Paternal Bonding and Eating Disorders Symptoms: The Mediating Role Emotion Regulation Difficulties

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Abstract: The aim of this study was to assess the relationship between paternal bonding and emotion regulation difficulties and eating disorders symptoms. 237 undergraduate students in the universities of central cities of Mazandaran province, Iran in range of age (19-22) years, completed scales parental bonding, emotion regulation difficulties and eating disorders. Emotion regulation difficulties showed that mediates the relationship between the paternal care, paternal overprotection and eating disorders symptoms. These findings provide additional evidence based on importance paternal bonding and emotion regulation difficulties in eating disorder psychopathology.

Keywords: Paternal Bonding, Eating Disorders Symptoms, Emotion Regulation Difficulties

1. Introduction

Evidence suggests that the incidence of eating disorders is rising (Hoek and Van Hoeken, 2003). To some individuals, it may provide a means to attain a valued appearance and acceptance (Striegel-Moore et al., 1986), increase feeling of control (Fairburn et al., 1998), and decrease negative feelings (Presnell et al., 2009). However, the continuation of these inappropriate strategies in some cases leads to long-term nutritional and weight problems and increases the risk of full-blown eating disorders (Hautala et al., 2011).

Several studies have shown that the family context and inadequate parental bonding plays a role in the development and maintenance of eating disorders (Dominy et al., 2000). However, some studies on the etiology of eating disorders by criticizing assumption of direct model explaining the relationship process between insufficient attachment parent - child and eating disorders (O’Kearney, 1996), believe that such a model does not provide a sufficient explanation for the development of eating disorders. Because, role of a mediator factors have been neglected between childhood experiences and symptoms of eating disorders (Jones et al., 2005). Therefore, development of eating disorders can be explained based on a multidimensional model, according to this approach, the development of eating disorders is influenced by the predisposing factors, precipitating and illness maintaining factors. Including the predisposing factors can be pointed to insufficient interaction of parent (Timea, 2011). For this reason, researchers increasing attention have attracted to itself who are following an true understanding of the etiology of eating disorders (Zachrisson and Skarderud, 2010).

Literature study revealed adolescents with eating disorders, describe their father emotionally cold, intervals and inactive (Minuchin et al., 1987; Strober and Humphrey, 1987). Furthermore, empirical evidence indicates that perceptions of adolescent females to eating disorders from their father is indicator their poor relationship (Botta and Dumlao, 2002) and the overprotection (Berger et al., 1995).

While acknowledging the influence of parents on children's cognitive development, the researchers believe that likely its effect is revealed by emotion regulation (Eisenberg, 2004). Emotion regulation is defined as a subject that includes awareness and understanding of emotions, emotional acceptance, the ability to control impulsive behavior and behave in accordance to desired goals in order to achieve personal goals and demands temporary (Gratz and Roemer, 2004).

Although the irregularities of emotion are not the new concept, however the research literature is full of definitions of inconsistent (Thompson, 1994). The term of emotion regulation difficulties in the research literature is used in a broad sense including difficulty in identifying and describing feelings (for example, alexithymia), emotion regulation (for example, regulation negative mood) and behavior (for example, emotional eating) (Spence and Courbasson, 2011).

While evidence suggests that insufficient parental bonding has a negative effect, on children's emotion regulation (McEwen and Flouri, 2009; Burns...
et al., 2012). Some evidence suggests that desire and positive bonding parenting to prevent the development of undetected compromise emotion regulation strategy in children (Feng et al., 2008).

Increasingly has been observed emotion irregularities are unclear of some kind of psychopathology (Nolen-Hoeksema, 2012). Actually emotional irregularities is one of the main features of eating disorders (Fairburn et al., 1995, Polivy and Herman, 2002; Holliday et al., 2006) and people bulimia use as a way to regulation emotions and avoid negative mood (Polivy and Herman, 2002).

Evidence suggests that parental bonding directly (Zachrisson and Skarderud, 2010) and indirectly through emotion regulation difficulties related to symptoms of eating disorder (Burns et al., 2012). Some evidence suggests that parent’s unkindness and excessive control related to symptoms of eating disorder (May et al., 2006). McEwen and Flouri (2009) showed that parental psychological control is directly related to eating disorders symptoms. But, emotion regulation difficulties do not play a mediating role in the relationship between these two variables. Pace et al., (2011) found that paternal care related to being eating, but paternal overprotection is not related to being eating. In addition, Turner et al., (2005) found paternal overprotection no relationship to attitudes and behaviors of eating disorder. However, Hautala et al., (2011) found that having positive experience of parental is mean enough to effective to avoid long term eating disorders for young females. Studies examined the relationship between emotional difficulties and eating disorders are also inconsistent. In a study Zonnevijlle – Bender et al., (2004) compared a group of anorexia nervosa (AN) adolescent and patients with psychiatric disorders with healthy control (HC) group and found both groups had poorer performance than (HC) in emotion recognition. In accordance to previous findings Harrison et al., (2009) compared two groups of (AN) and (HC) and concluded, (AN) group had performed poorly in identifying complex emotion and emotion regulation than the (HC) group. However, these findings were not confirmed in the study of Oldershaw et al., (2010). They compared three groups of people with the (AN), recovery (AN) patients and (HC) group. Although, (AN) participants perform more poorly than (HC) group in terms of complex emotion recognition. Nevertheless, Results showed no significant differences between three groups. In general, although previous research were highlighted some of the effects of insufficient parental bonding and eating disorder, however, psychology studies in reviews the relationship between early growth and adaptation have often focused on the bond of mother - child or adolescent, as a result, the role of father was indirectly compared with mother and Less attention has been. Few researches to have been examined the mediating role of emotion regulation difficulties in the relationship between parental bonding and eating disorders symptoms. Therefore, the aim of this study is to investigate the relationship paternal bonding through emotion regulation difficulties on eating disorder symptoms. The research hypotheses are:

1- Paternal overprotection through the mediating role of emotion regulation difficulties is related to eating disorder symptoms.

2- Paternal care through the mediating role of emotion regulation difficulties is related to eating disorder symptoms.

2- Material and Method

The population in this study was undergraduate students of central cities of Mazandaran province, Iran. The sample in this study Consisted of 237 (128 females and 109 males) who were selected by cluster sampling. The following instruments were used in this study.

Emotion regulation difficulties scale (DERS):

It is a 36-item self-report measure designed to assess clinically relevant difficulties in emotion regulation, and consisted of six subscales non-acceptance of emotional responses, difficulties in handling the targeted behavior, difficulty with impulse control, lack of emotional awareness, limited access to emotion regulation strategies and lack of emotional clarity in a five-point Likert-type scale. Higher scores indicate greater difficulty with emotion regulation. The final Survey results show the scale has high Internal consistency of total scale, α = 0.93 (Gratz and Roemer, 2004). Internal consistency of Persian version of the scale has approved in sample of students α = 0.86 (Alavi, 2009). In the present study internal consistency of the total scale was calculated 0.84 using Cronbach's Alpha.

Eating Disorder Inventory (EDI):

The EDI is a 64-item self-report questionnaire and measures for eating pathology that has been shown to correlate positively with clinician ratings, patterns of convergent, and discriminant validity with other psychometric measures (Garner and Olmsted, 1984) and to have good predictive validity (Garner et al., 1983; Norring, 1990). The EDI designed to assess psychological characteristics and symptoms relevant for anorexia and bulimia nervosa. This scale consists of eight subscales, which can be split into two clinically relevant aspects, eating attitudes, and ego dysfunction characteristics (Jones et al., 2005). The grading of this scale included a range of responses (never – always). The
EDI has good validity and reliability intercultural. For example, in Leung et al.‘s study (2004) with non-clinical samples the reliability ranges between 0.68-0.87 were calculated for the eight subscales. In Persian version of eating disorder inventory (Shayeghian and Vafaie, 2009) reported the reliability ranges for subscales 0.50-0.89 and for total scale 0.76. In the present study Cronbach’s Alpha was calculated for the total scale 0.89.

Parental Bonding instrument(PBI):
The PBI is a 25 item self report questionnaire and designed as a measure of perceived parental characteristics that according to Subjects remember them over the first 16 years of their life (Parker, 1983). This tool has two main subscales, care and overprotection (Parker et al., 1979) that is widely used to measure the bonding of parent - child and parenting styles. The scale has high convergent validity and is independent of mood states (Parker, 1983). The reliability of this scale has been demonstrated by test - retest interval of three weeks (Parker et al., 1979) and 10 years (Wilhelm and Parker, 1990). Range correlation test - retest reported 0.87 for overprotection and paternal care, 0.92 for paternal care with a mean of 0.89 (Lizardi and Klein, 2005). Pace et al., (2012) reported for paternal care α= 0.91 and paternal overprotection α=0.86. In the present study Cronbach's Alpha was calculated for care subscale 0.89 and overprotection 0.78.

3- Results
Average and correlation between variables are shown in Table 1. Based on this data, the relationship between emotion regulation difficulties and paternal care for eating disorder symptoms is negative and significant. Also, the relationship paternal overprotection with emotion regulation difficulties and eating disorders symptoms is positive and significant. In addition, the relationship between the variables suggests that emotion regulation difficulties with eating disorders symptoms and paternal care with emotion regulation difficulties have the highest and lowest correlation coefficient, respectively.

To investigate the role of these variables in predicting eating disorders symptoms was performed multiple regression (Table 2). As can be seen from Table 2, the emotion regulation difficulties could to predict eating disorder symptoms. But paternal care associated with emotion regulation difficulties could not to predict eating disorders symptoms. According to significant correlation between variables (Table 1) in order to determine the role of emotion regulation difficulties in the relationship between paternal bonding and eating disorder symptoms, based on suggested by Baron and Kenny (1986) were performed a set of regression analysis simultaneously (standard).

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
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<td>Care</td>
<td>28.81</td>
<td>4.31</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overprotection</td>
<td>11.25</td>
<td>5.01</td>
<td>-0.21**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty in emotions regulation</td>
<td>92.66</td>
<td>16.95</td>
<td>-0.19**</td>
<td>0.23**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Eating disorders symptoms</td>
<td>27.61</td>
<td>7.89</td>
<td>-0.22**</td>
<td>0.44**</td>
<td>0.39**</td>
<td>1</td>
</tr>
</tbody>
</table>

P < 0.01**

This method involves the following steps. 1) Regression eating disorders on the care and over protection 2) Regression emotion regulation difficulties on the care and paternal overprotection 3) Regression eating disorder symptoms on the emotion regulation difficulties and 4) Regression eating disorder symptoms on the paternal care and paternal overprotection and emotion regulation difficulties, the first three stages is to achieve a relationship between variables. If the relationship is not significant, the researchers conclude that there is not probably a mediation role. In the fourth step, if there is the predictor variable, the effect of the mediating variable is still significant, supports the mediating role. In the first stage were implemented two regressions the paternal care, eating disorder symptoms ($R^2=0.04$, $\beta = -0.21$, p <0.01) and paternal overprotection, eating disorder symptoms ($R^2 =0.19$, $\beta = 0.44$, p <0.01).

Results showed that the two subscales care and overprotection could predict eating disorder symptoms.
Table 2: Summary of regression results to predict eating disorder symptoms based on paternal bonding and difficulties in emotion regulation variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>R</th>
<th>R^2</th>
<th>SE</th>
<th>B</th>
<th>β</th>
<th>P</th>
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<tr>
<td>Care</td>
<td>0.54</td>
<td>0.28</td>
<td></td>
<td>-0.17</td>
<td>-0.09</td>
<td>0.01</td>
</tr>
<tr>
<td>Overprotection</td>
<td>0.11</td>
<td></td>
<td>0.09</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulties in emotion regulation</td>
<td>0.09</td>
<td>0.56</td>
<td>0.35</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the second stage, regression showed that paternal care \( (R^2 = 0.03, \beta = -0.19, p < 0.01) \) and patreral overprotection \( (R^2 = 0.05, \beta = 0.23, p < 0.01) \) predicts emotion regulation difficulties.

In the third stage, emotion regulation difficulties predicted eating disorder symptoms \( (R^2 = 0.15, \beta = 0.39, p<0.01) \).

In order to determine which whether get into emotion regulation difficulties variables in the regression equation care and overprotection the mediating process strong predict is significant for not, multiple regression paternal care, emotion regulation difficulties was indicative the significance of the emotion regulation difficulties role \( (R^2 = 0.17, \beta = 0.36, p< 0.01) \). Multiple regression paternal overprotection and emotion regulation difficulties was significant on the eating disorder symptoms, too \( (R^2 = 0.27, \beta =0.30, p< 0.01) \). These stages acknowledges the mediating role of emotion regulation difficulties in relationship between care and overprotection to the eating disorder symptoms.

4. Discussion and Conclusion

The aim of this study was to determine whether the emotion regulation difficulties have the mediating role in relationship between paternal bonding and the eating disorder symptoms. Findings of this study showed that emotion regulation difficulties have performed as the mediating variable relationship between paternal care and paternal overprotection and eating disorder symptoms. These findings support previous studies which have identified the insufficient functioning of the family (child abuse) is related to through emotion regulation defect with eating disorders (Burns et al., 2012) and McEwen and Flouri's study (2009) found to these results which paternal bonding is related to eating disorder symptoms and emotion regulation difficulties. But is not consistent to part of their findings which emotion irregularities has not performed as the mediating variable between paternal bonding and eating disorders symptoms, also, Is not consistent to Turner et al.’s findings (2005) in which paternal overprotection there was no significant relationship to eating disorder behavior and attitude, and is explained according to the following probability. According to evidence, emotion regulation difficulties are the main characteristics of people with eating disorders (Fairborn et al., 1995). According to schema theory and the works of Cooper et al. (1998) to increasing levels of parental overprotection may change the belief in children are not able independently to manipulate to daily responsibilities right way (Cooper et al., 1998, 2004). So, extreme control strategies and the excessive involvement of parents is effective on the need for autonomy and identity of adolescents and this issue may be to increase their efforts to prevent eating (McEwen and Flouri, 2009), or use overeating as a strategy to regulate self emotions (Presnell et al., 2009). Leung et al. (2000) have mentioned when maternal care is low, in anorexia nervosa people change this belief that emotional needs will never be realize and they should not show their feelings. In contrast, when the level of paternal care is low they believe that the relationship has ended and they are not able to control their emotions (Lang et al., 2000). However, the present study showed that paternal care has negative relationship to emotion regulation difficulties and eating disorders symptoms. This suggests that high levels of paternal care predicts low levels of emotion regulation difficulties and eating disorders symptoms. In accordance to the findings of Feng et al. (2008) believe that sufficient parents care to protect the development of undetected adaptation emotional strategies. As a result, it may not lead to the development of eating disorders.

Although recent research findings have supported the previous findings in which parental bonding has directly relationship to eating disorders symptoms and through emotion regulation difficulties has indirectly relationship, but this study also is facing some limitations. Including limitations of this study is that study sample was limited to undergraduate students and to measure variables used in just one tool. And such an approach to measuring self-description may be somewhat affected by the biases of respondents. However, regardless of these limitations, the present study has highlighted necessity of paying attention other the mediating
variables between family functioning and eating disorders symptoms that interested researchers can focus on it.

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