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Age and Gender Correlates of Pulling in Pediatric Trichotillomania

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Abstract

Objective—Our goals were to examine clinical characteristics and age and gender correlates in pediatric trichotillomania.

Method—A total of 62 children (8–17 years of age) were recruited for a pediatric trichotillomania treatment trial and characterized using structured rating scales of symptoms of hairpulling and common comorbid conditions. We analyzed the association between qualitative and quantitative characteristics of pulling, comorbidities, and age and gender. We also examined the type of treatments these children previously received in the community.

Results—We found lower rates of comorbid depression and anxiety disorders than have been reported in adult trichotillomania samples. Focused hairpulling significantly increased with age, whereas automatic pulling remained constant. Older children with hairpulling experienced more frequent urges and a decreased ability to refrain from pulling. Female participants reported greater distress and impairment associated with hairpulling, even though the severity of pulling did not differ from that of male participants.

Conclusion—These results confirm several findings from the Children and Adolescent Trichotillomania Impact Project (CA-TIP). Our cross-sectional findings suggest there may be a developmental progress of symptoms in trichotillomania. Children appeared to develop more focused pulling, to become more aware of their urges, and to experience more frequent urges to pull, as they get older. Although these are important findings, they need to be confirmed in prospective longitudinal studies.

Keywords

trichotillomania; cross-sectional study; children; adolescents

Trichotillomania (TTM) is classified in the *DSM-IV* as an impulse control disorder that involves repetitive pulling of one's hair, that produces noticeable hair loss, distress, and impairment.¹ The lifetime prevalence of trichotillomania is estimated to be 1% to 3%.² Trichotillomania has been demonstrated to have a strong female predominance and is often

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associated with significant physical, emotional, and functional impairment.^{3,4} Adults with trichotillomania experience much higher rates of comorbid anxiety and depression than in the general population.^{3,5-7} Although some effective behavioral and pharmacological interventions exist for the treatment of trichotillomania, randomized, controlled trials in adults with trichotillomania are few in number, and many adults with trichotillomania continue to experience severe and impairing symptoms of hairpulling despite using all evidence-based treatments.^{8,9}

Most cases of trichotillomania begin in childhood, but research on pediatric trichotillomania remains quite sparse. There are currently no published randomized, placebo-controlled trials of any pharmacological agents for the treatment of pediatric trichotillomania.¹⁰ Recently, a small, randomized, controlled study demonstrated the efficacy of behavioral therapy compared to a minimum attention control condition for the treatment of trichotillomania.¹¹ From the research available, there is ample evidence to suggest that children, like adults with trichotillomania, experience significant physical, emotional and functional impairment and high rates of comorbid anxiety and depression.¹²⁻¹⁵ Although children with trichotillomania experience the same pattern of impairment and comorbidities as adults, data suggest that they usually experience this to a lesser extent. This supports the idea that childhood may be a particularly important stage to intervene in the treatment of trichotillomania.

In recent years, substantial progress has been made in untangling some of the complexities of this disorder in childhood. The Child and Adolescent Trichotillomania Impact Project (CA-TIP) was an Internet-based survey that examined the phenomenology, comorbid symptoms, functional impact, and treatment use in youth with self-reported hair pulling. CA-TIP showed a potential developmental progression in the number of pulling sites, as adults were much more likely to pull from more than one site. CA-TIP also found that only about one-third of the children who were treated for TTM had improved in terms of their hairpulling symptoms during their treatment history. Not surprisingly, the vast majority of the children had not received interventions that have since been shown to be effective. CA-TIP also suggested that the current *DSM-IV-TR* criteria may not be appropriate for children, as many children did not describe urges before, and relief after, hairpulling episodes (criteria B and C in *DSM-IV*). CA-TIP was a significant advance in several aspects over previous studies in childhood hairpulling in that it used validated rating scales of hairpulling in children, involved a relatively large sample size, and involved a collaborative effort of many experts in the field. Although this study added invaluable understanding and insight into pediatric TTM, there were some limitations. One of the main limitations is that it was based entirely on Internet self-report, without confirmation via clinician assessment. Replicating the findings of CA-TIP in clinical and epidemiologically based samples remains important, as Internet-based samples may be subject to selection biases that could account for differences from hairpullers seen in the clinic or community.

We examined the characteristics of children with hairpulling in a clinically referred, assessed, and diagnosed sample. We explored the effects of age and gender on the characteristics of childhood pulling. Examining age and gender correlates in a cross-sectional sample will provide insight into the clinical course of TTM over time, and will help generate testable hypotheses for future longitudinal studies of pediatric TTM.

Two distinct styles of hairpulling have been described in trichotillomania: automatic and focused pulling.^{16,17} Automatic pulling is defined as pulling that occurs outside of one's own awareness. Focused pulling, by contrast, is defined as pulling with awareness. Focused pulling typically occurs in response to negative emotional states (stress, sadness, anger, or anxiety), intense thoughts or urges, or in an attempt to establish symmetry.¹⁸ Previous

descriptive research in women with trichotillomania has suggested that the degree of focused pulling may increase around puberty and then remain steady or decline slightly during adulthood.¹⁹ We therefore hypothesized that as children got older we would observe an increase in focused pulling but not automatic pulling. We also expected to observe an increase in other phenomenon associated with more focused pulling such as the following: pulling from more sites; increased frequency and intensity of urges; a greater frequency of comorbid anxiety and depressive disorders, and increased distress from pulling.

We also hypothesized that female individuals with trichotillomania would have increased distress associated with pulling and higher rates of comorbid anxiety and depressive disorders than their male counterparts. Although, to our knowledge, there is no direct evidence suggesting gender differences in these outcomes specific to trichotillomania, other supporting evidence does exist. Clinical studies of trichotillomania typically have an 8:1 to 10:1 female-to-male ratio, whereas epidemiological studies have suggested that the female-to-male ratio of trichotillomania is much lower closer to 2:1.^{2,16} Increased distress associated with pulling and/or increased likelihood of common comorbid conditions are likely explanations for the increased proportion of women seeking treatment for trichotillomania.

Method

Subjects

Children were recruited for a double-blind, placebo-controlled trial of *N*-acetylcysteine (NAC) for pediatric TTM at a large academic center. Children were eligible for this study if they were between ages 8 and 17 years, had a primary diagnosis of TTM, and had been pulling their hair for more than 6 months. Children who did not meet criteria B or C of *DSM-IV* criteria for TTM, (i.e. do not experience either an increasing sense of tension before pulling or pleasure, gratification, or relief after pulling) were allowed to participate, as a substantial proportion of children with impairing hairpulling do not experience these symptoms (15–20%).²⁰ Children were excluded if they had bipolar disorder, a primary psychotic disorder, a substance use disorder, a developmental disorder, or mental retardation according to *DSM-IV* criteria, as diagnosed by the lead study investigator. There were several additional eligibility criteria for the clinical trial that did not exclude children from being included in this analysis. These included current use of a psychostimulant medication ($n = 6$), asthma requiring use of an inhaler in the previous 6 months ($n = 4$), previously used NAC ($n = 3$), or an inability to swallow pills ($n = 3$).

Assessments

Most clinical assessments were conducted as part of an in-person evaluation to determine eligibility for the treatment trial described above ($N = 41$). A few children who were obviously ineligible for the treatment trial (e.g. prescribed psychostimulants, asthmatic requiring inhaler use, could not swallow pills) or who refused to participate in the trial (because of distance or unwillingness to receive placebo) were interviewed by telephone and included in the current analysis ($n = 21$). Clinical assessments included structured clinical rating scales of TTM, depression and anxiety severity. Rating scales included the following: Massachusetts General Hospital–Hairpulling Scale (MGH-HPS);²¹ Trichotillo-mania Scale for Children–Child and Parent versions (TSC-C,P);²² National Institute of Mental Health–Trichotillomania Severity Scale (NIMH-TSS);²³ Milwaukee Inventory for Styles of Trichotillomania–Child (MIST-C);¹⁷ Multidimensional Anxiety Scale for Children (MASC);²⁴ and Children's Depression Inventory (CDI).²⁵ In addition, an unstructured clinical interview by a trained child psychiatrist was conducted to establish comorbid *DSM-IV* diagnoses, medication use, and duration of pulling behaviors.

Data Analysis

Based on review of the literature and our experience treating children with trichotillomania, we had several a priori hypotheses regarding age and gender correlates of hairpulling. Specifically, we hypothesized that as children got older they would report the following: pulling from more sites; increased frequency and intensity of premonitory urges; increased distress from pulling; higher rates of comorbid depression and anxiety disorders; and increased focused pulling behaviors but not automatic pulling. We also hypothesized that females with hairpulling would report increased distress related to pulling and higher rates of comorbid anxiety and depression than males. We examined several additional clinical correlates of pulling in exploratory analysis; these included measures of parent-rated hairpulling (TSC-P), child-rated pulling (TSC-C, MGH-HPS), clinician-rated hairpulling (NIMH-TSS), anxiety (MASC), depression (CDI), and individual items from the MGH-HPS and the NIMH-TSS. We used the automatic and focused pulling subscales of the MIST-C to examine styles of pulling. We also computed a “pulling style index” (PSI), which we calculated as the difference in z scores for focused minus automatic pulling in our sample. This measured the extent to which each subject was a focused versus an automatic puller. Higher scores on the PSI indicate more focused pulling.

All statistical analyses were performed in SPSS version 19.0 for Windows (SPSS Inc, Chicago, IL). To examine changes in clinical characteristics associated with age, we used linear regression for continuous variables (i.e., MGH-HPS, TSC-C,P, CDI, MASC, MIST subscales, PSI) and ordinal logistic regression for ordinal variables (i.e., number of sites pulled and individual items from MGH-HPS and NIMH-TSS). For models examining hairpulling correlates with age, the outcome of interest was entered as the dependent variable in the model and age was the independent variable. To examine gender differences in characteristics of pulling we used a Student's T-test for continuous variables and the Mann-Whitney U Test to examine ordinal variables. The variables examined for gender were the same as for age. For models examining hairpulling differences with gender, the outcome of interest was the dependent variable and gender was the independent variable. We set the threshold for statistical significance at $p < .05$ for all analyses. In secondary analysis, we specifically tested 24 separate hypotheses for both age and gender correlates of pulling. Therefore, given our multiple hypothesis testing, we would expect an average of 1.2 results to be significantly associated with both age and gender by chance. Given the large number of hypotheses tested and the strong possibility of false-positive error, any significant secondary findings should be regarded as exploratory for hypothesis generating purposes that require future confirmation.

Results

Clinical Characteristics

Table 1 reports the demographic characteristics of our pediatric TTM sample. The sample was 82% female and 89% white. Of the children, 30% qualified for a history of depression (19% current), and 29% qualified for an anxiety disorder (26% current). The average age of the sample was 13.2 ± 2.8 , with duration of pulling of around 3.9 ± 2.8 years before assessment. Figure 1 provides a histogram of age of onset in our sample, by their retrospective report. The average age of onset was 9.3 ± 2.6 and the onset of pulling appeared to have a bimodal distribution, with one peak around age 7 to 8 years, and the other coinciding with the beginning of puberty for females (roughly 11–12 years of age).

Table 2 depicts the body sites pulled from in our sample. Of our sample, 45% reported pulling from multiple sites; 79% reported noticeable urges before pulling at least some of the time; 85% reported experiencing a sense of relief after pulling at least some of the time;

and 31% of reported that they did not experience either an urge before pulling or a sense of relief after pulling. These children would not meet the strict *DSM-IV* criteria for trichotillomania, despite having noticeable hair loss and significant distress from hairpulling.

Treatments Received

Table 3 depicts the past and current interventions being received in our pediatric TTM sample. Of the children, 62% reported receiving previous behavioral treatments for TTM, and 53% reported previously taking an selective serotonin reuptake inhibitor (SSRI), with 25% of the participants having no previous history of a mood or anxiety disorder.

Developmental Correlates of Hairpulling

Many clinical characteristics of hairpulling were associated with age. Most measures of hairpulling severity showed a weak positive association with age. The parent-rated measure (TSC-P: $\beta = 0.065 \pm 0.031$, 95% CI = 0.002–0.127, $t = 2.1$, $p = .04$) was significantly associated with age; the association of child-rated measures showed a strong trend, although both measures fell just outside our threshold for statistical significance (MGH-HPS: $\beta = 0.45 \pm 0.24$, 95% CI = –0.19 to 0.92, $t = 1.9$, $p = .06$ and TSC-C: $\beta = 0.066 \pm 0.035$, 95% CI = –0.003 to 0.135, $t = 1.9$, $p = .06$). Our only clinician-administered measure of hairpulling severity, the NIMH-TSS, showed a strong positive correlation with age ($\beta = 0.56 \pm 0.19$, 95% CI = 0.19–0.93, $t = 3.0$, $p = .004$).

Figure 2 depicts the association between age and measures of focused and automatic hairpulling. Focused pulling is defined as conscious pulling, often in reaction to an unpleasant sensory, emotional, or cognitive state. Automatic pulling is defined as pulling that occurs outside of the patient's awareness. Focused hairpulling showed a clear positive association with age (MIST focused subscale: $\beta = 3.87 \pm 1.36$, 95% CI = 1.15–6.60, $t = 02.8$, $p = .006$), whereas there was no association of automatic pulling with age (MIST automatic subscale: $\beta = -0.068 \pm 0.435$, 95% CI = –0.939 to 0.803, $t = -0.2$, $p = .88$). Children also showed an increased ratio of focused-to-automatic pulling behaviors with age (PSI: $\beta = 0.13 \pm 0.06$, 95% CI = 0.007–0.253, $t = 2.1$, $p = .04$).

Children reported an increased frequency of urges before pulling with age (MGH item 1: Parameter Estimate [PE] = 0.18 ± 0.09 , 95% CI = 0.003–0.36, Wald = 3.97, $p = .046$), less control over pulling (MGH-HPS item 6: PE = 0.21 ± 0.09 , 95% CI = 0.04–0.33, Wald = 5.6, $p = .02$ and item 3: PE = 0.21 ± 0.09 , 95% CI = 0.04–0.39, Wald = 5.6, $p = .02$), less attempts to resist pulling (NIMH-TSS item 4: PE = 0.18 ± 0.09 , 95% CI = 0.01–0.35, Wald = 4.0, $p = .046$), more time spent pulling (NIMH-TSS item 1: PE = 0.18 ± 0.09 , 95% CI = 0.003–0.35, Wald = 4.4, $p = .04$ and NIMH-TSS item 2: PE = 0.19 ± 0.09 , 95% CI = 0.02–0.37, Wald = 4.6, $p = .03$), and being more bothered by pulling (NIMH item 5: PE = 0.20 ± 0.09 , 95% CI = 0.03–0.37, Wald = 5.4, $p = .02$). We found no association of intensity of urges (MGH-HPS item 2: PE = 0.06 ± 0.09 , 95% CI = –0.11 to 0.23, Wald = 0.53, $p = .47$), frequency of pulling episodes (MGH-HPS item 4: PE = 0.07 ± 0.08 , 95% CI = –0.09 to 0.24, Wald = 0.78, $p = .38$) or interference from pulling related to appearance (NIMH-TSS item 6: PE = 0.08 ± 0.08 , 95% CI = –0.08 to 0.24, Wald = 1.0, $p = .33$).

Gender Correlates of Hairpulling

We found few differences in the characteristics of pulling between male and female hair pullers. Age of onset and age at assessment were similar between genders. Similarly, ratings of hairpulling severity (MGH-HPS, TSC-C, P, and NIMH-TSS), degree of automatic and focused pulling, number of sites pulled from, frequency and intensity of urges, time spent pulling and control over pulling did not differ by gender (data available upon request). However, female hair pullers reported being bothered by TTM to a greater degree than their

male counterparts (Mann-Whitney $U = 146$, $n = 62$, $p = .01$). In addition, we found a higher rate of current anxiety disorders (16 of 51 females, 0 of 11 males, Fisher exact test, $p = .03$) and a strong trend toward a higher level of depression (12 of 51 females, 0 of 11 males, Fisher exact test, $p = .07$) in females compared to males with pediatric TTM.

Discussion

Our study largely confirmed the results of CA-TIP, an Internet-based study that examined the clinical characteristics of children with TTM.^{11,20} The average age of onset in our sample was 9.3 ± 2.6 years, which is consistent with 8.8 ± 3.2 age of onset reported in a previous behavioral therapy trial of pediatric TTM.¹¹ However, our study suggested a potential bimodal distribution of age of onset between the ages of 7 and 18 years, in which there appears to be one peak around age 7 to 8 years and another roughly around age 11 to 12 years. There is evidence from previous studies that there may be another peak in trichotillomania onset that may occur in the preschool years.²⁶ Hair-pulling in the preschool years has been associated with an improved prognosis.²⁶ We confirmed that children tend to pull from multiple sites at a much lower rate (45% in our sample, 57% in CA-TIP) than adults with TTM (97% in TIP). Interestingly, we also found that roughly one-third of our sample would not meet current *DSM-IV* diagnostic criteria for TTM because they did not report experiencing either an urge before pulling or a sense of relief afterwards. This finding has importance when considering developmentally sensitive criteria for *DSM-V*, which is currently considering eliminating these criteria from the diagnosis of TTM. Also, similar to CA-TIP, a large proportion of children received SSRI treatment despite evidence from several randomized, placebo-controlled trials in TTM that suggested that these agents are ineffective in reducing hairpulling.⁸ Of the children in our cohort, 53% reported previously taking an SSRI, including 25% of those children who had no previous history of depression or anxiety disorders. We also found a relatively low rate of comorbid obsessive-compulsive disorder (OCD) (5%) and tic disorders (6%) when compared to previous studies in children and adults with hairpulling.^{13,16}

Our study extends these previous studies' findings by examining age and gender correlates of pediatric TTM. Female gender was associated with distress and impairment, but had little impact on the frequency or other concrete characteristics of hairpulling. This finding suggests that adding specific components to behavioral treatments, which seek to minimize distress and social impairment associated with hairpulling, may be particularly beneficial in females. We also found that age had quite a significant impact on the characteristics of pulling. The amount of focused hairpulling showed a strong positive association with age, whereas there was no association of automatic pulling with age. Children showed an increased ratio of focused-to-automatic pulling behaviors with age. Also, with increasing age, children reported an increased frequency of urges before pulling, less control over pulling, fewer attempts to resist pulling, more time spent pulling, and being more bothered by pulling.

As children get older, it appears they become more aware of urges and more focused in their pulling. These differences in characteristics of pulling over time would suggest a potential developmental progression of the disorder. These differences in hairpulling styles may affect the efficacy of both currently available pharmacological and behavioral treatments for trichotillomania. Understanding the sources of these differences may help us to develop better treatments for children, adolescents, and adults with TTM. For instance, we found that older children reported more frequent urges. Based on our data, it is unclear whether older children actually have more urges as they get older, older children are simply more likely to recognize and report urges, or a combination of both. If children have more urges as they get older, then intervening when children are younger may be a more effective strategy to break

the cycle. If older children are simply better able to recognize and verbalize the urges, then this difference may be important when designing strategies in behavioral therapy for children and adolescents. Specifically, younger children with hairpulling may benefit from simpler behavioral therapy techniques focused on habit reversal and stimulus control. In addition, teaching younger children to better recognize the urges and feelings preceding hairpulling may be important. In contrast, older children with hairpulling may benefit from simple behavioral therapy for trichotillomania augmented with therapy targeting emotion management skills. Regardless of the underlying cause, these findings emphasize the importance of accounting for age in the research design of trichotillomania studies for children and adolescents.

Given the potential impact of our findings, it is important to recognize several limitations of our study. Because our study is cross-sectional, assessing each subject at one time point, it is impossible to determine whether differences associated with age were due to a developmental progression of hair-pulling within subjects or whether the actual sample differs with age (e.g., the subjects in our adolescent sample are different individuals from a sample of children experiencing pulling who would be followed through adolescence). Longitudinal studies need to be conducted to confirm that this is the natural clinical course of the disorder. We also conducted multiple hypotheses testing without appropriate statistical correction; therefore our exploratory results should be used for hypothesis generating rather than hypothesis confirming purposes. In addition, our assessment technique to establish comorbid diagnoses could have been improved. We relied on an unstructured clinical interview conducted by a child psychiatrist to establish comorbid diagnoses. In future studies, it would be preferable to use structured clinical interviews for establishing comorbid diagnoses. Our results also have all of the limitations that go along with any relatively small sample size; therefore it is important to confirm these results with a larger sample. Our statistical power was particularly limited in assessing gender differences in hairpulling characteristics, as only 11 male subjects were included in this sample. That being said, to date our sample is the largest clinically assessed sample reported in TTM. With such limited research in TTM, especially in children and adolescents, it is imperative to generate as many empirically testable hypotheses as possible. Another potential limitation is the inclusion of hairpullers who were currently taking psychostimulants in study sample. Although there is some evidence from case reports that psychostimulant use may exacerbate or precipitate hairpulling, there was little evidence in any of these six cases that hair-pulling was psychostimulant induced.²⁷ Specifically, none of the six children taking psychostimulants in our sample reported an association between psychostimulant use and the onset or worsening of their hairpulling symptoms. A final limitation is that our study sample consisted of subjects who expressed interest in a placebo-controlled treatment study at a tertiary academic center specializing in trichotillomania. It is possible that the characteristics of hairpulling seen in the clinic are not representative of the population as a whole.

Despite the limitations, our study suggests several potentially important developmental changes in the characteristics of hairpulling that may affect both behavioral and pharmacological treatment. Older children with trichotillomania report more urges and have an increasingly focused character of hairpulling. Females tend to report greater distress, impairment, anxiety, and depression associated with hairpulling, even though the severity of pulling did not appear to differ in our sample. Two important future steps in the research of TTM are to conduct longitudinal studies in children with TTM, and to examine clinical characteristics of hairpulling as moderators of treatment response.

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CG Clinical Guidance

- Older children with trichotillomania reported more frequent urges and more focused hairpulling.
- The age-related differences observed suggest that tailoring behavioral treatments for trichotillomania to the maturity of the patient may be important. Younger children may benefit from simpler behavioral therapy techniques focused on awareness training, habit reversal, and stimulus control. Adolescents and adults with trichotillomania may benefit from behavioral therapy augmented with training in emotion regulation skills.
- Characteristics of hairpulling did not differ by gender; however, females with trichotillomania reported being more bothered by their hairpulling than males.
- Given the increased distress associated with hairpulling in females, adding specific components to behavioral treatments that seek to minimize distress and social impairment associated with hairpulling may be particularly beneficial in females.

Figure 1.

Histogram of age of onset of hair pulling. Note: The average age of onset was 9.3 ± 2.6 years. The onset of hair pulling appeared to have a potentially bimodal distribution with one peak around age 7 to 8 years and the other coinciding with the beginning of puberty for girls (roughly 11-12 years of age).

Figure 2.

Milwaukee Inventory for Styles of Trichotillomania (MIST)–Child Scatter Plot Panel (Automatic subscale v. Focused subscale v. Pulling Styles Index). Note: Focused hair pulling showed a strong positive association with age, whereas there was no association of automatic pulling with age. Children showed an increased ratio of focused-to-automatic pulling behaviors with age.

Table 1
Baseline Comparison of Children With Trichotillomania (N = 62)

Characteristics	
Age, y, mean (SD)	13.2 (2.8)
Range	8–17
Gender, n (%)	
Female	51 (82)
Male	11 (18)
Ethnicity, n (%)	
Caucasian	55 (88)
African American	1 (2)
Hispanic	3 (5)
Asian	3 (5)
Symptom severity, mean (SD)	
MG-HPS total	14.0 (5.3)
TSC–Child Report	2.37 (0.78)
TSC–Parent Report	2.21 (0.68)
MIST–automatic pulling subscale	13.4 (9.5)
MIST–focused pulling subscale	86.8 (31.5)
Pulling styles index	0 (1.4)
MASC	48.8 (17.7)
CDI	10.5 (7.4)
Comorbid psychiatric disorders, n (%)	
Depression	19 (31)
Anxiety disorder	18 (29)
Obsessive-compulsive disorder	3 (5)
Tic disorder	4 (6)
ADHD	10 (16)
Skin picking	1 (2)

Note: ADHD = attention-deficit/hyperactivity disorder; CDI = Children's Depression Inventory; MASC = Multidimensional Anxiety Scale for Children; MGH-HPS = Massachusetts General Hospital–Hairpulling Scale; MIST-C = Milwaukee Inventory for Styles of Trichotillomania– Child; NIMH-TSS = National Institute of Mental Health–Trichotillomania Severity Scale; TSC-C,P = Trichotillomania Scale for Children– Child and Parent versions.

Table 2
Body Sites of Hairpulling (N = 62)

Area of Body	n (%)
Scalp	45 (73)
Eyebrows	20 (32)
Eyelashes	24 (39)
Pubic	3 (5)
Body	6 (10)
Multiple sites (two or more)	28 (45)

Table 3
Types of Interventions Ever Received (N = 62)

Intervention	n (%)
No interventions of any kind	13 (21)
SSRIs	33 (53)
Antipsychotics	11 (18)
α_2 -Agonist	1 (2)
Stimulant	10 (16)
Mood stabilizer	3 (5)
Trazadone	3 (5)
Bupropion	1 (2)
Behavioral therapy	39 (63)

Note: SSRIs = selective serotonin reuptake inhibitors.