The Moderating Role of Father’s Care on the Onset of Binge Eating Symptoms Among Female Late Adolescents with Insecure Attachment

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The Moderating Role of Father’s Care on the Onset of Binge Eating Symptoms Among Female Late Adolescents with Insecure Attachment

Ugo Pace · Marco Cacioppo · Adriano Schimmenti

Abstract The present study examined the association between quality of attachment, perception of the father’s bond, and binge eating symptoms in a sample of female late adolescents. In total, 233 female students aged between 18 and 20 years completed measures on binge eating, quality of attachment and parent–child relationship. Data showed that respondents with binge symptoms reported lower scores on secure attachment and father’s care, and higher scores on preoccupied and fearful attachment. Binge eating symptoms were associated with father’s care, but not with father’s overprotection. Also, binge symptoms were negatively associated with secure attachment styles, and positively with preoccupied and fearful attachment. The data, finally, provided evidence that at higher levels of preoccupied attachment, the impact of binge symptoms tended to be lower when father’s care was high.

Keywords Binge eating · Parental bonding · Father’s care · Attachment

Introduction

Several empirical studies have stressed the role that family context plays in the development and maintenance of eating disorders among adolescents [1]. The research has mostly drawn attention to anorexia nervosa (AN) and bulimia nervosa (BN), but there have been relatively few studies on binge eating disorders (BED). BED can be described as an eating disorder characterized by persistent, frequent binge eating that is not accompanied by the regular compensatory behaviors present in BN [2]. Binge eating is indeed a maladaptive eating practice that can be observed in individuals with BN and AN, but in these disorders it is always linked with compensatory and/or eliminatory symptoms (vomiting, purging, excessive physical exercises). Since the publication of DSM-IV [3], binge eating disorder
has been included in the eating disorders section as an eating disorder not otherwise specified (EDNOS), that is, a category including the disorders that do not meet the criteria for AN or BN. With respect to epidemiologic studies on binge eating, it has been found to be significantly more common among females than males (46% vs. 30%), and among binging-compensating (BC) individuals (who compensate binge eating with practice aimed at weight loss, such as using laxatives) [1, 4].

In the last decade, several studies have revealed that binge eating not only characterizes clinical samples, but also the general population [4]. According to the DSM-IV diagnostic criteria, it is not unusual for female adolescents to have difficulties in controlling the urge to binge-eat even if this behavior cannot be considered an eating disorder [5]. For this reason, it is important to explore psychological factors associated with binge eating behavior in adolescents who have not yet developed an eating disorder. BED and other comorbid disorders have been the subject of several studies, and BED among female adolescents have been found to be associated with an increased risk of both internalized and externalized disorders [6]. Most notably, regular binge behaviors have been linked to high levels of depressive symptoms and low levels of self esteem, panic attacks, reduced life satisfaction [7], and abuse of psychoactive substances such as alcohol or illicit drugs [8].

Among factors that have been identified as possible precursors of binge eating, relationships between family members, beginning with parental bonds, have been deeply explored in the literature [9]. The relation between adolescents’ ideal body image and parent’s behavior has been showed in several studies. Researchers [10] argued that mothers have a strong influence on daughters’ attitudes and eating behaviors; conversely, the behavior of fathers has been identified as a predictor for body-image satisfaction in a sample of female adolescents [11]. The literature on this subject has highlighted that ED female adolescents describe their fathers as cold and distant [12]. Moreover, empirical research has reported ED female adolescents’ perception of poor father–daughter relationship [13], lack of paternal empathy [14] and overprotection [15]. In terms of primary relationships with a caregiver, researchers have emphasized the role that quality of attachment may play on the adaptive or maladaptive course of development from infancy to adolescence [16, 17]. Attachment theory assumes continuity between early parent–child relationships and interpersonal competence during adolescence and adulthood mediated by internal working models of self and other: within this relational context the child develops representational models of the self and of one’s relational experience [18, 19]. The model of self can be described as an individual’s sense of being worthy of love; conversely, the model of others can be described as the social world’s sense of trust and emotionally availability [20]. Secure attachment style is characterized by a positive sense of self-worth (“I am lovable”) and an expectation that others are reliable (“Others are trustworthy”). Insecure attachment may assume three shapes: dismissing attachment style is characterized by a positive working model of the self and by a highly negative model of others; preoccupied attachment style is characterized by a model of the self as unlovable or unworthy and by a positive model of others; finally, fearful attachment style is characterized by a sense of self-unworthiness and a view of others as rejecting [21]. According to theoretical studies on attachment, quality of parent–child relationships provides a sense of security that later enables individuals, on the one hand, to be emotionally available in adult relationships, and, on the other hand, to regulate their own emotions. Conversely, different styles of insecure attachment have been considered to be possible predictors of a number of mental disorders [22], and among these, eating disorders [23]. Findings from empirical studies have stressed that adolescents with eating disorders showed significantly less secure
attachment than their peers with no eating disorders [24]. Additionally, research suggests that individuals with eating disorders scored higher than a comparison group on measures of insecure attachment [25]. Furthermore, attachment insecurity was related to body dissatisfaction for young women with a diagnosed eating disorder [26]. A research review of this topic provided evidence that a strong association between eating disorders and insecure internal working models often emerged [27]. Because fathers in traditional households are not primary caretakers, the infant-father emotional bond has received little attention, unlike the infant-mother relationship. Psychological studies on early development and adjustment focused on the dynamics between mothers and their children or adolescents [28]. Consequently, the father’s function has often been considered as indirect in comparison with the direct role of the mother [29]. But, in view of the attachment model based on the role played by multiple emotional referring figures, fathers may affect, positively or negatively, individual developmental trajectories [30].

The present study sought to extend existing research on the relationship between attachment styles, parental bonds and binge eating [31]. In particular, we examined the association between quality of attachment, perception of father’s bonds and binge eating symptoms, in a sample of Italian adolescent females. Based on previous findings, we hypothesized that girls with lower quality of relationships with fathers and/or with insecure attachment styles would show higher levels of binge eating symptoms than peers with secure attachment styles or higher quality of relationship with fathers. Moreover, the moderating role of father’s care and control on the relationship between insecure attachment and binge eating was investigated.

Method

Procedure

Participants provided informed consent and completed self-report measures on binge eating, attachment and parental bonding. Two researchers collected data during class hours at the beginning of the academic year 2010/2011: previously, it had been issued an invitation to participate in a study on eating disorders. The study was conducted in compliance with University Internal Review Board guidelines and in respect of the ethical norms of the research approved by the Italian Psychology Association.

Participants

Initially 280 female university students were invited to participate in the study. Two hundred and thirty-three (83.2%) correctly and entirely completed all the measures administered. This reduced the sample to 233 late adolescents. This sample of 233 students was aged between 18 and 20 years (M = 19.1; DS = 0.9): 94 (40.3%) were 18, 61 (26.2%) were 19 and 78 (33.5%) were 20. The mean height in the group was 164 ± 0.06 cm (5.38 ± 0.20 feet), and the mean weight was 56.9 ± 9.51 kg (125.44 ± 20.97 pounds).

Measures

Binge Eating Scale (BES) [32]. The BES is a 16-item self-report measure of binge eating severity designed for use with overweight individuals. It appraises the behavioral manifestations and the cognitions that are believed to surround a binge episode. Three items (items 3,
9 and 12) assess the subjective perception of loss of control over one’s eating that distinguishes binge eating from ‘normal’ overeating [33]. Participants were instructed to complete the scale by reading the 16 groups of numbered statements, and to mark the statement in each group that best described the way they felt about their ability to control their eating behavior. The scale was scored by comparing the individual weights for the 16 items with higher scores indicating more severe binge eating problems. The BES scores ranges from 0 to 46, with scores between 17 and 26 indicating moderate binging symptoms, and scores of 27 or above suggesting a BED diagnosis [34]. The BES has demonstrated good convergence and concurrent validity [34] and a test–retest reliability after 2-weeks of $r = 0.87$ [35]. In this study, the Cronbach’s alpha reliability coefficient of the measure was 0.91.

Relationship Questionnaire (RQ) [21]. This is a self-report measure, where participants have to select one of four prototypes based on brief paragraphs which contain multisentence descriptions of attachment patterns. The prototypes, along with sample sentences, are (a) Secure: “I feel comfortable depending on others and having others depend on me”; (b) Dismissing: “I am comfortable without close emotional relationships”; (c) Preoccupied: “I want to be intimate with others, but I often find that others are reluctant to get as close as I would like”; and (d) Fearful: “I find it difficult to trust others completely, or to depend on them”.

Participants are asked to indicate on a 7-point scale how well each paragraph describes them (1 = It does not describe me at all, 7 = It very much describes me). This is a well validated instrument of adult attachment styles [36] with good discriminant validity [37]. The test–retest correlations of attachment dimensions are very high (on average, 0.78 for women and 0.86 for men) [38]. Prototype rating reliabilities (alpha) in this study ranged from 0.87 to 0.95.

Parental Bonding Instrument (PBI) [39]. This is a 25-item self-report measure designed to assess parent–child relationships using a Likert scale from 0 (very unlike) to 3 (very unlike). Twelve of the items are Care items (e.g. “Appeared to understand my problems and worries”), which allows for a maximum score of 36 for the Care dimension, and thirteen of the items are the Overprotection items (e.g. “Tried to make me feel dependent on him”), which allows for a maximum score of 39 for the Overprotection dimension. Care involves a dimension from parental affection, warmth and empathy (high scores) to parental coldness, indifference and rejection (low scores). Overprotection or control ranges from intrusiveness to infantilization (high scores) through to the detached promotion of independence (low scores). The PBI has good psychometric properties and is insensitive to the effects of the respondent’s mood [40]. The utility of this self-report measure is demonstrated by its robust and well-established psychometric characteristics, particularly the extent to which the PBI provides valid and reliable ratings of actual and not merely perceived characteristics of child-parent relationships [40, 41]. There is considerable support for its validity as a measure of both actual and perceived parenting, based on studies using family corroborative witnesses, twin studies, and studies using independent raters [40, 42–44]. The test–retest reliability of the PBI has been demonstrated for intervals ranging from 3 weeks [39] to 10 years [45]. The test–retest correlations ranged from 0.87 for maternal care and paternal overprotection to 0.92 for paternal care, with a mean of 0.89 [46]. In the present study, only the father’s scales were administered. The scale’s alphas resulted in 0.91 for paternal care and 0.86 for paternal overcontrol.

Results

In this sample, 33 subjects (13.3%) showed significant symptoms of binge eating (scores of 17 or more at the BES), eight of whom (3.4%) even scored above the cut off for the
A diagnosis of BED. Descriptive statistics of BES, RQ, and PBI scores are illustrated in Table 1.

A MANOVA, using Wilks’ lambda criterion, was performed in order to explore the differences between students with binge symptoms (BES scores of 17 or more) and students without binge symptoms on the overall dimensions of interest. The analysis showed a significant effect for the group, $\lambda = 0.92$, approximate $F(6,225) = 3.50$, $p < .003$. Tests of between-subjects effects showed significant effects for father’s care, $F(1,230) = 4.75$, $p < .03$, secure attachment, $F(1,230) = 10.47$, $p < .001$, preoccupied attachment, $F(1,230) = 11.62$, $p < .001$, and fearful attachment, $F(1,230) = 7.65$, $p < .001$. In comparison to students without binge symptoms, students with binge symptoms (BES scores of 17 or more) reported lower scores on secure attachment and father’s care, and higher scores on preoccupied and fearful attachment than (Table 2).

A hierarchical regression analysis was conducted in order to explore the predictive role of attachment style and father’s care and overprotection on binge symptoms. BES scores were entered in the regression model as the dependent variable. As a first step, all the RQ scores were entered in the model as independent variables to determine which of these contributed uniquely to the prediction. Variables in Step 1 significantly predicted binge symptoms ($R^2 = 0.25$, $F(4,227) = 4.31$, $p < .002$), with secure attachment emerging as a significant negative predictor ($\beta = -0.16$, $p < .03$), and preoccupied attachment emerging as a significant positive predictor ($\beta = 0.15$, $p < .04$). Avoidant and fearful attachment style scores were not significant. The PBI father’s scales of care and overprotection entered in Step 2 were found to add to the prediction ($R^2$ change = 0.03, $F(6,225) = 3.49$, $p < .003$). The PBI father’s care resulted as a significant negative predictor of binge symptoms ($\beta = 0.22$, $p < .001$), while the PBI scale on father’s overprotection was not significant. Finally, binge symptoms were significantly predicted by the Step 3 interactions ($\Delta R^2 = 0.05$, $F(8,223) = 2.61$, $p < .01$). The results showed only a significant interaction between preoccupied attachment and father’s care ($\beta = -0.14$, $p < .03$). The interaction between secure attachment and father’s care was not significant. Table 3 summarizes the results of the regression study.

Finally, we probed the above interaction following procedures recommended by Aiken and West [47] and Holmbeck [48]. The regression equation was restructured to express the regression of impact of binge symptoms on preoccupied attachment at levels of father’s care. The values of father’s care chosen corresponded to 1 SD above the mean (high) and 1 SD below the mean (low). These equations are plotted in Fig. 1 to display the interaction. The weakest relationship between preoccupied attachment and impact of binge symptoms was obtained for females who had the highest level of father’s care. At high level of preoccupied attachment, binge was lower when father’s care was high.

<table>
<thead>
<tr>
<th>Table 1 Mean and SD of binge eating symptoms, attachment prototypes, and father’s parenting (N = 233)</th>
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<tbody>
<tr>
<td><strong>Binge eating symptoms (BES)</strong></td>
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<tr>
<td>RQ secure attachment</td>
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<td>RQ avoidant attachment</td>
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<td>RQ preoccupied attachment</td>
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<td>RQ fearful attachment</td>
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<td>PBI father’s care</td>
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<td>PBI father’s overprotection</td>
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RQ = Relationship questionnaire  
PBI = Parental bonding instrument
The simple slope for the high level of father’s care was significantly different from zero ($b = -0.29, p < .005$) and the simple slope for the low level of father’s care was not significantly different from zero ($b = -0.09, ns$). As indicated, the simple slopes of the impact of binging symptoms tended to differ from one another as a function of the value of father’s care. Both at lower and higher levels of preoccupied attachment, binge symptoms tended to be lower when father’s care was high.

**Discussion**

The results of this study on 233 female college-age students suggested that binge eating symptoms tended to be lower among those who reported higher levels of secure attachment and father’s care during childhood. Furthermore, preoccupied and fearful attachments were related to higher levels of binge eating symptoms. This is consistent with literature showing that secure attachment and positive relationships with parents protect from the development of disorders, including eating disorders [49], while insecure attachments increase the risk of developing psychological symptoms. An interesting exception in this study concerns the role of avoidant attachment, which did not correlate with binge symptoms. In accordance with literature that finds little or no evidence of association between binge eating and avoidant attachment [26], this result confirms that binge eating symptoms are mostly present in people with preoccupied or fearful attachment. Nonetheless, this finding must be qualified, considering the difficulties of avoidant people in recognizing their avoidance style within self-report measures [50]. Hierarchical regression showed that secure attachment and father’s care negatively predicted binge symptoms, while preoccupied attachment positively predicted them.

The results confirmed a joint contribution of attachment insecurity and father’s care to the prediction of binge symptoms such that among females reporting a preoccupied attachment style, binge symptoms differ as a function of the level of father’s care. In particular, both at lower and higher levels of preoccupied attachment, binge symptoms tended to be lower when father’s care was high. This finding evidences the moderator role of father’s care on eating disorders in late adolescence with preoccupied attachment. Since previous studies have linked insecure attachment to psychopathology, including eating disorders [51], and girls with eating disorders typically exhibit insecure working models.
Table 3  Regression: predictors of binge symptoms (N = 233)

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
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<tr>
<td></td>
<td>Beta</td>
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<td>CI 95%</td>
<td>Beta</td>
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<tr>
<td>RQ secure attachment</td>
<td>-0.16</td>
<td>-2.19</td>
<td>.03</td>
<td>-1.02–0.05</td>
<td>-0.16</td>
<td>-2.23</td>
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<td>RQ avoidant attachment</td>
<td>-0.11</td>
<td>-1.83</td>
<td>.07</td>
<td>-0.91–0.03</td>
<td>-0.12</td>
<td>-1.92</td>
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<tr>
<td>RQ preoccupied attachment</td>
<td>0.15</td>
<td>1.99</td>
<td>.04</td>
<td>0.05–1.06</td>
<td>0.15</td>
<td>2.07</td>
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<tr>
<td>RQ fearful attachment</td>
<td>0.09</td>
<td>1.13</td>
<td>.26</td>
<td>-0.21–0.80</td>
<td>0.06</td>
<td>0.75</td>
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<tr>
<td>PBI father’s care</td>
<td>-0.22</td>
<td>-3.44</td>
<td>.001</td>
<td>-0.34–0.09</td>
<td>-0.22</td>
<td>-3.43</td>
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<tr>
<td>PBI father’s overprotection</td>
<td>-0.04</td>
<td>-0.66</td>
<td>.51</td>
<td>-0.20–0.10</td>
<td>0.04</td>
<td>0.78</td>
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<td>RQ secure attachment x</td>
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<td>-0.14</td>
<td>-2.19</td>
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<td>PBI father’s care</td>
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<td>RQ preoccupied attachment x</td>
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<td>Model $R^2$</td>
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<td>$R^2$ change</td>
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<td>$F$</td>
<td>(4,227) = 4.31, $p = .002$</td>
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<td>(6,225) = 3.49, $p = .003$</td>
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<td></td>
<td>(8,223) = 2.61, $p = .01$</td>
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RQ = Relationship questionnaire
PBI = Parental bonding instrument
it seems interesting to individuate which factors might moderate this relationship. The data of the present study suggests that a girl’s perception of her father’s involvement and concern in late adolescence can be considered one of these factors. In view of these considerations, it seems that father’s care might intervene in the linkage between inadequate primary bonds and the onset of eating disorders among girls in late adolescence. The findings should be read in the light of the limitations of this current research: the cross-sectional design does not allow any causal inferences as to whether the relationship with father influences BED or vice versa. Moreover, the stability of the association between variables might be explored during the transition from late-adolescent to early adulthood through a longitudinal study. Another limitation arises from the fact that all the obtained information was collected by self-report measures, that is, the accuracy of individual reporters cannot be assured. Finally, the present study explores the relationship between father’s care and binge eating in females of late adolescence. Moreover, it would be useful in future research to examine the relationship between the perception of care of both parents and eating disorders in male and female adolescents.

Nonetheless, when the findings of the study are conceived from a clinical point of view, important operational results can be derived. In terms of the protective role of father’s care on the severity of binge symptoms, inside the clinical frame a close examination of the binging patient’s relationship with the father can certainly furnish a clearer perspective on how the patient’s family functions; it is even possible that such exploration can further provide valuable advises for identifying the most effective clinical strategy to promote the development of security in the patient. Furthermore, looking at specific difficulties with the father may help the adolescent patient to overcome unsolved conflicts or problems that can exacerbate symptoms. Attachment theory suggests that while it is mostly mothers who during childhood care for their children when they are scared, feel threatened or stressed, fathers have the important role of guiding them as they make decisions in life, involving, in particular, their peers and learning strategies for affect regulation [22]. It is then possible to examine which experiences with the father may make children more integrated and secure within the family and facilitate the “differentiation process” or struggle for autonomy that is considered one of the primary components of eating disorders [53]. The differentiation of parental figures and their role in personal development may allow the patient to reflect...
upon and better distinguish between self and others [1], between past and present. The clinical work that is aimed at developing better patterns of regulation—proximity to and distance from parental figures, which is at the heart of attachment theory—can, in turn, support the definition of clearer rules within the entire family system, even facilitating the development of security.

As expressed in the principles of attachment theory [54], childhood relationships with parents create a template for the development of strategies for regulating emotions. It is then possible that overeating and binge symptoms precipitate when a person with such vulnerabilities is subjected to significant stressors or is required to deal with important developmental tasks. This is particularly the case with adolescents and late adolescents who often struggle to define their identity.

Therefore, psychiatrists and clinicians who work in this field may wish to consider how the current and past attachment relationships affect the development and the severity of binge eating. They may also wish to assist young people in becoming more self-secured and self-regulated.

Summary

Binge Eating is an eating disorder characterized by constant binge eating that is not associated to the habitual compensatory symptoms such as vomiting, purging or excessive physical exercises. The literature on this subject has highlighted that Binge Eating Disorder female adolescents depict their fathers as emotionally distant; researchers have also showed the role that attachment styles may play on the individual development during the transition from infancy and adolescence.

The aim of the current study was to empirically explore if girls who perceived low father’s care and/or were characterized by insecure attachment styles would show higher levels of binge eating symptoms than peers with secure attachment styles or with a perception of higher quality of father’s care. Results showed that secure attachment and perception of father’s care protected from the development of binge symptoms, while insecure attachments increased the risk of developing them. Moreover, both at lower and higher levels of preoccupied attachment, binge symptoms tended to be lower when father’s care was high. This finding evidences the moderator role of father’s care on eating disorders in late adolescents with preoccupied attachment. Since previous studies have linked insecure attachment to eating disorders, for research and clinical purposes it may become important understand which factors might moderate this relationship. The data of the present study suggests that a girl’s perception of her father’s involvement and concern in late adolescence can be considered one of these factors.

References