

Michael, K. D. (2004). Behavioral treatment of trichotillomania: A case study. *Clinical Case Studies*, 3:2, pp. 171-182. (ISSN: 1534-6501) April 2004 Version of record available from SAGE Publications at <http://ccs.sagepub.com/cgi/content/abstract/3/2/171>
DOI: 10.1177/1534650103259642
Keywords: trichotillomania | hair pulling | behavioral treatment

Behavioral treatment of trichotillomania: A case study

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ABSTRACT

Once considered a rare clinical condition, trichotillomania is now recognized as a psychological disorder that is more prevalent than previously thought. The behavioral treatment of a 21-year old college woman with a longstanding history of chronic hair pulling is described in this case study. The extent of the trichotillomania was measured during an 11-day baseline period (self-monitoring, photographs) followed by 4 months of behavioral treatment including prominent components of habit-reversal training. The results of the intervention were suggestive of a substantial reduction in hair pulling incidents, hair re-growth in the affected parts of her scalp, and self-reported improvements in mood, anxiety, and self-esteem. Limitations of these data are reviewed and recommendations for clinicians who intend on treating trichotillomania are provided.

ARTICLE

1 THEORETICAL AND RESEARCH BASIS

Once considered to be a rare clinical condition, chronic hair pulling, or trichotillomania (TM), is now recognized as a psychological disorder that is more prevalent than previously thought (Deifenbach, Reitman, & Williamson, 2000; Mansueto, Townsley-Sternberger, McCombs-Thomas, & Goldfinger-Golomb, 1997). Current prevalence estimates for the disorder range from 0.6% (Christenson, Pyle, & Mitchell, 1991) to 4% (Azrin&Nunn, 1978). However, estimates of chronic hair pulling without associated impairments in functioning are substantially higher (e.g., 10% to 13% in college samples) (Rothbaum, Shaw, Morris,&Ninan, 1993). Moreover, TM appears to be more common in women (Soriano et al., 1996; Tkel, Keser, Karah, Olgun ,& Calikusu, 2001), and the average age of onset is approximately 13 years (Christenson, Mackenzie,

& Mitchell, 1991).

Correlates and implications of TM are noteworthy and can include significant hair loss and serious dermatological damage (Swedo & Leonard, 1992), depression, anxiety, diminished self-esteem (Soriano et al., 1996), and significant difficulties with interpersonal relationships (Watson & Winter, 2000). Although some researchers (e.g., Christenson et al., 1991; King et al., 1995; Schlosser, Black, Blum, & Goldstein, 1994) have suggested that a number of psychiatric conditions such as personality disorders, obsessive-compulsive disorder, and mood disorders often co-occur with TM, clear patterns of comorbidity remain elusive and controversial (Elliot & Fuqua, 2000).

Currently classified as an impulse-control disorder in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IVTR)* (American Psychiatric Association, 2000), the hallmark symptoms include noticeable hair loss (alopecia) and an increase in psychological tension just prior to hair pulling followed by pleasure associated with hair pulling. There are psychodynamic (e.g., Zalsman, Hermesh, & Sever, 2001), biological (e.g., Swedo et al., 1991), and behavioral conceptualizations (e.g., Azrin & Nunn, 1978) Of TM. Behavioral conceptualizations range from tension reduction hypotheses to modeling. Azrin and Nunn (1973) suggested that individuals learn to use hair pulling as an adaptive response to stress that is then, in turn, reinforced by the relief or pleasure experienced by the hair pulling. Mansueto and colleagues (1997) proposed that, over time, these behaviors could become increasingly complex and maintained by a variety of internal (e.g., anxiety) and external cues (e.g., being alone in the bedroom).

Furthermore, several investigators (e.g., Jenike, 1989) have proposed that TM is a variant of obsessive-compulsive [anxiety] disorder (OCD), which is characterized by intrusive thoughts and compulsive behaviors that provide at least temporary relief from the anxiety associated with the obsessive cognitions. However, to date, a clear, empirically supported etiological mechanism that adequately explains the origins of TM has not been established (Deifenbach et al., 2000). Nonetheless, there is general agreement in the clinical literature that an integrative approach to TM (i.e., behavioral, biological, cognitive), with a specific focus on the context in which the disorder develops (see Silverman, 1999 for further review), is the most prudent way to address the treatment of TM.

Based on several narrative reviews of the extant literature on TM, habit-reversal training (HRT) is the treatment with the most empirical support (Peterson, Campise, & Azrin, 1994) and remains to be one of the few treatments tested in a controlled trial (Azrin, Nunn, & Frantz, 1980). In general, evidence that pharmacotherapy is an effective means of treating TM is sparse and limited to open medication trials (Deifenbach et al., 2000). Indeed, in a recent placebo-controlled trial comparing effectiveness of cognitive-behavioral therapy (CBT) and clomipramine in a clinical sample of 23 patients with TM, CBT was superior to medication and placebo at reducing symptoms to a significant degree (Ninan, Rothbaum, Marsteller, Knight, & Eccard, 2000). In contrast, the investigators reported that clomipramine was not superior to placebo in treating TM.

2 CASE INTRODUCTION

At initial assessment, Lisa (not her real name) was a 21-year-old college student who had a variety of part-time jobs to support her educational pursuits. She referred herself for treatment after two unsuccessful attempts to treat the condition via what was described as nonspecific supportive psychotherapy. The previous treatment attempts occurred 2 to 3 years before the current treatment course. In addition, prior treatments (during late adolescence) occurred within the context of other prominent issues including alcohol abuse and family-of-origin conflicts (e.g., nonacceptance of her homosexual orientation). Lisa attributed her limited success in decreasing her hair-pulling behavior during previous therapy attempts to (a) a weak therapeutic alliance and (b) her own self-described reluctance to modify maladaptive behaviors. However, on initial assessment, Lisa expressed substantial motivation to address her longstanding difficulties with chronic hair pulling, given that the energy she devoted to concealing the behavior was becoming increasingly difficult to sustain and led to a number of substantial problems in daily life (e.g., decreased participation in interpersonal and athletic events).

3 PRESENTING COMPLAINTS

During the initial evaluation, Lisa complained of chronic and significant hair pulling, associated hair loss, concealment of damage secondary to hair pulling, body image disturbance, depression, anxiety, and low self-esteem.

4 HISTORY

Lisa is the second of three children. Her parents, both college graduates, are still married. Until she enrolled in college and before her older sister moved out, she lived with her parents and two sisters. Lisa described her family life as a mixture of positive and negative experiences. According to Lisa, she did not feel supported by her parents regarding a number of issues, most notably her revelation about being lesbian.

Lisa's first memory of hair pulling occurred when she was 9 years old, during the fourth grade. She recalled a specific incident in class when she observed a male peer pull his hair out and comment that it was cool to see the root of the hair. Sometime shortly thereafter, Lisa reportedly tried pulling out a hair and found it to be somewhat compelling. She added that she became hooked on the behavior and that it became increasingly automatic after a few months, to the point where she became less aware of the behavior. Although her hair-pulling behavior persisted during adolescence, she developed concomitant Difficulties with body image and self-esteem at the approximate age of 12 years. According to Lisa, she gained 15 to 20 pounds during the summer between seventh and eighth grade, which subsequently led to significant peer censure on her return to school in the fall. Lisa said that, in addition to being subject to derogatory responses about her sexual orientation from her parents, she was now being ridiculed for her weight gain.

To exacerbate matters, she felt additional pressure to conceal the damage from her hair pulling to avoid further embarrassment and social censure. What developed was an elaborate series of behaviors designed to conceal her hair loss on the top of her scalp in particular. Lisa grew her hair out in unaffected areas to the point where she could pull her hair across the affected area of her scalp. In addition, she developed a fondness and need to consistently wear a baseball cap. Lisa said that her peers and family members often commented on her beautifully long and curly hair, which reportedly minimized her experience of the punishing consequences (i.e., social rejection) of hair loss.

However, during late adolescence and early adulthood, Lisa reportedly became exhausted maintaining the facade. She reported several incidents where her friends would jokingly try to remove her baseball cap, to which she responded with fervor and terror of her secret being exposed. Thus, Lisa's primary reason for seeking treatment was to address something that seemed well beyond her control, despite her experience of significant impairments in daily functioning as well as prior unsuccessful treatment attempts (self-help, two previous psychotherapy events).

5 ASSESSMENT

During the first two sessions, Lisa participated in a semi-structured clinical interview adapted from the Structured Clinical Interview for *DSM* (Spitzer, Williams, Gibbon, & First, 1992). According to the data, she met *DSM-IVTR* criteria for TM, given her longstanding and significant history of hair pulling with associated hair loss and impairments in important areas of functioning (i.e., interpersonal, academic, occupational). Although Lisa endorsed a feeling of momentary relief just after pulling out a hair follicle, she also often experienced a paradoxical feeling of shame and self-loathing after the event. However, both of the aforementioned experiences were dependent on her own awareness of the hair-pulling event given that Lisa reported that her self-awareness of the actual behavior varied, based on her mood state. For example, she said that during times of stress, her hair-pulling behavior was automatic and not subject to conscious cognitive processing of the event. After the initial session, Lisa was instructed to self-monitor each hair-pulling event using a spreadsheet provided by the author to collect baseline data. She was further instructed on the use and rationale of a functional analysis of her hair-pulling behavior. She kept track of antecedent, hair-pulling, and consequent events in between sessions. Moreover, she was instructed to take a picture of the top of her scalp as another measure of her current status. In addition to the importance of monitoring hair-pulling events, collecting pictorial data serves to corroborate self-monitoring efforts and provides a useful index of treatment outcome (Treadwell & Franklin, 1999). She provided a digital image of the affected area of her scalp approximately every 3 to 4 weeks during the course of treatment. During the second session and with some trepidation, Lisa permitted the author to visually inspect the affected areas of her scalp. In terms of Lisa's concomitant symptomatology, she endorsed subclinical levels of depression, generalized anxiety (without meeting *DSM-IVTR* criteria for generalized anxiety disorder), and body image disturbance. She did not meet *DSM-IVTR* criteria for OCD; Tourette's, a personality disorder; or a substance dependence or abuse disorder. She did, however, exhibit a great deal of psychological insight about her condition and appeared to be forthright and candid throughout the assessment process. At the conclusion of the initial assessment phase, Lisa was referred for a medical evaluation to rule out

any potential medical contributors (e.g., fungal infections) and complications to her condition (e.g., eczema).

6 CASE CONCEPTUALIZATION

Given the existing literature on TM that supports both conceptualizations and treatments based on behavioral principles, Lisa's treatment plan was behavioral in nature, including prominent components of HRT. Moreover, in light of the equivocal status of conceptualizing TM as a variant of OCD and the fact that Lisa did not exhibit clinically significant obsessive-compulsive symptoms, the literature regarding the use of HRT was used as a guide for both conceptualization and treatment. Furthermore, at no time during the treatment process did Lisa express a desire for a referral for pharmacological management.

Thus, once again, based on the literature and the client's own wishes, a behavioral treatment regimen was developed and implemented based on at least two detailed descriptions of behavioral treatments (i.e., Mansueto, Goldfinger Golomb, McCombs Thomas, & Townsley Sternberger, 1999; Robleck, Detweiler, & Fearing, 1999). Key elements of the behavioral approach to TM include a functional analysis of hair-pulling behavior, attempts to increase the client's awareness of the behavior (often via systematic self-monitoring), and identifying antecedents and triggers to hair pulling as well as the consequences and implications. Moreover, interventions often include relaxation and alternative methods of tension reduction, development of competing yet constructive replacement behaviors, and self-reinforcement of adaptive alternative behaviors.

According to Lisa and a functional analysis of her TM, hair pulling was reinforced in several ways. First, the most common antecedent events to hair pulling were anxiety and boredom, often associated with academic stress and external cues (e.g., being alone in her bedroom or bathroom), respectively. In the service of her anxiety about school, she experienced the act of hair pulling as a cue to distract herself from her academic tension, which often facilitated the avoidance of a noxious physiological, cognitive, and affective state (anxiety) and was thereby negatively reinforced over time. In addition, the physical sensations of touching her hair apparently were a catalyst (cue) to a more rapid entrance into an altered physiological, cognitive, and affective state. Thus, consistent with the tension reduction model, Lisa was able to escape from a dysphoric state via her TM. At the same time, it appears that the reinforcing qualities of these circumstances not only promoted a quicker progression to a desirable state but they also inhibited her access to the punishing consequences of the hair pulling (e.g., hair loss, itching, unsightly dermatological effects such as sores on the scalp). Given these data, an immediate goal of self-monitoring was to enhance Lisa's awareness of the behavior as well as the reinforcing and punishing consequences of her TM.

7 COURSE OF TREATMENT AND

ASSESSMENT OF PROGRESS

As described previously, Lisa monitored and kept track of the number of hairs pulled and the number of hair-pulling events daily during the course of treatment. During the 11-day baseline period, she pulled out hair follicles (range: 22-65 hairs pulled) every day during the interval (see Figure 1). A ratio of days when hair pulling occurred versus days when zero hairs were pulled was calculated over the course of therapy. Therefore, during the baseline phase, Lisa pulled hair on 100% of the days in the period.

In addition to the self-monitoring data, Lisa agreed to have a trusted friend take a digital photograph of her scalp during the baseline phase to establish a record detailing the scope of her hair loss as well as the condition of her scalp. The baseline pictures not only revealed significant hair loss on the top of her scalp but also skin damage, blemishes, and sores, likely associated with a longstanding pattern of TM. She was instructed to establish a consistent distance from the camera to facilitate a useful comparison of pictorial data across time. The pictorial data also served a key role during the intervention phase. It was used initially as a punishing and tangible reminder of the damage that she inflicted on her scalp over the course of several years of hair pulling. Lisa was instructed to place the baseline picture in prominent hair-pulling locations (bedroom, bathroom, car) to disrupt her automatic behavioral cycle of hair pulling in environments where external cues for TM were prevalent. The pictorial data were also used as a launching point for her development of a noxious cognitive stimulus (i.e., covert sensitization) as a preventative aid for additional hair pulling. In addition, it was used as a visual reinforcement of the progress she realized by comparing the baseline photograph with subsequent photographs illustrating improved scalp conditions. After each hair-pulling episode, Lisa was instructed to view the baseline picture in addition to calling up the noxious cognitive stimulus of her scalp.

With respect to Lisa's prominent internal antecedents (cues) for hair pulling, which included school-related anxiety and general dysphoria, she was trained in alternative adaptive behaviors including progressive muscle relaxation, Gestalt awareness training, positive practice of rubbing a string of beads between her fingers (most often used during hair-pulling events), and thought stopping. After sufficient training in the above

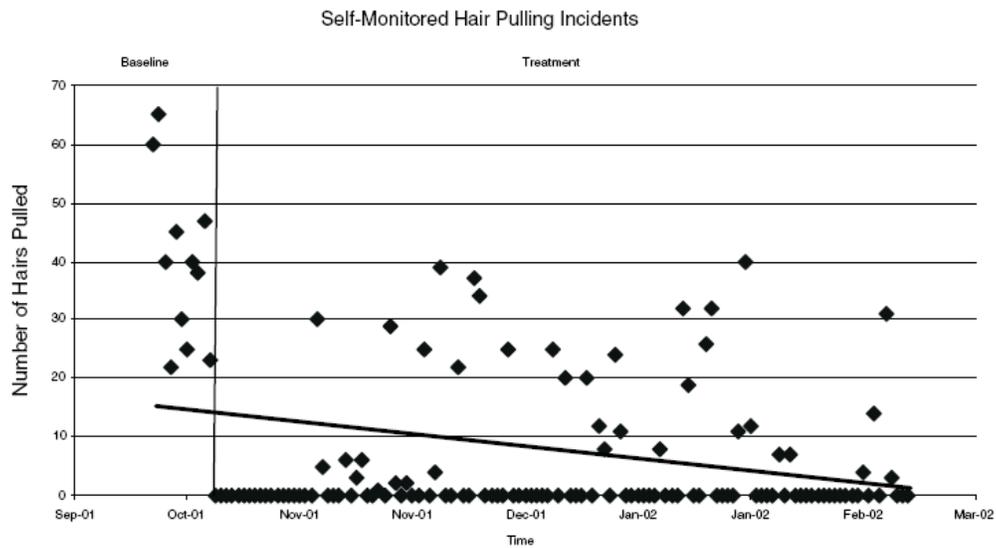


Figure 1. Number of Hairs Pulled Each Day During Baseline (11 Days) and Treatment Phases (123 Days) as Measured by Client's Self-Reported Frequency Counts
 NOTE: Regression line reflects the mean number of hairs pulled across time.

procedures, Lisa implemented these behaviors in response to her urge to pull or when she became aware of her hair-pulling behavior. Also, from a behavioral perspective, Lisa independently decided to implement a variant of a response prevention technique: namely, cutting her hair close to the scalp to both expose herself to the reality of the condition of her scalp and to make the actual act of hair pulling more challenging. Similarly, after the first session during active treatment, she opted to stop wearing a baseball cap to keep herself continuously exposed to the reality of her situation (extinction), to relieve her sense of tension associated with concealing the TM, and to provide another means of receiving social feedback that might inhibit the hair-pulling behavior.

As described above, the active treatment consisted of an amalgam of behavioral and cognitive procedures as well as several components of habit reversal training in particular. Formative evaluation efforts were conducted throughout the intervention phase, and necessary adjustments and revisions were made to promote the best possible outcome for Lisa. Moreover, the content and focus of individual sessions often included the discussion and review of important contextual factors and interpersonal developments. During the 123 days (12 sessions) of the active treatment phase, Lisa pulled her hair on 37 of those days (range: 1-40 hairs pulled). Whereas she pulled hair on 100% of the days during the baseline assessment period, she pulled hair on 30% of the days during the active treatment period. Thus, Lisa reported a 70% reduction in the number of hairpulling days over the course of treatment (86/123 no-hair-pulling days). Moreover, based on a trend analysis, the average number of hairs pulled during each event was reduced. See Figure 1 for detailed illustration of these data.

In terms of the pictorial data across time, five photographs were taken over the course of the baseline and treatment phases. The depictions of Lisa's scalp in Figure 2 were made by modifying the actual pictures of the top of her head from the various intervals

using a computer software program(i.e., Adobe Photoshop 5.0). These data are presented for illustrative purposes without compromising Lisa's identity and by no means represent a precise depiction of her scalp conditions across time. Nonetheless, the figure does represent an accurate approximation of her general scalp conditions over the course of treatment (see Figure 2).

With respect to the pictorial data, Lisa exhibited a substantial reduction in hair pulling, as evidenced by a significant reduction in the regions with little or no hair and actual hair re-growth. These data are consistent with the self-monitoring findings as well. It is important to note that exact and vivid depictions of scalp conditions over time are crucial to the treatment. Thus, under circumstances in which the protection of a client's identity is not potentially compromised (i.e., actual treatment), every effort should be made for the client to scrutinize more precisely the status of her scalp.

In terms of the related symptomatology (e.g., depression), Lisa reported substantial improvements in depression and self-esteem. However, she still experienced considerable difficulty managing her academic tension and general anxiety. Moreover, Lisa's reports of body image disturbance remained relatively unchanged over the course of treatment.

8 COMPLICATING FACTORS

As previously noted, the content and focus of individual sessions often included the review of important contextual factors and interpersonal developments. Although these are certainly predictable events during the course of any particular psychotherapeutic intervention, Lisa experienced a significant number of interpersonal difficulties during the course of treatment, which undoubtedly complicated treatment. For example, Lisa was having substantial difficulties with her significant other during the 4 months of treatment. Understandably, the plans for a number of sessions had to be revised to accommodate sufficient processing of these interpersonal issues. As such, the review of behavioral procedures and a systematic evaluation of the effectiveness of these procedures often became secondary. However, in the context of providing ecologically valid treatments, it would have been unwise and perhaps counterproductive to insist on a sterilized, overly manualized approach to therapy. Moreover, the interpersonal developments in Lisa's life were highly relevant to treatment outcome. Based on a review of treatment notes and the associated hair-pulling events, significant interpersonal strife was associated with increased amounts of hair pulling.

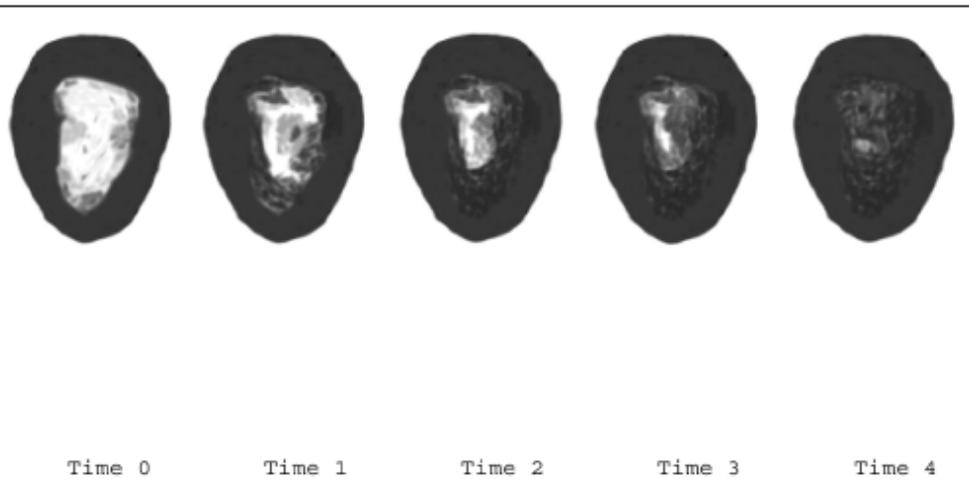


Figure 2. Pictorial Illustration of the Top of Client's Scalp at Pretreatment (Time 0) and Four Other Intervals (Approximately 1 Month Between Intervals) During Treatment Course

9 MANAGED CARE CONSIDERATIONS

Lisa was fortunate to have a reasonable insurance plan with a manageable copayment. Thus, despite having a considerable number of financial constraints often associated with being a college student, she was able to undergo treatment with a private practitioner. Although another therapeutic alternative was available to Lisa through her college counseling center, she was able to select her preferred treatment option. During the course of therapy, her insurance company conducted two standard reviews of treatment, and both resulted in the granting of additional sessions based on the assessment and treatment data up to that point.

10 FOLLOW-UP

Lisa is still undergoing treatment for related concerns, but the TM interventions are now secondary to other therapeutic priorities (e.g., body image disturbance). Nonetheless, periodic probes have been conducted regarding her hair-pulling behavior. On the basis of a week of self-monitoring data 3 weeks post-treatment, Lisa continues to pull her hair at about the same rate as she did at the end of the TM treatment phase. Unfortunately, Lisa was not able to completely extinguish the hair-pulling behavior during the treatment or follow-up phases. Indeed, a complete abatement of hair pulling is a clinical outcome rarely achieved during the course of treating TM (Brondolo, 2000). Given these less-than-optimistic findings, it is imperative to continue to follow clients with a history of TM and investigate possible methods of improving and sustaining treatment gains over time (e.g., booster sessions, adjunctive interventions).

11 TREATMENT IMPLICATIONS OF THE CASE

As illustrated above, TM is a complex disorder with a diverse presentation that is difficult and challenging to treat. However, based on the data obtained during the course of Lisa's treatment, it appears that conceptualizing and treating TM from a behavioral perspective leads to some positive results. Moreover, as Silverman (1999) described, the context in which the treatment is conceptualized, taking into account the relevant individual factors of each case (e.g., family-of-origin issues, interpersonal difficulties), provides a full menu of potential correlates for the practitioner to consider during therapy. However, given the limitations of the present case study (e.g., no sustained abstinence from hair pulling), it is critical that clinicians maintain a watchful eye for potential improvements to their procedures in hopes of providing better treatments for a substantial number of individuals who struggle with chronic hair pulling.

12 RECOMMENDATIONS TO

CLINICIANS AND STUDENTS

Given the experience working with Lisa and the extant literature as to the treatment of TM, five primary recommendations are offered to clinicians who intend to treat clients with TM. First, it is recommended that before attempting to treat TM, clinicians become well acquainted with the empirical literature on the topic. Second, in light of the empirical data in support of behavioral conceptualizations and treatments of TM, practitioners are advised to use such behavioral methods, including habit reversal procedures, during the course of therapy. Third, assessment data should be multifaceted, including both self-report data and more objective means (e.g., pictures) of measuring clinical outcomes. Fourth, clinicians unfamiliar with the specific intervention procedures that are well validated in the treatment of TM should seek consultation and supervision from those with expertise and experience in these areas. Finally, given that TM is not necessarily rare but variable depending on a number of contextual factors, it is recommended that clinicians pay close attention to the idiosyncratic variables in combination with broader treatment principles when providing treatment to those suffering from trichotillomania.

REFERENCES

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed. text revision). Washington, DC: Author.
- Azrin, N.H., & Nunn, R. G. (1973). Habit reversal: A method of eliminating nervous habits and tics. *Behaviour Research and Therapy, 11*, 619-628.
- Azrin, N. H., & Nunn, R. G. (1978). *Habit control in a day*. New York: Simon & Schuster.

- Azrin, N., Nunn, R., & Frantz, S. (1980). Treatment of hairpulling (trichotillomania): A comparative study of habit reversal and negative practice training. *Behavior Therapy and Experimental Psychiatry*, 3, 257-260.
- Brondolo, E. (2000). Using imaginal desensitization as an adjunctive treatment for trichotillomania. *Behavior Therapist*, 23, 169-172.
- Christenson, G. A., Mackenzie, T. B., & Mitchell, J. E. (1991). Characteristics of 60 adult chronic hair pullers. *American Journal of Psychiatry*, 148, 365-370.
- Christenson, G. A., Pyle, R. L., & Mitchell, J. E. (1991). Estimated lifetime prevalence of trichotillomania in college students. *Journal of Clinical Psychiatry*, 52, 415-417.
- Deifenbach, G. J., Reitman, D., & Williamson, D. A. (2000). Trichotillomania: A challenge to research and practice. *Clinical Psychology Review*, 20, 289-309.
- Elliot, A. J., & Fuqua, R. W. (2000). Trichotillomania: Conceptualization, measurement, and treatment. *Behavior Therapy*, 31, 529-545.
- Jenike, M. A. (1989). Obsessive-compulsive and related disorders: A hidden epidemic. *The New England Journal of Medicine*, 321, 539-541.
- King, R. A., Scahill, L., Vitulano, L. A., Schwab-Stone, M., Tercyak, K. P., & Riddle, M. A. (1995). Childhood trichotillomania: Clinical phenomenology, comorbidity, and family genetics. *Journal of the American Academy of Child and Adolescent Psychiatry*, 34, 1451-1459.
- Mansueto, C. S., Goldfinger Golomb, R., McCombs Thomas, A., & Townsley Sternberger, R. M. (1999). A comprehensive model for behavioral treatment of trichotillomania. *Cognitive and Behavioral Practice*, 6, 23-43.
- Mansueto, C. S., Townsley Sternberger, R. M., McCombs Thomas, A., & Goldfinger Golomb, R. (1997). Trichotillomania: A comprehensive behavioral model. *Clinical Psychology Review*, 17, 567-577.
- Ninan, P. T., Rothbaum, B. O., Marsteller, F. A., Knight, B. T., & Eccard, M. B. (2000). A placebo-controlled trial of cognitive-behavioral therapy and clomipramine in trichotillomania. *Journal of Clinical Psychiatry*, 61, 47-50.
- Peterson, A. L., Campise, R. L., & Azrin, N. H. (1994). Behavioral and pharmacological treatments for tic and habit disorders: A review. *Developmental and Behavioral Pediatrics*, 15, 430-441.
- Robleck, T. M., Detweiler, M. F., & Fearing, T. (1999). Cognitive behavioral treatment of trichotillomania in youth: What went right and what went wrong? *Cognitive and Behavioral Practice*, 6, 154-161.
- Rothbaum, B. O., Shaw, L., Morris, R., & Ninan, P. T. (1993). Prevalence of trichotillomania in a college freshman population [Letter to the editor]. *Journal of Clinical Psychiatry*, 54, 72.
- Schlosser, S., Black, D. W., Blum, N., & Goldstein, R. B. (1994). The demography, phenomenology, and family history of 22 persons with compulsive hair pulling. *Annals of Clinical Psychiatry*, 6, 147-152.
- Silverman, W. K. (1999). The importance of walking on infirm or swampy ground. *Cognitive and Behavioral Practice*, 6, 163-167.
- Soriano, J. L., O'Sullivan, R. L., Baer, L., Phillips, K. A., McNally, R. J., & Jenike, M. A. (1996). Trichotillomania and self-esteem: A survey of 62 female hairpullers. *Journal of Clinical Psychiatry*, 57, 77-82.
- Spitzer, R. L., Williams, J. B. W., Gibbon, M., & First, M. (1992). The Structured Clinical Interview for DSM-III-R (SCID): I. History, rationale, and description. *Archives of General Psychiatry*, 49, 624-636.
- Swedo, S. E., & Leonard, H. L. (1992). Trichotillomania: An obsessive-compulsive spectrum disorder? *Psychiatric Clinics of North America*, 15(4), 777-790.

Swedo, S. E., Rapoport, J. L., Leonard, H. L., Schapiro, M. B., Rapoport, S. I., & Grady, C. L. (1991). Regional cerebral glucose metabolism of women with trichotillomania. *Archives of General Psychiatry*, *48*, 828-833.

Treadwell, K. R. H., & Franklin, M. E. (1999). Cognitive behavioral treatment of trichotillomania: Review of case material. *Cognitive and Behavioral Practice*, *6*, 173-182.

Tkel, R., Keser, V., Karah, N. T., Olgun, T., & Calikusu, C. (2001). Comparison of clinical characteristics in trichotillomania and obsessive-compulsive disorder. *Anxiety Disorders*, *15*, 433-441.

Watson, S., & Winter, D. A. (2000). What works for whom but shouldn't and what doesn't work for whom but should? A case study of two clients with trichotillomania. *European Journal of Psychotherapy, Counseling & Health*, *3*, 245-261.

Zalsman, G., Hermesh, H., & Sever, J. (2001). Hypnotherapy in adolescents with trichotillomania: Three cases. *American Journal of Clinical Hypnosis*, *44*, 63-68.