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How perceived parental bonding affects self-concept and drive for thinness: A community-based study

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ABSTRACT

The main aims of the present study were to investigate the relationship between perceived parental bonding and self-concept and to investigate whether these variables have an effect on eating disturbances vulnerability by testing a mediation model. We screened 3158 Italian high school students (1132 males and 2026 females), ranging in age from 14 to 18 years old by means of self-report measures of parental behavior as perceived by the offspring, eating disturbance propensity and self-concept. Weight and height were also measured. The link between a parental bonding behavior characterized by low paternal care and by maternal overprotection and a dysfunctional eating attitude (expressed by the drive for thinness) was significant and was found to be perfectly mediated by adolescents' self-concept. Moreover, our results showed that the impact of self-concept for the drive for thinness (and hence on eating psychopathologies) is moderated by the participants' body mass index and gender, but not by age. We consider this evidence of study to be useful for the prevention and treatment of eating related problems in adolescence.

1. Introduction

Many adolescents are affected by an eating disorder attitude and behavior, such as fasting or skipping meals, bingeing, and purging (Cotrufo, Barretta, Monteleone, & Maj, 1998; Croll, Neumark-Sztainer, Story, & Ireland, 2002). Empirical studies have reported prevalence rates ranging from 13% to 29.4% for girls and from 7% to 14.4% for boys (Herpertz-Dahlmann et al., 2008; Neumark-Sztainer & Hannan, 2000; Toselli et al., 2005). The natural outcome of subclinical eating disorder attitudes and behavior in adolescents has also been studied (Cotrufo, Monteleone, Castaldo, & Maj, 2004). In particular, the drive to be thin has been found to be a significant predictor of a future eating disorder (ED) symptom (Dodmeyer & Stein, 2003; Garner, Garfinkel, Rockert, & Olmsted, 1987; Joiner, Heatherton, & Keel, 1997).

1.1. Parental bonding patterns and eating disorders

Empirical evidence suggests that family factors are important features in the etiology of both eating disorders and disordered eating behavior and attitude. Selvini Palazzoli (1963) was one of the first authors who placed emphasis on family relationships in the pathogenesis of anorexia. The Italian psychiatrist observed some typical patterns in families with anorexic offspring, such as maternal intrusiveness and over-involvement. Similarly, the psychosomatic family model advanced by Minuchin et al. (1975) suggested that one of the preconditions for the onset of anorexia was a family situation characterized by enmeshment, overprotective parenting, rigidity, and lack of conflict resolution. In such a context, illness may end up being used as a mode of communication.

On the other hand, a number of researchers have highlighted the prevalence of insecure attachment patterns in ED patients (Armstrong & Roth, 1989; Brown & Wright, 2001; Salzman, 1997). According to the interpersonal vulnerability model, disturbances in early child–caregiver relationships (e.g., adoption, child physical or sexual abuse, and parental psychopathology) may initially lead to insecure attachment and then to social personal disorders, the feeling of loneliness, and low self-esteem. These latter factors may cause affective dysregulation, and the individual may use binge eating as a means of coping with an uncomfortable emotional state (as cited in O'Donohue, Moore, & Scott, 2007).

All of these theoretical models contribute to identifying the specific types of family relationships underlying the development of EDs, which have been the target of subsequent empirical studies. Most of these studies have focused on the association between eating psychopathologies, perceived parental care, and psychological control. A parenting style based on low care–high control has been shown to be the most frequent type amongst ED patients (Jáuregui Lobera, Bolaños Ríos, & Garrido Casals, 2011). High levels of maternal control, intrusiveness, and overprotection (Laporte, Marcoux, & Guttman, 2001; Swanson et al., 2010; Walters & Kendler, 1995) and low levels of parental care (Swanson et al., 2010) have demonstrated to be associated with anorexic symptomatology. In the study by Canetti, Kanyas, Lerer, Latzer, and Bachar (2008), anorexic women perceived both parents as less caring

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and fathers as more controlling than non-problem control; moreover, maternal control and paternal care were associated with higher symptom severity. Bulimic women have been found to report low levels of parental care (Fassino, Amianto, Rocca, & Daga, 2010) and high levels of paternal overprotection (Calam, Waller, Slade, & Newton, 1990).

1.2. Self-concept is a variable in the rapport between perceived parental bonding and eating disorders

A body of research has focused on perceived parental bonding, concerning the levels of care and overprotection, as a risk factor for individuals in the development of eating disorder-related symptoms, concerns, and behavior. Moreover, researchers have begun to consider the existence of possible mediating factors between parental bonding and eating pathologies, such as poor self-concept. Self-concept is generally defined as a person's perception of him or herself formed by environmental experiences and other significant factors (Shavelson, Hubner, & Stanton, 1976). Literature on EDs show that a patient's self-concept is fundamentally characterized by low self-esteem, which is considered to be an important vulnerability factor in the development of these diseases (Button, Sonuga-Barke, Davies, & Thompson, 1996, Button, Loan, Davies, & Sonuga-Barke, 1997; Courtney, Gamboz, & Johnson, 2008). In a review focusing on causes of EDs, low self-esteem was demonstrated to be one of the prominent features strongly implicated in the onset of the pathology (Polivy & Herman, 2002). Therefore, a poor sense of self-esteem is an important contributor to ED symptomatology (Stein & Corte, 2007).

An interesting study involving undergraduate students from The United States and Norway, Perry, Silvera, Neilands, Rosenvinge, and Hanssen (2008) reported an association between a parental bonding behavior pattern typified by low care, over-protection, and self-concept of the individuals, characterized by lack of self-understanding, low self-esteem, and external locus of control. This self-concept was, in turn, connected with higher levels of eating disorders. Despite the established connections between perceived parental bonding and self-concept as well as between self-concept and eating disorders, it is important to note that this study involved a rather small number of participants ($N = 387$), and it was conducted on a sample of individuals ranging from adolescence to late adulthood. To our knowledge, no studies have tested the validity of generalizing these findings on a large sample of adolescents. Moreover, this type of research is very interesting since eating disorders most commonly appear in adolescence, and some studies have revealed puberty to be an important factor in the development of this problem (Cotrufo, Cella, Cremato, & Labella, 2007; O'Dea & Abraham, 1999). In conclusion, though unintentionally, parental over-involvement may produce in children a sense of ineffectiveness and a poor concept of self, which in turn might make them prone to developing eating disorders. For this reason, we have launched a study program using a large sample of South European adolescents to investigate the relationship between perceived parental bonding and self-concept, and whether these variables affect eating disorder vulnerability (expressed by the drive for thinness) testing a mediation model.

On the basis of the existing literature, it has been hypothesized that low levels of parental care and high levels of parental protection may be associated with higher ED vulnerability and, moreover, that this association may be mediated by poor self-concept. In addition, we evaluated the moderating effects of the gender, age, socioeconomic status (SES), and body mass index (BMI) of the participants in the study. It was demonstrated that the process regarding self-concept and the drive for thinness investigated in the present research would be more likely to involve girls with greater BMI. In fact, being a female (Hoek & Van Hoeken, 2003) and overweight (Fairburn et al., 1998, Fairburn, Cooper, Doll, & Welch, 1999) allows individuals to be more vulnerable in developing an ED. No predictions about the moderating effect of the age were formulated.

2. Methods

Our study has been approved by the Ethic Board of the Department of Psychology and by the Ethic Committee of the Second University of Naples.

2.1. Participants

All participants are italian adolescents, attending public high schools, located in different (urban and rural) areas of Southern Italy. The only inclusion criterion was that participants were present in the classrooms during the questionnaires.

A study was carried out on 3210 individuals. After screening, 52 of them were excluded from the study: 22 because they were younger than 14 and 30 because they skipped two or more questions when completing the questionnaires. Therefore, the final study was of 3158 adolescents (1132 males and 2026 females). The average age was 15.76 (SD = 1.364). The majority of participants ($N = 1739$, 55.1%) fell into the low to middle socioeconomic category (based on parental education level).

2.2. Materials

Participants were asked to complete a questionnaire of 4 self-reports.

2.2.1. Demographic information

An *ad hoc* sociodemographic form to be completed with information about sex, age, family composition, and level of parental education.

2.2.2. Drive for thinness

The Eating Disorder Inventory 2 (EDI-2; Garner, 1991) is a self-evaluation inventory consisting of 91 questions that evaluate eating related attitudes and behavior generally associated with EDs. The EDI-2 handbook indicates a cutoff score of 14 in the Drive for Thinness scale (DT), corresponding to the 98th percentile for the screening of EDs. In the present study, as our interest was limited to eating attitudes, only the Drive for Thinness scale, composed of 7 items, was used. Participants were asked to rate how much they agreed with statements (e.g., "I eat sweets and carbohydrates without feeling nervous," "I think about dieting," "I feel extremely guilty after overeating") with answers ranging over a scale from "always" to "never." The EDI-2 is an instrument with good reliability for the assessment of eating disorder symptoms (Thiel & Paul, 2006). In the present study, the Drive for Thinness scale achieves an adequately high Cronbach's alpha ($\alpha = 0.91$).

2.2.3. Perceived parental bonding

The Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979) is a 50-question self-report questionnaire that measures parental behavior as perceived by the offspring. It measures two principal areas of parental behavior and attitude as rated by the child: parental care (behavior indicating affection and warmth or coldness and rejection) and parental overprotection (behavior indicating encouragement of autonomy/independence as opposed to strict control with regulations and intrusiveness). Participants were asked to rate how much they agreed with various statements (e.g., "Spoke to me in a warm and friendly voice," "Appeared to understand my problems and worries," "Let me do those things I liked doing," "Liked me to make my own decisions"). Response options for questions range from 0 to 3: 0 = very like, 1 = moderately like, 2 = moderately unlike, and 3 = very unlike. However, not all items are scored in the same directions.

High overprotection scores and low care scores indicate problematic bonding. Scores can be also interpreted as falling into one of four quadrants: optimal bonding (high care, low overprotection), weak bonding (low care, low overprotection), affectionate constraint (high care, high overprotection), and affectionless control (low care, high overprotection). The PBI was asked separately for each participant's mother and