YQ. Estrategias de enfrentamento evitativas y riesgo de desarrollar un trastorno de la conducta alimentaria en adolescentes. *Psicothema* 2012; 24(2):230-235.
52. Lam CB, McHale SM. Developmental patterns and family predictors of adolescent weight concerns: a replication and extension. *Int J Eat Disord* 2012; 45(4):524-530.
53. Goss K, Allan S. Shame, pride and eating disorders. *Clin Psychol Psychother* 2009; 16(4):303-316.
54. Thompson JK, Shroff H, Herzoso S, Cafri G, Rodriguez J, Rodriguez M. Relations among multiple peer influences, body dissatisfaction, eating disturbance, and self-esteem: a comparison of average weight, at risk of overweight, and overweight adolescent girls. *J Pediatr Psychol* 2007; 32(1):24-29.
55. Aime A, Craig WM, Pepler D, Jiang D, Connolly J. Developmental pathways of eating problems in adolescents. *Int J Eat Disord* 2008; 41(8):686-696.
56. Forney KJ, Holland LA, Keel PK. Influence of peer context on the relationship between body dissatisfaction and eating pathology in women and men. *Int J Eat Disord* 2012; 45(8):982-989.
57. Scoffier S, Paquet Y, d'Arripe-Longueville F. Effect of locus of control on disordered eating in athletes: the mediational role of self-regulation of eating attitudes. *Eat Behav* 2010; 11(3):164-169.
58. Hutchinson DM, Rapee RM. Do friends share similar body image and eating problems? The role of social networks and peer influences in early adolescence. *Behav Res Ther* 2007; 45(7):1557-1577.
59. Fitzsimmons EE, Bardone-Cone AM. Coping and social support as potential moderators of the relation between anxiety and eating disorder symptomatology. *Eat Behav* 2011; 12(1):21-28.
60. Bodell LP, Smith AR, Holm-Denoma JM, Gordon KH, Joiner TE. The impact of perceived social support and negative life events on bulimic symptoms. *Eat Behav* 2011; 12(1):44-48.
61. Scime M, Cook-Cottone C. Primary prevention of eating disorders: a constructivist integration of mind and body strategies. *Int J Eat Disord* 2008; 41(2):134-142.

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