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The impact of family functioning on pulling styles among adolescents with trichotillomania (hair pulling disorder)

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ABSTRACT

Despite aversive impact amongst youths, trichotillomania (hair pulling disorder, HPD) literature demonstrates a lack of research in several critical domains including adolescent HPD, HPD pulling styles (i.e. focused and automatic pulling) and family functioning. The present study sought to address these limitations through the examination of (1) family functioning within the context of adolescent HPD, (2) family functioning in relation to adolescent pulling styles, and (3) characteristics of an HPD adolescent sample relative to pulling styles. In total, fifty-seven adolescent-parent dyads (41 adolescents with HPD and 16 matched controls) from a larger investigation were included. Participants completed an assessment battery including diagnostic interviews and self-report measures pertaining to comorbidity, pulling styles and family functioning. Regression analyses indicated that diagnostic status (i.e. HPD adolescent or control) failed to predict family functioning. Family functioning also failed to predict the degree to which adolescents reported engaging in focused or automatic pulling. Examination of sample characteristics indicated both focused and automatic pulling styles to some extent, with a large portion of individuals (compared to prior research) demonstrating solely focused pulling behavior. Implications for these findings, as well as limitations and avenues for further research are discussed.

1. . Introduction

Trichotillomania (hair pulling disorder, HPD) is characterized by the recurrent pulling out of one's hair, resulting in hair loss. Although largely understudied in pediatric populations, HPD research suggests a substantial presence of this disorder amongst youths. Though the precise number of youths affected is unknown, past research in adult populations indicates approximately 3.4% of adults to be affected by HPD, with a large portion of individuals exhibiting an adolescent onset (i.e. mean age of 13; Bruce, Barwick, & Wright, 2005; Christenson, Pyle, & Mitchell, 1991). What is more, research in youths with HPD has demonstrated significant physical (e.g. trichobezoars; Harrison & Franklin, 2012) and psychosocial impairment associated with the disorder (e.g. poor social relationships and academic functioning, anxious and depressive symptoms; Lewin et al., 2009; Franklin et al., 2008; Tolin, Franklin, Diefenbach, Anderson, & Meunier, 2007). For example, Boudjouk, Woods, Miltenberger, and Long (2000) assessed peer evaluations of adolescents with and without a habit behavior (i.e. tic disorder or HPD) and found that adolescents exhibiting these behaviors were rated significantly lower in social acceptability compared to adolescents with no habit behavior. In addition, anecdotal evidence amongst adolescents indicates substantial isolation and distress due to hair pulling (e.g. “My parents were so stressed. I felt like a terrible child”; Trichotillomania Learning Center, personal communication, November 5, 2015). Despite such evidence demonstrating aversive impact amongst youths, pediatric research in relation to HPD, is significantly lacking.

One area in which this lack of research is most evident is with relation to family functioning. Family functioning refers to a multitude of factors within the family including parental mental health, parenting practices, family dynamics and family cohesion. Considering adolescent's proximity to and dependence on family, it is important to understand how the family environment may contribute to and/or be impacted by disorders with an adolescent onset, such as HPD. What is more, research demonstrates family functioning to be a critical factor in several areas of adolescent development including psychological well-being and risk and resilience development (Compas, Hinden, & Gerhardt, 1995; Shek, 2005; Shucksmith,

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Hendry, & Glendinning, 1995). This critical period of development simultaneously coincides with average age of HPD onset and lends support to the study of family functioning as a viable area of research among adolescents with HPD.

Interestingly, emerging research suggests a presence of dysfunction within the families of youths with HPD. Though scant in number and rarely assessing adolescents exclusively, these studies suggest a link between pediatric HPD (spanning ages ten to seventeen years) and poor parental mental health (e.g. increased parental anxiety), maladaptive parenting practices (e.g. limited independence), weakened family dynamics (e.g. low family cohesion) and a turbulent family emotional climate (e.g. increased family aggression; Boughn & Holdom, 2003; Keuthen, Fama, Altenburger, Allen, & Raff, 2013; Moore et al., 2009; Reeve, Bernstein, & Christenson, 1992). Similarly, qualitative research utilizing case study analyses further indicate increased impairment and disruption amongst the families of youths with HPD (McLaughlin & Nay, 1975; Tay, Levy, & Metry, 2004). Such disruption includes demands of perfectionistic parenting and psychosocial stressors within the family (e.g. separation from an attachment figure, hospitalization of the child or parent, parental marital conflict, etc.). Findings suggest that family functioning may be linked, at least in part, to the onset and course of this disorder (e.g. increased family dysfunction linked to youth HPD diagnosis and worsened quality of life). Despite the evident importance of family functioning within HPD, research within this domain is generally lacking. For example, the majority of recent studies have failed to include youth perspectives in the assessment of family functioning, instead opting for parent report or adult retrospective analyses. Such methodologies are limiting, as the absence of youth report may neglect potentially critical differences in, as well as effects of, family member perceptions (e.g. parent versus youth's perception of family functioning). What is more, due to sample characteristics (e.g. mother-youth dyads) prior research within these domains has failed to assess both maternal and paternal parenting distinctively, limiting a comprehensive understanding of the family dynamics. One available tool commonly used to assess youth report of both maternal and paternal behaviors is the Child Report of Parental Behavior Inventory (CRPBI; Schaefer, 1995). This assessment is used within the current study. Lastly, with regard to limitations, studies have yet to examine whether a relationship exists with respect to family functioning and specific HPD characteristics.

One HPD characteristic perhaps of most importance to the family functioning domain is HPD pulling style. Research indicates two distinct styles of pulling exist among youths, termed automatic (i.e. pulling outside of one's awareness) and focused pulling (i.e. intentional pulling in response to an urge, impulse, negative event, or emotion; Flessner, Woods, et al., 2008). Considering the differential functions of pulling styles (i.e. habit behavior versus emotion regulation), it is plausible that disruptions in family behavior may create or foster an emotional environment particularly conducive to focused pulling behavior, however additional research in these domains is critical for determining the validity of such hypotheses.

Notably, only a small percentage of youths who hair pull- 4.8% – have been found to engage in solely automatic or focused pulling, supporting the notion that youths most often engage in both forms to some extent (Flessner, Conelea et al., 2008; Flessner, Woods et al., 2008). Interestingly, recent literature has indicated differences amongst HPD pulling styles, both in relation to disorder severity and impairment. For example, in a study of youths 10–17 years old (mean age of 14 years), Flessner, Conelea et al. (2008) and Flessner, Woods et al. (2008) found increased levels of HPD severity amongst high focused pullers compared to low focused pullers. What is more- independent of pulling severity- higher levels of depression symptoms were found amongst high (compared to low) automatic and focused pullers, and higher anxiety symptoms were found amongst high focused pullers. Intriguingly, cross-sectional research indicates that although levels of automatic pulling appear to remain constant throughout the lifespan, focused pulling demonstrates a dramatic increase coinciding with approximately thirteen years of age. This further supports adolescence as a potentially critical period of development within the context of HPD (Flessner, Woods, Franklin, Keuthen, & Piacentini, 2009). However, despite the important implications of these findings (i.e., potential benefit of tailored therapeutic interventions, concurrent impact on the family, etc.), particularly amongst adolescents, scant research has sought to better characterize these pulling styles within youths. Better characterization of these styles may contribute to further hypothesis generation with relation to pulling style behaviors and family functioning (e.g. future research may wish to examine family functioning domains associated with comorbid disorders) and advance comprehensive understanding of adolescent HPD (e.g. associated pulling style comorbidities may provide more support for conceptualization of the styles as affective or habit behaviors; may further clarify adolescent pulling behaviors and appropriate interventions, etc).

In sum, a paucity of research within the pediatric HPD literature suggests several domains in need of further inquiry including, (1) family functioning, (2) the relationship between family functioning and automatic and focused pulling, and (3) the improved characterization of pulling styles, particularly during adolescence. Utilizing secondary data analyses, this study looks to alleviate these gaps and expand upon past research. In particular, past research using the current sample (see Keuthen et al., 2013) has assessed family environment in adolescents with HPD as compared to healthy controls, with results indicating increased family conflict, anger, aggression, and parental stress and decreased family support amongst youths with HPD. The current study seeks to expand this line of inquiry (i.e. investigating additional family measures of interest with focus on an adolescent's perspective, etc.) and examine such domains within a pulling style context. As such, the aims of the current study are as follows: (1) examine youth -reported differences in adolescent family functioning (i.e. adolescent report of parenting behaviors via the CRPBI) among adolescents with HPD compared to controls, (2) examine the relationship between parenting behaviors, parenting attitudes, family environment, and pulling styles, and (3) examine characteristics of pulling styles within the current sample (i.e. percentage of focused and automatic pulling, comorbidities, etc.). It is hypothesized that adolescents with HPD will demonstrate decreased family functioning compared to controls. In addition, though exploratory in nature, we hypothesize that adolescents demonstrating worse family functioning will demonstrate increased focused pulling behavior. We predict no relationship between family functioning and automatic pulling.

2. Method

2.1. Participants

The current study utilized secondary analysis of data obtained by a Northeastern hospital between February 2009 and June 2011. Approval for this study was granted by the institution and university's IRB. Participants described herein were recruited as part of a larger study examining genetic and non-genetic factors related to adolescent and adult HPD. In total, 75 participants were recruited through a northeastern trichotillomania clinic and the Trichotillomania Learning Center Newsletter. For the current study, inclusion within the adolescent HPD group required (a) participant age between 13 and 18 years old, (b) current diagnosis of DSM-IV HPD or chronic hair pulling (as defined by satisfaction of DSM-IV HPD criteria without Criteria B, C or both), (c) no diagnosis of mental retardation, autism spectrum, or psychotic disorders, (d) availability of at least one biological parent for study participation and (e) complete data on all relevant measures. Inclusion within the control adolescent group required (a) participant age between 13 and 18 years old, (b) lack of any DSM-IV diagnoses (c) availability of at least one biological parent for study participation and (d) complete data on all relevant measures. Participants (N = 18) failing