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Adolescence and Eating Pathologies

Adolescencia y trastornos de la alimentación

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Abstract: Eating disorders have received growing attention by professionals as well as mass media (Shorter, Quinton et al. 2007). The most recent ISTAT data (Italian Institute for Statistics) reveal that about 3 million people (5% of the Italian population) suffer from these disorders, 90-95% females with two peaks of onset at 14 and at 18. Especially at this age, socio-cultural factors are crucial to the development of ideals (Tylche, Subich 2002), cognitions and expectations concerning body image (Schilder, 2002), nutrition and weight (Halmi, 2003). These factors can be divided into four main categories: 'the cultural pressure to acquire a thin body; the change in the woman's social role; the mythical character granted to eating disorders; the prejudice against obesity' (Dalle Grave, 2007). So far, the literature on this subject, however wide, has provided no conclusive data with reference to related issues, such as psychiatric co-morbidities (Blinder et al, 2007). In particular, this study focused on the aspect of control, a significant feature of the Obsessive-Compulsive Disorder too, (Couturier, 2004) and on body-image disperception, peculiar to eating disorders (Neumark-Sztainer, 2000). To investigate co-morbidity between eating disorders and Obsessive-Compulsive Disorder, a questionnaire including items of the Body Shape Questionnaire and the Yale-Brown Obsessive Compulsive Scale (Dalle Grave, Ghisi, Calugi, 2006) was administered to a sample of adolescent students. The results provide significant correlations between Calculation Compulsions and the BSQ Behaviours variable, between Current Miscellaneous Compulsions and Body Image, between Current Miscellaneous Compulsions and Body Shape/Self Esteem. Therefore the study provides further evidence in support of co-morbidity.

Key words: Eating disorders, co-morbidity, adolescence.

Resumen: Los trastornos alimentarios han recibido una atención cada vez mayor por los profesionales, así como los medios de comunicación (más corto, Quintana et al. 2007). Los datos más recientes del ISTAT (Instituto Italiano de Estadística) revelan que cerca de 3 millones de personas (5% de la población italiana) sufren de estos trastornos, las mujeres 90-95% con dos picos de

aparición a los 14 ya los 18. Sobre todo a esta edad, los factores socio-culturales son fundamentales para el desarrollo de los ideales (Tylche, Subich 2002), conocimientos y expectativas sobre la imagen corporal (Schilder, 2002), la nutrición y el peso (Halmi, 2003). Estos factores se pueden dividir en cuatro categorías principales: "la presión cultural para adquirir un cuerpo delgado, el cambio del papel social de la mujer, el personaje mítico concedida a trastornos de la alimentación, el prejuicio contra la obesidad"(Dalle Grave, 2007). Hasta ahora, la literatura sobre este tema, sin embargo todo, no ha facilitado datos concluyentes en relación con las cuestiones conexas, tales como trastornos psiquiátricos concomitantes (Blinder et al, 2007). En particular, este estudio se centró en el aspecto del control, una característica importante del trastorno obsesivo-compulsivo también (Couturier, 2004) y en distorsión de la imagen corporal, tan propio de los trastornos alimentarios (Neumark-Sztainer, 2000). Para investigar la comorbilidad entre trastornos de la alimentación y el trastorno obsesivo-compulsivo, un cuestionario que incluía elementos de la BSQ, y la de Yale-Brown Obsessive Compulsive Scale (Dalle Grave, Ghisi, Calugi, 2006) se administró a una muestra de estudiantes adolescentes. Los resultados ofrecen una correlación significativa entre compulsiones de cálculo y la variable de comportamientos BSQ, entre las diversas corrientes compulsiones y la imagen corporal, entre la actual compulsiones varias y forma del cuerpo / la autoestima. Por tanto, el estudio proporciona más evidencia en apoyo de la comorbilidad.

Palabras clave: *desordenes alimenticios, co-morbilidad, adolescencia.*

Introducción

Since the 60s Eating Disorders (ED) have received growing attention both by professionals and by mass media (Shorter, Quinton et al, 2007). These eating pathologies marked by high prevalence, severity and complexity are the mirror of the Western society which has produced a new value, i.e. a thin body at any cost (Cuzzolaro, 2004). According to the most recent ISTAT data (Italian Institute for Statistics) about 3 million people (5% of the Italian population) are affected by these disorders: 90-95% females with a double peak of onset at 14 and 18. While similar prevalence rates are recorded in the rest of the Western world, these disorders seem to be extremely rare in the developing countries, e.g. in the Third World, where food is scarce, there are no recorded cases of Anorexia Nervosa (AN). Quite the opposite happens in Japan.

This country, which can be considered westernized and receptive to western aesthetic values, shows a dramatic increase in the prevalence of eating disorders. Therefore Anorexia Nervosa can be rightly defined 'the ethnic syndrome of the West' as stated by Menarini (Menarini, 2007). Cultural factors are not the only elements contributing to the onset of eating disorders, but it is certain that, for example, a strict diet is 'the behaviour that above all else contributes to duration and chronicity of anorexia and bulimia nervosa' (Dalle Grave, 2007). Researchers have also investigated other factors that predispose people to eating disorders: genetic risk factors, attachment style, affective disorders (Griffiths, Sutherland, 1998), body image disperception (Schilder P., 2002), style of personal relationships, family history (Vitousek K., Orimoto L., 1993) and personality traits such as insecurity, perfectionism,

obsessive-compulsive traits, low self-esteem and self-efficacy, avoidance behaviours, low tolerance to frustrations (Kobus, 2003).

All these factors characterise eating disorders as multidimensional pathologies (Gardner and Garfinkel, 1997) with different risk factors concurring to their onset. Some of them have already been researched: adolescence and female gender as individual risk factors (Kestemberg E., Kestemberg J., Decobert S., 1974), idealisation of thinness (Slade, 1982) social condemnation of obesity and influence of mass-media as socio-cultural factors (Thompson J.K., Penner L.A., Altabe M.N., 1990). As for the family, a few factors inherited and/or connected with the family environment seem to increase the risk of developing eating disorders (De Zwamm M., Mitchell J.E., 1991).

Rigorous studies of genetic epidemiology have been carried out, especially in the last few years. It emerged that for first-degree relatives of subjects suffering from anorexia or bulimia the risk of developing eating disorders is three-times bigger than controls. However, it wasn't demonstrated whether the incidence of eating disorders in relatives is due to genetic causes, or environmental causes, or both. (Treasure J., Schmidt U., Furth E.V., 2008). Genetic studies of anorexia detected polymorphism in the receptor gene of agouti-related melacortin-4, which is involved in appetite regulation (Birketvedt G.S. et al, 1999).

Other studies found an association between 2-serotonin receptor gene polymorphism and anorexia. Family studies report that in second- and third-degree relatives the incidence of mood disorders is three times higher than controls, which could predispose them to develop depression that, in turn, is a risk factor of ED. Mothers of AN patients often suffer from the obsessive-compulsive disorder, while first-degree relatives of BN patients have alcohol abuse problems. (Dykens E.M., Gerrard M., 1986). Obesity in family members seems to be another risk factor of BN and BED. However, neither the size nor the birth order seem to be predictive of onset. As for the income level, the most affected families belong to high/middle social classes. As regards family environment and interactions, it was emphasized that families with an AN member are more rigid in organisation while interpersonal boundaries are less clear. Besides, parents tend to avoid arguments and conflicts with children (Marks, 1990).

While in families with a BN member, interpersonal boundaries are clear, the family organisation is less stable and conflicts are avoided less (Palazzoli, 2006). So far, the literature on this subject, however wide, has provided no conclusive data with reference to issues such as psychiatric co-morbidities. The obsessive-compulsive co-morbidity is predominant in anorexia (Wiederman, Pryor, 1996) with 35% of diagnosed obsessive-compulsive disorder before the onset of anorexia (Krueger, 1988; Valence et al, 1988).

As a matter of fact, compulsive eating, peculiar to BN and BED, is in a few subjects just one of the many symptoms included in a more general multi-impulsive context (Vinai P., Todisco P., 2007). Other studies of eating disorders highlight the patients' perceptions, feelings and attitudes towards their body and also their relationship with the socio-cultural factors that influence the ideal body shape. (Thompson J.K., Penner L.A., Altabe M.N., 1990).

Bruch, e.g., believes that contemporary society rewarding physical attractiveness associated with a thin body is playing a substantial role in the development of an obsession with thinness. In particular, a study of Shorter et al suggests that the media influence the acquisition of a thin model by inducing comparison processes with favoured celebrities. While

celebrities might be valued for a number of reasons, they are often thinner than age- and gender-relevant norms. They might represent attractive social targets, but their thinness provides an excessively demanding comparison standard.

Every adolescent in the process of acceptance of his/her changing body shape is faced with this demanding and potentially dangerous ideal, unless he/she is naturally predisposed to a slender body. Since 1987, APA included body image disturbance in the diagnostic criteria of eating disorders contained in DSM editions (DSM III-R, DSM IV, DSM IV-TR). In fact, anorexic and bulimic patients painfully experience a distorted perception of their body appearing unattractive and always inadequate. A variable considered by the present study is control – crucial in eating disorders. Slade suggested that eating disorders are the expression of ‘pathological control of one’s body and self’ (2002). He remarked that sufferers of eating disorders pursue total control over eating in a context of ‘general life dissatisfaction and perfectionist tendencies’. Perfectionist tendencies are commonly regarded by literature as one of eating disorder distinctive traits. Slade underlined that these patients tend to identify imperfection with failure or lack of success. Thus, general dissatisfaction associated with perfectionist tendencies determines a perceived sense of little or no personal control over events (Fairburn, 2003).

There seems to be a relationship between the sufferers’ lack of control over their own behaviour/events (producing feelings of inadequacy and ineffectiveness) and their perceived ability to have strong control over their eating and consequently over their shape and weight. (Cooper, 2004). Hence these patients exert pathological control over their eating behaviour because they need to control absolutely some aspect of their life to achieve total success in at least one area (Slade, 1982).

Slade’s ideas were extended by proposing that dietary restrictions increase the sense of control over shape and weight and are therefore used as an important index of self-control (Fairburn et al, 1999). Moreover, in the context of Western contemporary society the loss of weight resulting from anorexia further enhances the sense of self-control, as slimness is considered a socio-cultural value (Bruch, 2002). Finally, it is proposed that this need for self-control derives from a general sense of ineffectiveness and perfectionism in a context of low self-esteem. The aim of the present study is to focus on two different variables: control and body image disperception. These variables are not only fundamental in eating disorders, they are also characteristic of adolescent boys and girls, who are the subjects chosen to investigate the hypotesis.

Aim of the present study

This study investigates the aspect of control, largely present in the obsessive-compulsive disorder (OCD) too, and the aspect of body-image disperception, peculiar to ED. In particular, correlations between the traits predisposing to eating disorders and to OCD in adolescents are hypothesized and investigated, especially the correlations between the components of eating disorders and the variables of weight and body image.

Method

Subjects : Study participants were 100 subjects, 31 male and 69 female, between the ages of 13 and 19 years. The main subgroup had an age of 16 (30%). All participants were students at Santa Maria Immacolata's Scuola Media or Liceo Socio-Psico-Pedagogico in Rome.

Materials and Procedure: Participants were given a 130-item questionnaire. The first 18 items collected background information (weight, height) while promptly checking the occurrence of behaviour predisposing to eating disorders. The following 112 items were more specific. They were taken from the Body Shape Questionnaire (92 items) and from the Yale-Brown Obsessive Compulsive Scale (20 items). Both measures are well-aimed at researching the hypothesis. In particular, the Body Shape Questionnaire (BSQ) developed by Cooper et al in 1987 assesses the area of body image. Actually, body image is believed to play a fundamental role in eating disorders, especially AN. The items investigate the frequency of thoughts, feelings and behaviours. For this study, a version of the Body Shape Questionnaire consisting of three subscales was used: BSQ Behaviours; BSQ Somatic Sensations; BSQ Body Image.

The BSQ Behaviours is a 40-item subscale assessing the frequency of disordered eating behaviours in the prior three months on a 5-point scale (from 0=never to 4=always). The scale also measures perceptions, thoughts and concerns with food intake and body image. The BSQ Somatic Sensations is a 18-item subscale assessing the level of concern with specific somatic sensations on a 5-point scale ranging from (1) 'not at all' to (5) 'extremely'. The BSQ Body Image is a 34-item subscale assessing the frequency of sensations concerning the body image on a 6-point scale (from 1=never to 6=always). The Yale-Brown Obsessive Compulsive Scale (Y-BOCS) developed by Goodman et al in 1987 is the most widely used measure of symptom severity in patients with the Obsessive Compulsive Disorder (OCD). The version administered is focused on compulsions (counting, checking, ordering/arranging hoarding/collecting, saving, somatic and miscellaneous) and repeating rituals, checking the current/past occurrence (true/false) during the prior three months.

Data Analysis: In order to assess the occurrence of symptoms, the scores of each subscale were summed. Moreover, a linear correlation with Pearson's correlation coefficient among the different subscales was carried out to determine the kind of correlation existing between the BSQ and the Y-BOCS. Pearson's coefficients can have values ranging from -1 to 1.

Results

The data concerning the different subgroups of participants were evaluated to ascertain whether the 'age' variable is marked by higher/lower frequency of traits predisposing to OCD. First of all, it should be noted that some age-groups are more numerous because each class-group (3rd year 'scuola media', 1st, 2nd and 3rd year 'liceo') included a minority of repeating or anticipating (i.e. first year primary school at 5 instead of 6) students. Both 14-year-old and 17/18-year-old show a higher level of dissatisfaction with their weight and wish for a significantly lower weight (57.6 vs. 50.4; 62.7 vs. 55.9) suggesting that at quite an early age adolescents are worried about their body: they are well aware of how much they weigh and

they'd like to weigh. Moreover, self-esteem of 3rd year-liceo students appears more strongly linked with body image (3.1).

However, it's worth noting that body perception is not distorted (3=normal) over the different age groups. In accordance with scores, the groups at the extremities of the sample reported a higher frequency of low-calorie diets in the past (0.7). The eldest have also more significantly avoided food consumption or cut food-intake (1.8; 1.8). Actually, 16-year-olders too, with their higher tendency to fast and to food-avoidance (0.8; 1.7), show that concern with their body shape often results into drastic and inappropriate practices.

The episodes of compulsive eating over the different age groups are not frequent (the value is close to 0=no episodes). However, the same score of perceived loss of control in the eldest may suggest that their supposed greater maturity does not involve an equally mature control of their impulses. The data analysis shows that participants do not have a distorted perception of their weight. In fact, they estimate the ratio weight/height as normal (3).

However, female students wish for an ideal weight comparatively lower than males. Both subgroups practice many sports activities to lose weight and improve their body shape (0.7). The latter seems to play quite an important role in enhancing self-esteem, especially of females ($F=2.9$; $M=2.1$). As for BSQ scores, the whole sample doesn't total significant scores in any of the subscales (BSQ behaviours; BSQ somatic sensations; BSQ body image). Yet, female students show significantly higher scores than males, especially in the BSQ body image subscale ($F=91.4$; $M=56.9$).

However, if the sample is considered in its subdivision by school year, higher scores are usually displayed by students born in 1990 or 1991. While they scored higher in the BSQ body image (mean 98.5) and in the BSQ somatic sensations (mean 38.5), compared to the total sample, the highest scores in the BSQ behaviours were displayed by students born in 1993 (mean 46.1). As for Y-BOCS, the only significant finding concerns Checking Compulsions, both current (8) and past (8.2).

No great difference is recorded between the male and the female subgroups, but, considering the age, students born in 1993 score higher (current checking compulsion 7.9; past checking compulsions 8.1). The following negative correlations largely support the study hypothesis, i.e. traits predisposing to ED correlate with obsessive-compulsive traits: between the counting compulsion variable and the BSQ behaviour variable (-0.73) in the 15-year-olders subgroup; between the current miscellaneous compulsion variable and the BSQ body image variable (-0.769) in the 17-and-18-year-olders subgroups; between the current miscellaneous compulsion variable and the body shape and self-esteem variable (-0.739) in the 17- and -18-year-olders subgroups.

These findings suggest that the older the students, the more vulnerable they are to develop an eating disorder alongside obsessive rituals.

Conclusion

The study aim was to test the hypothesis of correlations between traits predisposing to ED and traits predisposing to OCD in adolescents. The main results seem to support this hypothesis. In

fact, significant correlations were found between the Counting Compulsions and the BSQ Behaviours variable, between the Current Miscellaneous Compulsions and the Body Image and finally between the Current Miscellaneous Compulsions and the Body shape and Self-Esteem. Findings from this study thus lend further support to the hypothesis of co-morbidity between the two pathologies, which has to be kept in mind both when developing community screening projects (checking for alarming signs or high-risk subjects) and for diagnostic and treatment purposes.

The limited statistical power of this study results from the relatively small number of participants (31 male+69 female = 100), the more so if we consider that the sample was subdivided into age subgroups. Further research should therefore strive to sample larger numbers of adolescents attending school in different districts to ensure better social class representativeness. Furthermore, it could be interesting to assess students with a longitudinal design, as the results suggest a higher risk of eating disorders when there are prior obsessive compulsive symptoms. Preventive treatment before the onset of the pathology is of utmost importance in eating disorders. Prevention should aim at fighting risk factors, reinforcing protection factors and early detection of the pathology.

In fact, when the eating disorder is clearly evident, treatment becomes difficult, expensive and hardly successful. Both therapists and relatives are sadly familiar with the patients' obstinate denial of evidence and, above all, of admitting their terrible sufferings and their need for help. In conclusion, adolescence is surely a high-risk stage of the life cycle. However, the onset of an eating disorder is the result of the confluence and interaction of numerous and complex factors of various nature.

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