

Maternal Psychological Distress and Separation Anxiety Disorder in Children

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Abstract

The psychological wellbeing of parents have consistently been found to be a major risk factor for child development. However, few studies have been conducted on parental psychological wellbeing in relation to separation anxiety disorder (SAD) in particular. The current study examined the relationship between psychological distress in mothers and SAD symptoms in children. A total of 120 children in first grade school and their mothers participated in the study. SAD was measured using SAAS_C while maternal psychological distress was assessed using GHQ_28. There was evidence that significant and positive relationship existed between maternal anxiety and SAD in children. Maternal anxiety was the main predictor for SAD in this study. The result highlights the psychological constructs which may be relevant for the assessment and intervention in children suffering from SAD.

Keywords: Separation anxiety disorder, psychological distress, childhood anxiety.

1. Introduction

Separation Anxiety is a condition long viewed by researchers and clinicians as a relatively normal and healthy process and a basic human disposition. The term refers to a child's or parent's concerns regarding the loss of significant others in one's life (Hock & Lutz, 1998). Sometimes, normal separation anxiety may become intense and disruptive in a child's life. This condition is referred to as

Separation Anxiety Disorder (SAD), which is characterized by inappropriate and excessive anxiety concerning separation from home or from an attachment figure. The fourth edition of Diagnostic and Statistical Manual places SAD as a disorder usually diagnosed at infancy, childhood or adolescence and the mean age of the onset is age 7.5 years (DSM-IV-TR: American Psychiatric Association, 2000).

One study lists prevalence rates for children aged 7-11 years at 4.1%; 12-14 years at 3.9% and 1.3% for adolescents aged 14-16 years (APA, 2000). To our knowledge, there has been no published epidemiological survey for child and adolescent mental disorders in Iran, but unpublished research indicates that adolescent mental disorders in Iran approximates the rates of disturbances reported by developed countries (Nejatisafa, Mohammadi, Sharifi, Goodarzi, Izadian, Farhoudian, Mansouri & Movaghar, 2006).

Separation anxiety develops from complex interactions in the environment. Although genetic factors contribute to the etiology of anxiety disorders (Ogliari, Citterio, Zanoni, Fagnani, Patriarca, Cirrincione, Stazi & Battaglia, 2006), environmental factors such as the family, environment and parental psychopathology also account for the development of anxiety (Feigon, Waldman, Levy & Hay, 2001). Similarly, research on anxiety suggests that early experiences that foster a sense of diminished control over the environment may contribute to the development of anxiety disorder in children (Chorpita & Barlow, 1998). Barlow (2002) suggested a model of anxiety related to perceived lack of control on events or situations that produce fear and worry. He believes that anxiety related events and sensations that are uncontrollable, makes anxiety a problem for individuals with anxiety disorder. In other words, the difference between pathological anxiety and non-pathological anxiety is the belief that these events are uncontrollable (Weems, Silverman, Rapee & Pina, 2003).

The current study extends beyond previous research by considering mothers' psychological distress along with their anxiety as they relate to their children's anxiety and addressed factors that are missing in previous research. Although many dimensions of family relationships are potentially important to children anxiety development; this study primarily focuses on the relationship between maternal psychological distress and Separation Anxiety Disorder (SAD) symptoms among first grade children. We hypothesized that maternal psychological distress may affect a child's well-being, and more specifically that maternal anxiety has significant association with SAD symptom in children. Specifically, mothers who have high levels anxiety tend to protect their children, display less warmth and permit less autonomy in their interaction with their children (Bayer et al., 2006; Roelofs et al., 2006; Chorpita & Barlow, 1998). They feel comfortable when their child's attachment behaviors are triggered. They tend to minimize explorative behaviors in their children, which lead to the development of separation anxiety (Marvin, Cooper, Hoffman & Powell, 2002). Research on these associations may have important clinical and public health implications. It may also facilitate the development of intervention strategies that may help to prevent the transmission of psychiatric disorders from parents to their offspring.

2. Previous Research

The strongest evidence for SAD comes from studies investigating parental anxiety and depression. Mothers of SAD children show a heightened risk of a lifetime diagnosis or a current diagnosis of an anxiety disorder or major depression (Biederman, Petty, Hirshfeld, Henin, Faraone, Fraire, et al., 2007; Biederman, Faraone, Hirshfeld, Friedman, Robin, & Rosenbaum, 2001). Relatively few studies have focused on separation anxiety disorder. Generally, the studies on anxious children and mothers have demonstrated that anxious children are more likely to have anxious mothers. Children of mothers with anxiety disorder are at greater risk of being diagnosed with anxiety disorder (Kaitz & Maytal, 2005; Moore, Whaley & Sigman, 2004; McClure, Brennan, Hammen & Brocque, 2001). Studies have found positive relation between maternal anxiety and anxiety in children (Bayer, Sanson & Hemphill, 2006; Roelofs, Cor-ter-Huurn, Bamelis & Muris, 2006).

Emotional and psychological wellbeing of parents are important for children. Children of parents with mental health problems are at greater risk for a range of psychosocial and developmental problems, and are less likely to benefit from mainstream parenting education efforts. Impairments in parental and mental health have consistently been found to be a major risk factor for child development; the more severe and chronic the parent's disorder, the more likely that they will have negative impact on their behavior and on the child's development. Parents suffering from anxiety have been observed to be highly critical (Bayer et al., 2006; Cooper, Fearn, Willetts, Seabrook & Parkinson, 2006; Johnson, Cohen, Kasen & Brook, 2006; Manning & Gregoire, 2006; Bogels & Melick, 2004; Turner, Beidel, Roberson-Nay & Tervo, 2003; McBride, Schoppe & Rane, 2002). Unfortunately, relatively few studies have been conducted on SAD in particular.

However, findings on the relation between parental psychological disorders and the risk of disturbance in children are mixed. Krain and Kendall (2000) found no significant correlations between parental anxiety and child anxiety symptoms. Yet, sufficient evidence have indicated that children who have parents with anxiety disorder are at a high risk for the disorder (O'connor, Caprariello, Blackmore, Gregory, Glover & Fleming, 2007; Nicol-Harper, Harvey, Stein, 2007; Cooper et al., 2006; Bernstein, Layne, Egan & Nelson, 2005). Children with serious current or past medical problems may be overprotected by parents and therefore at greater risk for separation anxiety disorder (Grover, Ginsburg & Lalongo, 2005). Parental illness and death may also increase the risk for SAD, although high level of a parents' education and income may reduce behavior problems in children (Teramoto, Soeda, Hayashi, Satio & Urashima, 2005).

3. Hypothesis

There is a significant association between maternal anxiety and SAD symptom in children.

4. Research Method

4.1. Participants

The sample consisted of 120 normal children (66 girls and 54 boys) recruited from primary schools, and their mothers. The children, predominantly born in Iran, were recruited from 10 elementary schools representing Bushehr, a southern Iranian city.

4.2. Measures

In addition to a questionnaire which collects information on demographic details which include age, gender, birth order, background of illness of children, number of children, parental marital status, education status, occupation status, and back ground of illness related to mothers, we used the following measures.

4.2.1. Separation Anxiety Assessment Scale- Child (SAAS_C)

The SAAS-C (Hahn, Hajilian, Eisen, Winder, & Pincus, 2003) was administered to assess children's separation anxiety symptoms. This scale is a 34-item measure scored on a four-point Likert scale; it assesses individual differences across separation anxiety symptoms. These symptoms are measured with the use of four dimensions which includes, fear of being alone (FBA), fear of abandonment (FAB), fear of physical illness (FPI), and worry about calamitous events (WCE). For purely exploratory reasons, the SAAS-C also, has two other subscales, these includes a frequency of calamitous events (FCE) subscale, which may help to determine to what extent, if any, that children's separation anxiety was related to actual events, or irrational anxiety. The Safety Signal Index (SSI) subscale is related to persons, places, or objects that help children feel more secure in distressful situations. The SSI helps clinicians identify unhealthy signals. These symptom dimensions were drawn

from the clinical child literature on SAD and related problems (Eisen & Schaefer, 2005). Previous studies indicated good internal consistency (.91), test-retest reliability (.83) with good validity of the SAAS-C and they suggested as a useful tool in identifying separation anxiety symptoms (Eisen & Schaefer, 2005; Hahn et al., 2003; Hajinlian, Hahn, Eisen, Zilli-Richardson, Reddy, Winder & pincus, 2003).

In this study, we restricted our analyses to overall scores rather than subscales. The internal consistency was found to be excellent with a Cronbach's alpha value of .94. The values obtained for the 25th and 75th percentile suggest that 50% of the respondents had SAAS-C score of between 62 and 86. The inter-correlation analysis on SAAS-C, indicate the correlation coefficient ranged from .01 (no relationship between FCE and FPI) to .82 (high correlation between SSI and WCE).

4.2.2. General Health Questionnaire-28 (GHQ-28)

The GHQ-28 is a self-administered screening instrument designed for the detection and assessment of individuals with an increased likelihood of psychiatric disorder. The 28-item version of the GHQ is the only version that provides subscale measures of more specific domains of psychopathology (Goldberg & Hillier, 1979). There are four subscales consisting of 7 items in each case, which are labeled psychosomatic, anxiety and insomnia, social dysfunction, and severe depression. The GHQ-28 has been studied in a wide range of cultural settings, and factor analysis of GHQ-28 data has confirmed the stability of the subscales (Nagyova, Krol, Szilasiova, Stewart, Dijk, & Heuvel, 2000; Werneke, Goldberg, Yalcin & Ustun, 2000). A Likert score (0–3) was used for the present study. The scores ranged from 0 to 21 for the each subscales and from 0 to 84 for the total score. The validity and reliability of the GHQ-28 Persian version has been documented in several Iranian publications (Assadi, Nakhaei, Najafi, & Fazel, 2007; Malakouti et al., 2007; Kalafi, Hagh-Shenas, & Ostovar, 2002; Noorbala, Bagheri, Yazdi, Yasami & Mohammad, 2002).

In the current study, general health refers to a person's state of mental and physical well-being that is measured on the GHQ-28. The Cronbach's alpha coefficient of reliability for overall GHQ-28 was .88 and for the subscales ranged from .63 for psychosomatic symptom and .92 for anxiety symptom. The mean score is 19.3 the values obtained for the 25th and 75th percentile suggest that 50% of the respondents had scores of between 13 and 26. The inter-correlation coefficients between the subscales are rather high, with the mean correlation being about .52 (range .21-.85). According to Malakouti et al. (2007) the best cut-point for GHQ-28 was a score of 23 for total score on psychological distress.

4.3. Procedure

All the children were interviewed one to one using SAAS-C in a quiet room at the child's school during school hours. The instructions were read by the researcher and the children were asked if they had any questions about the questionnaire. They were told that there were no correct or incorrect answers but rather it was the answers that were most true for them that were of interest to us and also, their responses would remain confidential. The Persian language version of the GHQ-28 was also administered to 120 mothers individually.

5. The Results

Participants were 120 first graders (45% boys and 55% girls) and their mothers. The results indicated that 66% of the children had a background of illness at least once. The assessment of mother's background revealed that 47% of the mothers had high school education, 27% had bachelor degree, 20% had elementary education and 6% had master degree and above. Also, 49% of the mothers were employed, and 51% were unemployed. In terms of illness background, the results show 36% of the mothers report medical illness and 53% of them report psychological distress at least once. The mean and standard deviation for the total SAAS-C score in the present sample were 75.6 and 12.6,

respectively. The mean score corresponds closely to the results quoted by Eisen and Schaefer (2005), who reported a mean value of 75 for the scale. The mean and standard deviation for the GHQ-28 total score was 19.3 and 8.6, respectively (see Table 1). Based on the SAAS-C, we classified the children with low and high score likelihood of showing SAD symptoms. Only 17% of them revealed a high likelihood of showing SAD symptoms. The GHQ-28 used to measure the general health of the mothers, indicated that 35% of mothers felt unhealthy.

Table 1: Means, standard deviations, minimum and maximum score for SAAS-C and GHQ-28 (n=120).

	<i>Mean</i>	<i>S.D.</i>	<i>Min.</i>	<i>Max.</i>	<i>Alpha value</i>
SAAS_C total	75.57	12.64	50.00	96.00	.92
GHQ-28 total	19.34	8.63	2.00	37.00	.89
Psychosomatic	4.72	2.53	1.00	11.00	.68
Anxiety	7.21	4.14	.00	17.00	.92
Social dysfunction	5.27	2.74	.00	12.00	.83
Depression	2.12	2.77	.00	11.00	.80

Table 2: Pearson Product Moment correlation between SAAS-C total score and GHQ-28 scales (n=120).

	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1) SAAS-C score	1.000	.452**	.735**	.046	.330**
2) Psychosomatic symptom		1.000	.664**	.350**	.350**
3) Anxiety symptom			1.000	.214*	.325**
4) Social dysfunction symptom				1.000	-.016
5) Depression symptom					1.000

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Pearson Product Moment correlation was computed to examine the relationship between maternal distress and children’s SAD. Results revealed a significant correlation between the overall scores ($r = .61, p < .05$). A significant and positive correlation was also found between GHQ-28 anxiety subscale and SAD scores [$r = 0.74, p < .05$]. This suggests that a higher level of anxiety in mothers is associated with higher levels of SAD symptoms in the children, and vice versa. As expected, mothers with anxiety were more likely than others to have a child with SAD. Table 2 lists Pearson Product Moment correlations between maternal psychological distress and children’s SAD. After we classified the mothers and children with those with likelihood symptoms, the result indicated that 22% of the children who revealed SAD symptoms, had mothers with current psychological distress. Pearson chi-square test indicated significant association between maternal psychological distress and separation anxiety symptoms in children $\chi^2 = 99.10, p < .05, \phi = .4$.

We were interested in assessing the unique contributions of the constructs (maternal psychosomatic, maternal anxiety, maternal social dysfunction, and maternal depression) in explaining the children’s SAD score. To examine our hypothesis, a standard multiple regression analysis was performed using the following as independent variables: (a) psychosomatic, (b) anxiety, (c) social dysfunction, and (d) depression scores. Preliminary analyses were conducted to ensure no violation of the assumptions of normality and linearity. More so, there was no evidence of multi-collinearity between the independent variables.

Table 3: Regression analysis with GHQ-28 scales as predictors and SAAS-C score as dependent variable.

<i>Model</i>	<i>B</i>	<i>β</i>	<i>t</i>	<i>p</i>
(constant)	61.49		30.07	.000
Psychosomatic	-.270	-.054	-.61	.542
Anxiety	2.32	.758	9.09	.000
Social Dysfunction	-.44	-.095	-1.43	.156
Depression	.46	.101	1.49	.137

N=120, F= 36.82, $p = .000$, R= .75, $R^2 = .56$, $\Delta R^2 = .55$, Std. Error 8.51

The regression analysis showed that 75% of the variation in children’s SAD scores was explained by the constructs on maternal distress ($F_{4, 115} = 36.83$, $p < 0.05$). The results presented in Table 3 reveal that maternal anxiety was the strongest predictor for children’s SAD symptoms ($\beta = .76$, $t = 9.19$, $p < .05$).

6. Discussion and Conclusion

The current study investigates the association between maternal psychological distress and separation anxiety disorder in children. The first major finding on separation anxiety disorder (SAAS-C) demonstrated a reliable index, with acceptable internal consistency for the assessment of separation anxiety symptom among Iranian children. Thus, this findings suggests that the SAAS-C will be useful in the assessment of SAD and in the identification of symptoms and dimensions that may be masked by DSM-IV-TR’s categorization. Moreover, the scale may also help in the treatment of SAD by allowing clinicians to obtain specific information aimed at the development of treatment planning, identification of separation anxiety and the establishment of points of intervention.

Our hypothesis which suggested that an increase in maternal anxiety was associated with increases in child separation anxiety was supported, given that maternal anxiety appeared to be most significantly related to child’s SAD. This finding supported previous studies that had shown a relationship between global measures of parental anxiety and child anxiety (Nicol-Harper, et. al., 2007; Oconnor, et.al. 2007; Cooper, et. al., 2006; Bernstein, et. al., 2005), but differed from Krain and Kendall (2000), who found no significant correlations between parental anxiety and child anxiety symptoms.

The reason for this finding maybe related to the characteristics of mothers with high levels of anxiety that over-control their children, which lead to the loss of their sense of self-control (Chorpita & Barlow, 1998). The child probably saw the world as a dangerous place requiring help from others, and therefore experienced more anxiety and depression, perhaps throughout life (Barlow, 2002). However, conclusion based on causality should not be made, because this study was limited mainly because of its cross-sectional nature.

In a sample of 120 children, we found 17% with SAD symptom and 35% of mothers had a probable psychiatric disorder. It was hypothesized that parental psychopathology affected family environment, and contributed to the development and maintenance of childhood anxiety (Feigon, et. al. 2001). Therefore, parental psychopathology might influence the presence of childhood anxiety. In the current study, 36% of mothers had a background of physical illness and 53% had a background of psychological illness. The high rate of illness might be due to exposure to several stressful life situations such as Iraq-Iran war, and Iraq-Kuwait war. Such situations could have affected people, bringing about high levels of anxiety. However, this study did not administer structured psychiatric interviews to mothers. Therefore, our findings were merely related to maternal symptoms, not maternal anxiety disorders.

The current study advances our understanding of the relationship between family variables and children’s SAD. However, there are limitations that should be addressed. The data were gathered from only one parent (mothers). In addition, there was a lack of variability in participant demographics.

Most of our sample were primarily Iranian children from sub-skirt, middle-class families. Therefore, it is unknown whether the findings can be generalized to other samples. Another limitation within the study was that the results were based on parent questionnaire data (GHQ-28). It is unclear whether high levels of maternal psychopathology and low levels of family were as a result of anxious children or whether children exhibit more symptoms of anxiety due to elevated maternal psychopathology. In summary, the current study provides a closer examination of the relations between family variables and SAD children. Findings from the present study suggest that family variables may play an important role in SAD children. Clinicians might find it helpful to view SAD in early childhood as a continuing issue for mother and child and not as a unique factor for early school period. Interventions addressing both mother and child's history might be more useful than those focusing on issues in the child's life. Furthermore, the results of the current study are based on a nonclinical sample, although, in this study, we found some with obvious symptom. Additional research is needed to examine the relationship between parent and family variables among anxious children.

In conclusion, the current study employed a design which attempted to better understand the unique contribution of maternal psychological distress and SAD during early childhood. Researchers may find the 34-item child report scale useful in examining the condition of children's early separation anxiety. The results indicate that all measures in maternal psychological distress contributed significantly to the prediction of children's SAD at the age 7 years.

Future studies are needed to further examine the relationship between maternal psychological distress, especially maternal anxiety and child separation anxiety in both clinical and non-clinical settings. Additional information is needed about the role of maternal anxiety in the development and maintenance of child separation anxiety. Specifically, research should also aim to assess the role of parents' psychopathology in child anxiety. Future research should include more comprehensive assessment of maternal psychopathology such as standard diagnostic interview.

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