Childhood Anxiety Disorders in Mothers and Their Children

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ABSTRACT: This study examined the prevalence of separation anxiety disorder (SAD) and overanxious disorder (OAD) in the mothers of children diagnosed with SAD and/or OAD (n = 64), and a control group of children who had psychiatric diagnoses other than anxiety or affective disorders (n = 33). Results indicated that mothers of children with OAD had an increased prevalence (42%) of OAD themselves as children. Contrary to expectation, mothers of children with SAD did not show a higher rate of SAD than the other groups.

It has been hypothesized that mothers of children with anxiety disorders manifest similar disorders during their own lifetimes. Results from three studies have supported this hypothesis.[1,2,3] Weissman et. al.[1] found an increased risk of separation anxiety disorder in the offspring of mothers with panic disorder or agoraphobia. In their study of mothers of children with separation anxiety and overanxious disorder, Last et al.[2] found that the vast majority of these mothers had a history of an anxiety disorder. Finally, in comparing the reports of parents of school phobic and hyperkinetic children, Gittelman-Klein[3] found an increased prevalence of separation anxiety in the parents of the school phobic children.

In the studies cited above, only one[3] actually examined the prevalence of childhood anxiety disorders in the mothers of children with anxiety disorders. However, interpretation of findings from this investigation are hampered by two ambiguities. First, it is unclear whether the "school phobic" children met diagnostic criteria for separation anx-

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iety or were phobic of some aspect of school[4], since diagnostic criteria were not reported for the study. Second, it is unclear whether the parent interviewers were blind to the children's diagnoses (i.e., "school phobia" or "hyperkinetic"), which potentially could seriously bias the results from the study.

In the present study, we examined the prevalence of two childhood anxiety disorders, separation anxiety disorder and overanxious disorder, in the mothers of children diagnosed as having one or both of these disorders, and a control group of mothers of children who were psychiatrically disturbed but did not have an anxiety or affective disorder. DSM-III[5] diagnostic criteria were used to diagnose both the children and their mothers, and the diagnosis of the mothers' childhood anxiety disorders were conducted blindly, through the use of a structured diagnostic questionnaire and raters who were unaware of the children's disorders.

The design of our study allowed us to determine whether there is relationship between mothers and their children for childhood anxiety disorders, and whether the nature of this relationship is general or specific. In other words, do the mothers of anxious children show a higher prevalence of childhood anxiety disorders in general or, rather, the specific anxiety disorder manifested by their children? We hypothesized that there would exist a specific relationship; that is, that mothers of children with separation anxiety disorders had similar disorders themselves as children, and that mothers of overanxious children had overanxious disorders themselves as children.

Method

Sample

The mothers of 64 children with separation anxiety disorder and/or overanxious disorder and 33 children with other psychiatric disorders participated in the study. Anxious children were evaluated in the Child and Adolescent Anxiety Disorder Clinic at Western Psychiatric Institute and Clinic during a two year period (September, 1984 through August, 1986). During the same time period, control children were recruited from the general child output clinic at the same institution. All children were administered the *Interview Schedule For Children*[6,7] a semi-structured, symptom oriented psychiatric interview based on DSM-III criteria. Previous research by our group has shown

high levels of reliability using this instrument for a wide range of psychiatric disorders, including separation anxiety and overanxious disorders.[8]

Of the 64 children with anxiety disorders, 21 received the diagnosis of separation anxiety disorder (SAD), 26 received the diagnosis of overanxious disorder (OAD), and 17 received both of these diagnoses. These three groups of anxious children and the control group were compared on the following sociodemographic variables: age, sex, and race of child, and socioeconomic status of the child's family. Socioeconomic status was determined using the Hollingshead Four-Factor Index of Social Status,[9] a recent revision of the author's original Two-Factor Index of Social Status.[10,11]

The mean age of each of the four groups was: SAD = 9.4 years, OAD = 12.8 years, SAD+OAD = 9.3 years, and control = 11.3 years ($F = 6.23$, $df = 3$, $p < .001$). Orthogonal comparisons using the Tukey HSD test indicated that OAD children were significantly older than SAD children ($p < .05$) and SAD+OAD children ($p < .05$). Regarding the sex distribution of the group, there was a trend for the control group to differ from the anxiety group in the percentage of female children: SAD = 57%, OAD = 54%, SAD+OAD = 76%, control = 37% ($X^2 = 7.56$, $df = 3$, $p < .10$). The racial composition of the group revealed that the control group had the largest percentage of black children: SAD = 10%, OAD = 4%, SAD+OAD = 5%, and control = 34% ($X^2 = 13.09$, $df = 3$, $p < .005$). For this variable, orthogonal comparisons indicated that the control group significantly differed from the OAD group only ($X^2 = 6.39$, $df = 1$, $p = .01$). Social strata was analyzed by combined social class ratings into two groups: 1) middle/upper socioeconomic level (I, II, and III), and 2) lower socioeconomic level (IV and V). The percentage of each group receiving middle/upper socioeconomic strata ratings was: SAD = 33%, OAD = 71%, SAD+OAD = 47%, and control = 47%. Although the OAD group clearly had the largest percentage of middle and upper socioeconomic level families, statistical analysis did not reveal any significant differences among the groups.

Sociodemographic findings for the three anxiety groups parallel previous data reported by our group.[8]

Procedure

The 97 mothers completed a Childhood History Questionnaire (CHQ) (see Appendix I). The CHQ was designed by one of the investigators (CGL) to elicit information necessary for making DSM-III child-

hood diagnoses of separation anxiety disorder and overanxious disorder. The questionnaire includes the nine criterion listed in DSM-III for diagnosing separation anxiety disorder, and the seven criterion listed for diagnosing overanxious disorder. In addition, the questionnaire elicits information regarding the duration of each symptom reported present during childhood, since DSM-III requires a duration of two weeks (for three symptoms) for separation anxiety disorder and six months (for four symptoms) for overanxious disorder.

The questionnaires were scored by an individual who was blind to each child's diagnosis. The rater assigned a diagnosis of separation anxiety disorder if the CHQ indicted that at least three of the nine criteria for this disorder were present for at least two weeks. A diagnosis of overanxious disorder was assigned if at least four of the seven criteria were present for a minimum of six months.

Data analysis

For the purposes of data analysis, data from the "mixed" group (i.e., children having both SAD and OAD) were combined with the SAD group for calculating the prevalence of childhood SAD in the mothers. Alternatively, in determining the prevalence of childhood OAD in the mothers, the mixed group was combined with the OAD group. Presence or absence of SAD and OAD were analyzed using chi-square tests, first for three (SAD vs. OAD vs. control) and then for two (SAD vs. OAD, OAD vs. control, and SAD vs. control) group comparisons.

Results

Table 1 shows the percentage of mothers of SAD children, OAD children, and control children who met DSM-III criteria for separation anxiety disorder. As can be observed, the OAD group had a somewhat higher percentage of mothers who received the SAD diagnosis than either the SAD or control groups. However, there were no statistically significant differences among the groups for this childhood diagnosis.

Table 2 shows the percentage of mothers in each of the three groups who met DSM-III criteria for overanxious disorder. The percentage of mothers who received the diagnosis of overanxious disorder significantly differed among the groups ($X^2 = 10.31$, df = 2, $p < .01$). Orthogonal comparisons using 2×2 chi-square tests revealed that the OAD group had a significantly higher percentage of mothers receiving the diagnosis of overanxious disorder than mothers in the control

Table 1
Percentage of Mothers of Separation Anxious, Overanxious, and Control Children Meeting DSM-III Criteria for Separation Anxiety Disorder

Separation Anxiety Disorder (n = 38)	*Overanxious Disorder (n = 26)*	*Controls (n = 33)*
7.9	23.1	9.1

Table 2
Percentage of Mothers of Separation Anxious, Overanxious, and Control Children Meeting DSM-III Criteria for Overanxious Disorder

Separation Anxiety Disorder (n = 21)	*Overanxious Disorder (n = 43)*	*Controls (n = 33)*
9.5	41.9	15.2

group ($X^2 = 5.12$, df = 1, $p < .05$) and mothers in the SAD group ($X^2 = 5.45$, df = 1, $p < .05$). There were no significant differences between the SAD and control groups for this childhood diagnosis.

Discussion

The main findings from this study support one of our two hypotheses. Nearly one-half (42%) of the mothers of children with OAD manifested OAD themselves as children. However, contrary to our expectations, the mothers of children with SAD did not show an increased prevalence of SAD.

Ours is the first study to look at OAD in mothers and their children. The high concordance between mothers and their children having this disorder indicates that, in the case of OAD, children are manifesting the same disorder their mothers had as children.

By contrast, the mothers of children with SAD did not show a higher prevalence of SAD themselves as children than did the OAD or control

mothers. In fact, our rate of SAD in the mothers of SAD children (8%) was lower than the rate obtained previously by Gittelman-Klein (3) in her study of SAD in parents of school phobic children (19%). Since *all* of the children in our study were diagnosed as having SAD, as opposed to the Gittelman-Klein study, whose group was mixed (some had SAD and some had a specific phobia of school), we had expected our rate to be higher.

However, while Gittelman-Klein's rate was *statistically* significant, it is questionable as to how *clinically* meaningful it is for two reasons. First, only 19% of the parents reported a history of SAD. Second, whereas our study looked only at mothers, Gittelman-Klein's study examined the childhood histories of both parents. From the results indicated, it is unclear as to how many of the 16 parents who presented with a history of SAD were actually in the same family. Thus, while the percentage of parents of school phobic children having a history of SAD was significant, it is possible that had the families been analyzed as individual units, the rate of SAD might have been more similar to ours.

Our data suggest that there is a specific relationship between OAD but not SAD in mothers and their children. However, it is possible that the method utilized in this study obscured a relationship for SAD. The differences in findings for SAD and OAD may be due to selective recall in terms of retrospective data; that is, perhaps it is easier to recall having experienced the more generalized anxiety symptoms of OAD than the specific symptoms of SAD. In addition, as the symptoms for OAD had to be present for six months, as opposed to two weeks for a diagnosis of SAD, OAD might be more salient in the memories of those who experienced it. It is possible that an interview with the mothers, rather than a symptom checklist, might have helped to probe for the more specific and relatively transient symptoms of SAD.

Since our questionnaire essentially duplicates (in question form) the specific criteria included in DSM-III for SAD and OAD, the measure is assumed to be comparable to DSM-III in terms of content validity. However, a cautionary note must be introduced in interpreting our data, since the CHQ awaits empirical evaluation of its reliability (i.e., test-retest) and validity (i.e., convergent validation through administration of *both* the questionnaire and a structured diagnostic interview).

Nevertheless, the high rate of childhood OAD reported by mothers of children with OAD is noteworthy. Replication with other clinical samples of anxious children is warranted, preferrably including repeated administration of the questionnaire and concurrent administration of

a childhood diagnostic interview schedule that has been shown to have adequate psychometric properties. Finally, future studies should consider obtaining childhood psychiatric history on *all* of the children's relatives, in order to examine whether the relationship of overanxious disorder specifically is between mothers and their children, or of a broader familial nature.

Summary

This study investigated the prevalence of two childhood anxiety disorders—separation anxiety disorder and overanxious disorder—in the mothers of children diagnosed as having separation anxiety disorder and/or overanxious disorder, and a psychopathological control group of children. Childhood diagnoses of the mothers were made through administration of a Childhood History Questionnaire, which was based on the DSM-III diagnostic criteria for separation anxiety disorder and overanxious disorder. Results showed an increased prevalence (42%) of overanxious disorder in the mothers of overanxious children. However, a similar relationship was not found for separation anxiety disorder.

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Appendix I

Childhood History Questionaire

Name: _____

Date: _____

This questionnaire contains questions about different types of problems that children and adolescents (age 3–18) often experience. Please place a check next to each item *that was true for you at any time when you were a youngster.*

_____ 1. I worred a lot about something bad happening to my mother (father) or that she (he) would leave and not return.

_____ 2. I worried a lot that some terrible event would separate me from my mother (father) (for example, I would get lost, kidnapped, killed, or get in an accident).

_____ 3. I was reluctant or refused to go to school and wanted to stay home.

_____ 4. I was reluctant or refused to go to sleep without being next to my mother (father) *or* to go to sleep away from home.

_____ 5. I often avoided being alone in my home and was upset if I could not be with my mother (father).

_____ 6. I had repeated nightmares about being separated from my mother (father) (for example, about being away from my parents, getting kidnapped, my parents going away or getting hurt, etc.).

_____ 7. I often had physical symptoms on school days (for example, headaches, stomachaches, nausea, vomiting, etc.).

_____ 8. I was extremely distressed when separated (or anticipated separation) from my mother (father).

_____ 9. When I was not with my mother (father), I was socially withdrawn, apathetic, sad, or had difficulty concentrating on work or play.

FOR THOSE ITEMS MARKED ABOVE (items 1–9), WHICH SYMPTOMS PERSISTED FOR AT LEAST TWO (2) WEEKS? *(Circle all that apply)*

1 2 3 4 5 6 7 8 9

How old were you when these symptoms started? _____

When did they stop? _____

_____ 10. I worried a lot about future events, that is, I worried a lot about things before they happened.

_____ 11. I thought a lot about things that already happened and whether I did or said the right thing.

_____ 12. I felt I had to be good at everything, that is, I was *very* concerned about being competent in a variety of areas.

_____ 13. I needed a lot of reassurance about a variety of worries.

_____ 14. I had physical complaints (for example, headaches, stomachaches) and the doctor couldn't find anything wrong with me.

_____ 15. I was very self-conscious or embarrassed easily.

_____ 16. I was tense ("uptight") a lot or couldn't relax.

FOR THOSE ITEMS MARKED ABOVE (items 10–16), WHICH SYMPTOMS PERSISTED FOR AT LEAST SIX (6) MONTHS. *(Circle all that apply)*

10 11 12 13 14 15 16

How old were you when these symptoms started? _____

When did they stop? _____