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Family environment in adolescent trichotillomania

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ABSTRACT

We examined family environment variables and parenting stress in a cohort of adolescents with trichotillomania (TTM; $N=49$), their parents ($N=55$) and matched control adolescents ($N=23$) and their parents ($N=23$). TTM youth vs. controls endorsed significantly more expression of anger, aggression and conflict in their families and less family support on the Family Relationship Index (FRI) of the Family Environment Scale (FES). Pulling distress but not severity was correlated with these variables. Greater pulling severity, distress or both were correlated with impairment on the cohesion subscale of the FES and the task accomplishment and affective expression subscales of the Family Assessment Measure (FAM). Mothers of TTM youth vs. controls endorsed more anxiety, depression and anger, plus more total parenting stress and problems in their offspring on the Stress Index for Parents of Adolescents (SIPA). On the FES, mothers of TTM youth vs. controls reported less emphasis on intellectual and cultural orientation and less organization in the family. TTM youth and their mothers were discordant in their ratings of several family environment variables. These findings warrant further study and merit attention when designing treatment interventions for adolescents with TTM.

1. Introduction

A substantial literature suggests that family environment variables can have critical roles in the onset and maintenance of psychiatric disorders. In addition, these variables may also influence treatment response and maintenance of gains.

Few studies have examined family functioning in trichotillomania (TTM). Methodological limitations (e.g. lack of comparison controls, small sample sizes, use of measures lacking adequate psychometric validation, and absence of in-person diagnostic ascertainment) compromise interpretation of findings. More rigorous exploration of family environment variables in TTM can potentially guide the design of prophylactic interventions as well as optimize symptom reduction and maintenance of treatment gains.

Studies of internalizing and externalizing disorders in youth have documented dysfunction in parenting styles and family environments. For example, parental overprotection and rejection, excessive parental control and attention, perfectionistic family styles, increased criticism, and reduced (or lack of) warmth have been implicated in childhood anxiety (Ehiobuche, 1988; Hoover & Insel, 1984; Whaley, Pinto, & Sigman, 1999; Wood, McLeod, Sigman, Hwang, & Chu, 2003). High parental anxiety and the child's perceived lack of control over external events (Capps, Sigman, Sena, Henker, & Whalen, 1996; Chorpita & Barlow, 1998) have also been implicated in anxiety disorders in youth. High expressed emotion and psychiatric disorders have been reported in the parents of youth exhibiting disruptive behavioral disorders and OCD (Hibbs, Hamburger, Lenane, Rapoport, & Kruesi, 1991). Negative maternal attitudes towards their child have been identified in externalizing disorders of childhood (Webster-Stratton & Eyberg, 1982). In an investigation of the relationship between family environment and depression, conduct problems/aggression and inattention/hyperactivity, George, Herman and Ostrander (2006) demonstrated that depression and conduct problems/aggression were associated with family environments characterized by less cohesiveness, fewer intellectual/cultural pursuits, and greater conflict. Depressive symptoms alone in the youth were independently related to reduced expressiveness, independence and activity in the family and elevated levels of control.

Superior response to family-based cognitive-behavioral treatment for pediatric OCD cases has been associated with lower levels of family conflict and blame and higher levels of family cohesion (Peris, Sugar, Bergman, Chang, & Langley, 2012). In a follow-up study by Peris and Piacentini (2013), families of adolescents with

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OCD who exhibited impairment in the family domains of conflict, blame and cohesion had a better response to family-focused therapy than to standard child cognitive-behavioral treatment. In a multi-modal treatment study for adolescent depression, children of mothers reporting more parent–child conflict had worse outcomes than those reporting lower levels of parent–child conflict regardless of treatment type (Feeny, Silva, Reinecke, McNulty, & Findling, 2009). It has been repeatedly documented that high expressed emotion predicts worse clinical outcomes for patients with a range of clinical disorders (Hooley, 2007).

The early psychoanalytic literature portrayed the TTM family constellation to consist of ambivalent, hostile and mutually dependent relationships between mother and child with TTM (Greenberg & Sarner, 1965). Fathers were described as passive and emotionally distant. Hair was conceptualized to be the symbolic representation of the power struggle between mother and daughter and the child's frustrated wish for paternal attention. Buxbaum (1960) conceptualized hair pulling as anger towards a parental figure that then became self-directed. All of these early theories lacked empirical support.

Reeve, Bernstein, and Christenson (1992) assessed family functioning in a sample of ten children and adolescents with TTM using parent and youth ratings on the Family Environment Scale (FES; Moos, 1974) and parent ratings of self on the Symptom Checklist-90-Revised (Derogatis, 1977). On the FES, parents of TTM youth viewed the family as more cohesive and expressive and with a greater moral-religious emphasis than did the TTM-affected child. Unfortunately, findings from this study are limited due to small sample size and the absence of a control comparison group.

Moore, Franklin, Keuthen, Flessner, and Woods (2009) subsequently conducted an Internet-based study to investigate the relationship between family functioning and TTM in youth. Parent report of family functioning and attitudes towards their child were assessed for 133 children and adolescents with self-reported TTM. Comparison with existing normative samples failed to identify statistically significant differences though trends towards greater dysfunction in family functioning on the Family Assessment Measure (FAM; Skinner, Steinhauer, & Santa-Barbara, 1995) were reported. Further, scores on the FAM and the Attitudes towards My Child Questionnaire (unpublished instrument) were analogous to those for comparable medical and psychiatric conditions. Correlations between TTM severity and family functioning provided evidence for more disruption in role performance and affective expression with greater hair pulling severity. An unexpected correlation between TTM severity and the values and norms subscale was interpreted to reflect underreporting of disturbance in the family environment due to sensitivity to public perception and/or the attribution that family problems resulted from TTM symptoms in the child.

In the current study, we sought to examine family functioning in adolescent TTM families, the relationship between family functioning and TTM severity/distress, the clinical characteristics of the parents of youth with TTM, differences in parenting stress and perception of family environment by mothers of TTM youth and controls and the concordance in family environment ratings between TTM mothers and their offspring. We did this while addressing the methodological shortcomings of earlier studies; accordingly, we utilized a more comprehensive, psychometrically-validated assessment battery with in-person diagnostic ascertainment for TTM and other psychiatric diagnoses in a large sample. We included comparison control groups for both our adolescent TTM youth and their parents.

In this study, we had two sets of hypotheses. These were derived from the limited findings in the literature for this population and for other psychiatric disorders in youth, as well as from our clinical experience with adolescents with TTM. First, we hypothesized that adolescent TTM youth would endorse more dysfunction in their family environment than controls. We utilized both the FES and the Family Assessment Measure-Version III (FAM-III) to assess family environment given prior findings in the literature with these instruments and the incomplete overlap in family domains measured by these scales. On the FES, we predicted greater impairment for youth with TTM vs. controls on the conflict and control subscales and the Family Relationship Index (FRI), a measure of family support. On the FAM-III, we predicted greater impairment in TTM youth ratings on the control and affective expression subscales. The remaining FES and FAM subscales were analyzed without directional hypotheses. We hypothesized that adolescent self-rated TTM severity would be correlated with the severity of dysfunction in those family environment variables with significant differences between TTM youth and controls. We also examined correlations between TTM severity and distress with those family environment variables not demonstrated to be different between groups, though without directional hypotheses.

Our second set of hypotheses addressed differences between parents of TTM youth vs. controls. First, we predicted more anxiety, depression and anger in the parents of TTM youth vs. controls. Secondly, we predicted increased levels of parenting stress in the parents of TTM youth vs. controls as reflected in both the Adolescent–Parent Relationship Domain and the Index of Total Parenting Stress from the Stress Index for Parents of Adolescents (SIPA). Although we lacked specific hypotheses regarding parent ratings on the FES, FAM and the other domains of the SIPA, we performed additional exploratory analyses to elucidate differences in the perception of family environment between parents of TTM youth and controls.

Lastly, to understand how adolescents and parents view the same family environment, we conducted exploratory analyses examining the concordance between TTM youth and parent ratings on the FAM and the FES.

2. Methods

2.1. Participants

Study criteria for TTM youth included participant age between 13 and 18 years old, lifetime satisfaction of DSM-IV TTM or chronic hair pulling (as defined by satisfaction of DSM-IV TTM criteria without Criteria B, C or both) and the availability of at least one biological parent for study participation. Adolescents diagnosed with mental retardation, autism spectrum disorders or psychotic disorders were excluded. Criteria for adolescent controls included participant age between 13 and 18 years old, lack of TTM or chronic hair pulling and the availability of at least one biological parent for study participation.

Our TTM youth sample consisted of 49 adolescents (48 female, 1 male) with TTM or chronic hair pulling and 23 matched controls (20 female, 3 male). Initially 52 adolescents (50 female, 2 male) were enrolled in our TTM-affected youth sample but three of these participants were excluded due to lack of TTM diagnostic data, failure to meet significant impairment or distress criteria for TTM diagnosis, or missing family environment measures. Mean (SD) ages for TTM youth and control samples were 15.07 (1.47) and 15.20 (1.54) years, respectively. In terms of ethnicity for the TTM youth, 91.84% identified as White/Caucasian ($n=45$), 2.04% as Black/African-American ($n=1$), 2.04% as Hispanic/Latino ($n=1$) and 4.08% as Multiracial ($n=2$). Our control sample was