

When Informing About Eating Disorders Exacerbates the Problem Instead of Preventing it: Which Programs Work and Which Ones do not?

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Abstract

Nowadays, we find in the literature many researches and related theories about body diseases and eating disorders in adolescence. Basing on these theories, the health promotion interventions at school are inclined to give youth the outcomes of risk behavior analysis, in the development of eating disorders. Those interventions lack of consideration regarding what students already think about the origins of the diseases. In this work we seek for the spontaneous ideas about developing of eating disorders and theories about how these problems could be prevented at school. In order to do that, we constructed an ad hoc survey which have been validated. Using the factorial analysis, we recognized three factors that participants used to explain the disorder: Relationship with parents, self-harm and mental illness; Organic illness; and Social comparison and social acceptance. The analysis of the data suggest that, in the schools that did not have programs of health promotion on food and the body (70%), students are more vulnerable to eating disorder. Among the others, the factor considered the most important by the students of these school, was the social comparison and social acceptance. On the contrary, the students who participated to the health programs on this topic, were more likely to consider responsible the relationships with parents, mental illness and self-harm. Considering the outcomes, we could suggest to rethink the methods utilized to promote health programs for preventing eating disorders at school.

Keywords: eating disorders prevention, adolescents' naïve theories about eating disorders, schools interventions

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Introduction

Food behaviour can assume particularly problematic connotations during adolescence, especially in relation to two important areas of development: self-perception, and social relationships among peers (Faccio, 2013; Vandereycken, 1996). Every aspect of social adaptation and personality is influenced by adolescents' perceptions of their own bodies and the effect this has on others. Body image is then experienced with greater intensity for the reason that, during adolescence, alongside radical physical changes, a capacity for introspection is accentuated: comparison with peers from the same age group becomes more intense and everyone tends to compare themselves to an ideal physical model (Bosma & Kunnen, 2001; Confalonieri & Grazzani Gavazzi, 2000). Many adolescents, even though they have undergone normal development, discover that they cannot accept their bodies as they are, and similarly feel that they are not accepted by others. While, as a child in previous years, it was easy to adapt to slow physical changes, it is not so easy in adolescence to feel that this body which has undergone such rapid changes in dimension, proportions, sexual characteristics, belongs to oneself. It can feel "alien" this body which has undergone such rapid changes in size, to which the adolescent must become acquainted, value and get to know, so much so that every little anomaly, although it has been there since infancy, now assumes a different

meaning. Elements such as a decrease, or more often an increase, in normal weight, insufficient muscular development, too small breasts, or external concerns such as the size and shape of the nose or the ears, can lead to a sense of inadequacy; whatever makes someone appear “different” from the norm is experienced as an inferiority complex (Attie & Brooks-Gunn, 1989; Faccio, Belloni, & Castelnuovo, 2012; Faccio, Centomo, & Mininni, 2011; Faccio, Costa, et al., 2013; Faccio, Romaioli, Dagani, & Cipolletta, 2013).

Problem Statement

Many adolescents who feel unhappy about their physical appearance (Bonino, 1999; Bonino & Cattelino, 2002). Even when they don't experience eating problems directly, young people compare themselves with others and with what they see in the media; these comparisons form the basis of the behaviour they adopt towards peers, especially when such behaviour is highly problematic. Furthermore, the power to influence and to condition peers has a decisive role in making certain conduct desirable; for these reasons, it becomes strategically important in terms of disease prevention, to understand the “naïve theories” used to explain the development of eating disorders in adolescents' comments. The literature offers a wide range of theories and research on eating disorders and body-image disease among adolescents (Busse, 1996; Castiglioni, Faccio, Veronese, & Bell, 2013; Cipolletta & Faccio, 2013; Cuzzolaro, 1997; Faccio, 2013; Faccio, Bordin, & Cipolletta, 2013). According to Bonino, Cattelino, and Ciairano (2003), disturbed eating behaviour is very widespread but also varied: some adolescents make use of food as a “relief valve”, with a consolatory function (eating excessively even in the absence of organic need, eating when not hungry or already satiated to cope with negative emotional states, such as anxiety, depression or boredom, etc.), others diet or eliminate food by compensatory behaviours, and still others display all of these behaviours together. In general, it is a predominantly female phenomenon; with the exception of the consolatory function, also frequently employed by males, females make significantly greater recourse of laxatives and obsessive physical movement and food-elimination behaviour (Braet, 1996).

Moreover, problematic eating behavior increase in girls with age, up to involving around a quarter of the female at 18-19 years (Faccio, 2006). In addition to gender and age, there are other variables related to the type of school attended: there are more food-related problems in students attending vocational schools and high schools in Social Science. Diets are commonly used by teenagers to obtain and maintain the physical condition of “normal” weight; the behaviour of dieting does not seem to decrease with age but tends rather to increase. According to the authors, (Bonino, Cattelino, & Ciairano, 2003) this trend exposes adolescents to different types of risks, both physical and psychological. Physical risks include an unbalanced diet, since various diet plans select and exclude important nutrients. The psychological risks are related to the loss of confidence in adolescents' ability to self-control, caused by the vicious cycle between control and loss of control (binge eating), and attempts to restore previous weight.

As the connection between the cited variables (food behavior, vulnerability to eating disorder and naive theories about the development of an eating disorder) is very narrow, it seems important to structure and validate a tool that allows researchers to investigate the correlations between these conditions, and that could provide some suggestions about the most appropriate forms of intervention to prevent the onset of the problem in the context of school.

Research Questions

As previous researches suggest that behaviors revealing a vulnerability to the development of eating disorders are very frequent, it is important to get in depth in the analysis of the phenomenon; in particular, the aims of the present study are:

1. to recognize the possible different impact of eating disorders vulnerability in different types of schools,
2. to understand adolescents naïve ideas about the origin and the development of an eating disorder,
3. to investigate the student's expectations about the way the schools could address the problem,
4. to test the correlations between the above cited variables.

Method

Materials

An ad hoc questionnaire, consisting of three parts has been created. The first part was a previously validated scale, able to detect subclinical variables related to problematic eating behaviour and bodily disease (scale of psycho-social vulnerability to eating disorder; Faccio, 1997, 2006). The scale items were added to other psychological variables related to psychological self-perception and self-acceptance. The second part of the questionnaire included a series of questions on expectations of whether the school might provide intervention programmes for preventing eating disorders, and the third and final part consisted of a second scale of Likert-type, concerning factors considered to be significant in the development of eating disorders. In particular, reference was made to the causal attributions that are assigned to the etiopathogenesis of this disorder. The attitude scale was constructed on the basis of a pre-study on the subject. In particular, the 45 scale items representing the third part of the questionnaire derived from exploratory research conducted with 130 adolescents, who answered open and semi-open questions, explaining their points of view about the origins and the influence of other variables involved in the development of eating disorders. Some causal attributions provided by a sample of clinical subjects (20) were also taken into consideration (a group of patients admitted to a Centre for Eating Disorders in Northern Italy).

The three most significant variables used by the participants in their explanations of the disorder seem to be (OR, "There seem to be three particularly significant variables used by the participants in their explanations of the disorder:"):

1. Individual Factors
2. Social Factors
3. Lack of causes or inability to describe them.

Two other questions (dependent variables) were added, relating to: i) the self-assessment of knowledge about eating disorders, and ii) involvement in a romantic relationship.

The Participants

The questionnaire was completed by 403 students: 255 females (63.3%) and 148 males (36.7%) from Verona (Northern Italy). The students were attending the second class (51.9%) and fourth class (48.1%) of the following types of institute: "Classical High School" (*Liceo classico*) "Scientific High School" (*Liceo scientifico*), "High School in Social Science" (*Liceo delle scienze umane*), "Institute for Technical Studies and Marketing" (*Istituto tecnico commerciale*), and Institute for Professional Chefs and Waiters. The choice of subjects was dictated by the need to involve adolescents who, on the basis of the existing literature and epidemiological data, represent the population most vulnerable to eating disorders.

Analysis

The following statistical analyses were applied by the software SPSS (Cristante, Lis, & Sambin, 2001; Faccio, Castiglioni, & Bell, 2012):

- Analysis of the items, in order to assess the reliability of the scale;
- Factor analysis with the principal component method to explore the dimensional structure of the scale;
- Calculation of Cronbach's alpha to verify the reliability of the factor structure;
- Bivariate correlation, between the scale for social vulnerability to eating disorders and that of the Causal Attributional Scale for explaining the eating disorder phenomenon;
- The T-test, to test the effect of one or more independent variables on a single dependent variable;
- The analysis of variance, to investigate the influence exercised by the independent variables on those employees (answers to the questionnaire). Post-hoc analysis also allows for pairwise comparisons.

From the factorial analysis of the first 23 items of the instrument (first part), five factors were extracted through the method of principal components. Three of these factors were selected using the Cattell Scree-test to facilitate the interpretative moment. Each factor (with eigenvalues > 1) was capable of explaining a percentage of the total cumulative variance equal to 42.03%. Once extracted the factors were rotated with the orthogonal rotation method (Varimax). With regard to the interpretation phase, only items that presented a saturation level of not lower than 0.50, in absolute value, were considered significant for each factor. Factor 1, called "Fear of weight gain and weight control", collected items concerning the increase of body weight and the need for diet control. Factor 2, called "Self-control in social situations", presented items with a positive saturation (greater than 0.50) that refer to the fear of judgment by others in social situations. Factor 3, called "Food as a relief valve", refers to situations of anxiety or loss of control in which food becomes a "safety valve", an obsessive thought to keep one's mind busy.

For the third part of the questionnaire (45 items), the same procedure was applied. The factor analysis of these items led to the extraction, with the method of principal components, of five factors. Using the Cattell scree-test, three factors were selected, explaining a cumulative percentage of variance of 34.79%. Once extracted, the factors were rotated with the orthogonal rotation method Varimax. In this case, only items that had a saturation level of not lower than 0.40, in absolute value, were considered significant. The first factor extracted, entitled "Acceptance and social comparison", collected items which attribute social causes to eating disorders: in particular, the fear of not being accepted and of comparison with other people's bodies (e.g. "An eating disorder derives from the conviction that one is unpleasant to others" or: "...doesn't please others", "It comes from the frustration of not having a body as beautiful as that of others", "Desire to receive the approval of others", "Arises from the comparison with others", etc.). The second factor, was called "Relationship with parents / Self-harm / mental illness" (e.g. "It depends on the relationship with parents", "the result of the failure to communicate with their parents" "It's a way of punishing oneself", "This gives rise to psychological problems", "Loneliness", etc.). The third factor, called "Organic disease", refers to the fact of attributing eating disorders to organic dysfunction, genetics or poor absorption of food.

The Cronbach's alpha analysis, for calculating internal consistency, detected the presence of good or very good values, except for the third factor of both scales ("Food as a safety valve" and "organic disease") which had weaker levels of internal consistency (0.663 and 0.550).

Results

The validation of the questionnaire using the inferential statistics showed that students who reported greater fear of weight gain and weight control, considered the “social factor” as the most important in the development of eating disorders, in particular social acceptance and social comparison. The same trend was observed in women compared to men: females more vulnerable to eating disorders, living with anxiety around fluctuations in weight, tend to consider the social dimension as the most important in developing an eating disorder. The younger group of adolescents (14-15 years old) appeared to be more vulnerable to eating disorders, they considered eating disorders as the result of an organic illness, while the older group (17-18 years), considered the relationship with parents, psychological disease and self-injury as the most important factors.

It is interesting to note that the students most vulnerable to eating disorders were those attending the High School in Social Science (Liceo *socio-psico-pedagogico*) and the Institute for Technical Studies and Marketing (Istituto *tecnico commerciale*) then those attending the vocational schools for chefs and waiters. This is confirmed in part by the research of [Bonino, Cattelino, and Ciairano \(2003\)](#), which detected a greater vulnerability to bodily disease in students attending High Schools in Social Science, which may be related to their interest in psychological studies. This result might also be attributed to the prevalence of females in the High School in Social Science.

Analysis of the data shows that the students who are more vulnerable to eating disorders are those who consider their physical appearance to be very important in their own self-conception. These students tend to agree to the use of plastic surgery to improve their appearance; they also feel very anxious, depressed, disappointed and disapproving of their bodies and experience anxiety or concern about one or more parts of their body. In particular, they appear to have a strong fear of weight gain and weight control, exhibit greater self-control in social situations, and consider food as a relief valve. The students who are more sensitive and more vulnerable to food and body-image diseases have a greater fear of judgment by peers; they consider the social dimension as the most important factor in the development of eating disorders, especially social acceptance and social comparison. People less vulnerable to eating disorders tend to attribute the development of eating disorders to interpersonal and intrapersonal factors, including relationship with parents, mental illness, and self-injury. It is interesting to note that students in schools that do not promote initiatives on wellness related to food and body-image issues, seem to be more vulnerable to eating disorders, and consider social acceptance and social comparison to be the most important factors in the development of eating disorders, in contrast to students at schools that promote initiatives on this topic, who tend to consider self-harm and mental illness to be the causes of eating disorders.

Participants who believe they have a good understanding of eating disorders are more likely to have a strong fear of weight gain and exhibit greater self-control in social situations, while those who claim to have a poor knowledge of eating disorders are more likely to treat food as a relief valve. It could therefore be argued that knowledge about eating disorders is strategically and actively used to regulate and control weight, while a lack of knowledge can lead subjects to consider their relationship with food in a more passive manner.

Adolescents who are experiencing a romantic relationship seem to be more fearful of weight gain, they exhibit greater self-control, especially in social situations, and also attribute the origin of eating disorders to social acceptance and social comparison. Students who aren't in a romantic relationship are more likely to consider food as a relief valve. It could be argued that, for some, a romantic relationship is not experienced as a source of reassurance, but as a reason for controlling the body, perhaps for fear of losing their partner. Instead, some of those who are

not involved in a romantic relationship probably experience solitude as a condition which can be ameliorated by food, seen as a relief valve. This result confirms the research for [Tilgner, Wertheim, and Paxton \(2004\)](#), who found a correlation between social desirability scores and scores of dissatisfaction with one's body, that lead to thinness, bulimic tendencies and the intention to diet.

Descriptive statistics applied to the data show a high incidence of disease related to the body or parts of it: 98% of female students report the experience of dissatisfaction with at least one part or characteristic of the body, together with 90% of males. These percentages suggest that dissatisfaction with the body represents the norm. Fourteen years ago, asking the same question, Frazier and Lisonbee found that only 50% of females and 30% males experienced such dissatisfaction. Over the years, the spread of disease related to body-image has considerably grown amongst adolescents ([Petter, 1990](#)).

Most of the schools in which the questionnaire was completed did not promote initiatives on the subject (78%). Analysing those schools that did promote some kind of initiative, the Scientific High Schools and Technical Institutes performed the most interventions, followed by the High Schools in Social Science and then by the Vocational Institute. There were close to zero interventions at the Classical High Schools. Analysing the types of intervention promoted by schools who have implemented such initiatives, nutritional education interventions and the reporting of eating disorders are most common. Operations were supported, promoted and offered mainly by professors or by the headmaster, and conducted primarily by a psychologist, otherwise the professors themselves or by a dietitian. Most of the students surveyed (70%) believed it to be useful to discuss eating disorders in class, and would like to be spoken to on the subject. The reasons given in support of this were mainly: the desire for more information on the subject, to broaden their knowledge and that of others, and because dialogue and a greater knowledge on the subject are seen as tools for prevention and even treatment of, and care for, those who suffer from this type of problem. It was also claimed that such a discussion and comparison between classmates would act as a reassurance for many students, even leading to self-acceptance.

A less significant number of students expressed the desire to be spoken to on the subject, in order to acquire useful information and the motivation necessary to keep one's body in shape, and to be able to lose weight or adjust it. 30% of respondents said that they did not think the topic of eating disorders should be addressed in the classroom. Most of these said that they were not interested in the subject as it didn't concern them directly. Particularly interesting were the other reasons that were given in order to avoid the treatment of the topic in class. For a substantial group of students, it was seen as a personal topic, to be treated in private and in an individual manner, and not in class. The school was therefore not considered the appropriate place to address these issues. In fact, some male students believe that the topic would create discomfort and shame for themselves and others; they didn't want to talk about it as it could create a situation of great embarrassment. A smaller group of students said that discussing eating disorders would be useless, because "everyone is their own doctor" and is completely free to make decisions with respect to themselves and their bodies, and to choose for themselves how to behave with respect to food etc. The majority of respondents, both those who wanted to discuss eating disorders in class and those who did not want to, were unanimous in considering the psychologist the most suitable person to deal with the issue (72%). A substantial group of those who wanted to discuss the issue favoured another person, such as an expert in the field (dietitian or nutritionist) or even someone who had personally experienced these problems (28% + 4%). A smaller number of those who wanted to discuss it considered a person trusted as a friend, a classmate, a doctor or parent as the most suitable person. The majority of students rated their own knowledge on the topic "eating disorders" as sufficient or good (77%). There were very few who claimed they

didn't know anything about the subject (3%). Just over half of respondents reported being involved in a romantic relationship (60%), and 40% of those currently in romantic relationships said that they were very deeply involved/committed".

Conclusions

This research provides further support for "the hypothesis that eating disorders are a 'cultural syndrome' (Devereux, 1978; Gordon, 1987). In fact, plenty of research on the general population reveals a spread of the behaviour of food restriction, even outside of the sample of subjects considered as pathological (almost 60-70% of young girls on a diet) and proposes theories in favour of a continuity between dieting and eating disorders (Cuzzolaro, 1997; Dolan & Ford, 1991). This encourages us to consider the psychological implications of the food-body relationship, through which the distance between normality and pathology might not be as clear as one might think. It also seems that eating disorders are normally associated to the clinical setting where they are identified from specific observations and complaints from patients, while bearing in mind that these cases can be considered only "the tip of the iceberg" among the many instances that can be found in several other non-clinical areas, as our research has shown (Faccio, 2011). More in detail, the analysis of 403 completed questionnaires showed that the students most worried about weight gain considered the social dimension (in particular, social acceptance and social comparison) as the most important factor in the development of eating disorders. Furthermore, females tend to consider this social dimension to a greater extent than males. The younger respondents (14-15 years) were particularly vulnerable to eating disorders; they considered organic disease to be a primary factor in the development of these disorders, while older teens (16-17-18 years) considered relationships with parents, mental illness or self-harming as the key factors in explaining the origin of these disorders. Some interesting differences also emerged regarding the type of school attended: paradoxically, the schools which students seem to be more involved in the problem are also those in which no programs have been activated to promote health with food and body. The results of this study may suggest also a rethinking of the way in which health programs for preventing Eating Disorders are proposed at school, in fact, students can be embarrassed or live the discussion about the body in presence of peers as a form of personal outing of an eating problem. It would be useful to promote the well-being through experiences of bodily communication, theater role playing instead of talking about food issues in a strict sense. In particular a critical aspect is connected with the use of the informative methodology or of programs oriented to "intervene on risk behavior" models, the latter diffusely used in medical-sanitary field.

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