

**Case Study**

Habit Reversal Training and Relaxation Training for the Treatment of Adult-Onset Trichotillomania due to Premature Greying

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ARTICLE INFO

Keywords:

Trichotillomania, Habit Reversal Training, Stress Management, Relaxation Training, Behavioral Intervention

How to Cite:

Haqqi, S. A., Farhan, S., Shah, S. Z. A., Kalhoro, S., Ali, S. K., Maheshwary, N., Asif, M. I., & Asif, W. (2025). Habit Reversal Training and Relaxation Training for the Treatment of Adult-Onset Trichotillomania due to Premature Greying: Habit Reversal and Relaxation in Adult Trichotillomania. *Pakistan BioMedical Journal*, 8(6), 38-43. <https://doi.org/10.54393/pbmj.v8i6.1229>

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Received Date: 14th April, 2025

Revised Date: 28th May, 2025

Acceptance Date: 8th June, 2025

Published Date: 30th June, 2025

ABSTRACT

This case study demonstrates the use of Habit Reversal Training (HRT) combined with Relaxation Training (RT) in addressing trichotillomania. The subject, a 28-year-old woman, reported experiencing stress and frequent lateness to work. Her hair-pulling behavior, triggered by the early appearance of grey hair, led her to spend 30 to 60 minutes each morning pulling her hair, which contributed to her tardiness. Over the course of 14 weekly therapy sessions, interventions included self-monitoring, psychoeducation, identification and modification of visual triggers, stimulus-response strategies, and restructuring daily routines. The treatment resulted in reduced stress and effective control of hair-pulling behaviors. The case suggests that incorporating a hair care regimen into therapy may further enhance positive outcomes. It also highlights the importance of considering both psychological and societal influences in the development and treatment of trichotillomania.

INTRODUCTION

Theoretical and Research Basis for Treatment

Trichotillomania is defined by a persistent, overwhelming urge to pull out hair from various body regions, leading to noticeable hair loss, significant emotional distress, and disruption in daily functioning. Unlike hair loss from dermatological conditions, the hair loss seen in trichotillomania results from self-inflicted trauma,

highlighting the role of psychological factors. The disorder is diagnosed more often in women, with prevalence estimates ranging from 1% to 2% [1]. Unlike dermatological forms of alopecia, the hair loss seen in trichotillomania results from self-inflicted trauma, as individuals deliberately pull out their own hair—highlighting the role of psychological influences. The condition is diagnosed more

often in women, with estimated prevalence rates ranging from 1% to 2%. Studies indicate that hair-pulling episodes are often set off by particular triggers, such as stressful life events, certain hair textures, or specific emotional states [2]. Focused and automatic are the two subtypes of trichotillomania. With focused trichotillomania, people pull their hair consciously and purposefully, frequently as a coping mechanism for stress or boredom, and they are more conscious of what they are doing [3]. Automatic trichotillomania, on the other hand, happens unconsciously and frequently happens when a person is distracted or working on another task [4]. This distinction has been questioned, though, by Grant and Chamberlain (2021), who propose that both targeted and automatic hair-pulling can happen during the same episode or at separate periods for the same person [5]. These characteristics could be clinically significant, although they don't always indicate different subtypes. Trichotillomania has been connected to a number of psychological issues; stressful life events, such as traumatic experiences, interpersonal disputes, or pressures from the workplace or school, can cause or exacerbate hair-pulling episodes. Additionally, in people with trichotillomania, more frequent and severe hair pulling is associated with higher levels of stress [5]. Additionally, Woods *et al.*, (2006) investigated the psychological elements, such as stress, linked to trichotillomania [6]. The findings showed that, in comparison to those without the illness, those with trichotillomania reported higher levels of chronic stress [7]. According to the authors' hypothesis, stress may either cause or sustain the symptoms of trichotillomania [8]. A mix of behavioral therapy, medication, and support techniques are commonly used to treat trichotillomania [9-11]. The Habit Reversal Training (HRT) component of Cognitive-Behavioral Therapy (CBT) has demonstrated notable effectiveness in assisting people in reducing hair-pulling behaviors by raising awareness and creating other coping mechanisms [12]. Another potential strategy is Acceptance and Commitment Therapy (ACT), which aims to help people resolve to change their behavior and accept their urges without acting on them [6]. Although results can vary and frequently point to the necessity for integrated therapeutic approaches, pharmacological therapies, such as Selective Serotonin Reuptake Inhibitors (SSRIs) like fluoxetine, have also been utilized to address trichotillomania [2]. In order to effectively cure trichotillomania and enhance general quality of life, it is imperative that various treatment methods be integrated and customized to each patient's needs. This particular viewpoint was the focus of the current case study. Habit Reversal Training, Relaxation Training, and a hair care

regimen were the main components of the psychotherapy. One type of cognitive behavioral treatment is habit reversal training. Research has repeatedly shown that HRT is one of the most successful therapies for trichotillomania, outperforming medication with either SSRIs or Clomipromine [3]. This is why Habit Reversal Training was selected. Based on Cognitive Behavioral Therapy (CBT), Habit Reversal Training (HRT) aims to recognize and change maladaptive thoughts and actions. The relationship between stressor and hair-pulling is strengthened when someone pulls their hair to relieve stress after being exposed to a particular stressor or occurrences. This habit is reinforced by the momentary respite [13]

Case Introduction

A 28-year-old unmarried female patient presented to a campus-based clinic with complaints of stress and workplace issues involving getting late for work. During the second session, the patient revealed that she gets late to work because she has a habit of checking and plucking her scalp hair. She expressed that it was an embarrassing problem and she was reluctant to share it at the first session. This hair pulling behaviour was motivated by her fear of developing grey hair, which she suspected was occurring. It was stated by the patient that although plucking out greying hair brings a strong sense of satisfaction and relieves her of stress, she feared developing extensive alopecia due to her habits [14]. The patient reported that hair pulling behaviour had commenced six months ago when she first noticed three strands of greying hair. Furthermore, the patient reported that initially she used to pluck white hair only and would spend time searching for those, "hunting down white hair" felt like a game and relieved her of stress. But from last month not all the plucked hair was white; in fact, the majority were black, and she pulled them out of suspicion that they might turn white in the future. Since the hair pulling was not restricted to one specific scalp site alopecia was not that obvious at this stage because she plucked hair from different sites every day and is not focused on one or few specific sites. However, one could observe small patches of hair loss dispersed across the scalp. She mentioned that she has started covering her head so that people cannot see the hair loss [15].

Trichotillomania is a distressing body-focused repetitive behavior characterized by recurrent hair pulling leading to noticeable hair loss and functional impairment. Although Habit Reversal Training and Relaxation Training have demonstrated efficacy in managing trichotillomania, limited literature exists on adult-onset cases triggered specifically by premature greying within sociocultural contexts such as Pakistan. This case study aims to evaluate

the effectiveness of a combined HRT and relaxation-based intervention, supplemented with a structured hair care regimen, in reducing hair-pulling behavior and associated stress in an adult female patient.

Presenting Complaints

The initial problems disclosed by patient included stress and workplace issues, notably conflicts. She revealed that her emotional distress was precipitated by difficulties with her office manager due to her persistent tardiness and issues with punctuality. The apprehension of facing termination exacerbated her stress levels, thereby leading to poor work performance which in turn aggravated her symptoms of stress further. Patient reported experiencing physical manifestations of stress, including symptoms such as neck stiffness and migraines. These physiological effects can be attributed to the heightened stress levels she experienced. It was during second session that patient was getting late to work due to her habit of hair pulling and that she had started to develop diffuse alopecia [16].

History

Patient stated that she had only lately started tugging her hair and that she had no past or childhood history of doing so. She added that there was no family history of trichotillomania or other mental illnesses. Although patient admitted to feeling anxious at test times, she explained that this had never gotten to the point where it affected her academic performance. She revealed that about six months ago, she saw some greying hairs on her head and felt compelled to pull them out. This first incident of hair pulling eventually evolved into a ritualistic behavior for her.

Assessment

Patient discussed her presenting problems, which are mentioned above, in an intake interview. During the second session, she disclosed the reason for her tardiness to work, which was her tendency to pull her hair. Using the Depression, Anxiety, Stress Scale (DASS-21; Lovibond and Lovibond, 1995), a preliminary screening for symptoms of stress, anxiety, and depression was conducted. This 21-item scale gauges how severe stress, anxiety, and sadness are. The Depression Anxiety Stress Scale (DASS-21) results showed that moderate stress was present, and the anxiety and depression scores were within the normal range. The Milwaukee Inventory for Styles of Trichotillomania-Adult Report was administered, confirming that the hair pulling style was focused [1]. The Psychiatric Institute Trichotillomania Scale (PITS; Winchel et al., 1992) was also administered to further understand the extent and nature of hair pulling [11]. It was revealed that she spent 30 minutes to one hour each day pulling her hair, this involved both the inspection and the actual act of taking out hair,

mostly in the morning before work. She reported that she was rarely ever able to resist the urge to pull hair and it was frequently impacting one major life activity at this point (i.e., work life). It was also indicated that she worries daily about hair pulling, and distress caused by it is moderately severe. On further probing she revealed that she only started to worry about hair loss recently when she started to pull black hair based on suspicion and observed small patches of hair loss. Upon inspection mild loss of hair (seen only if area is pointed out) was observed. A few (2 to 3) strands of greying hair could also be seen. She was asked to keep track of how many hairs she pulled each day, and it was found that she pulled 20 to 30 hair strands daily [17].

Case Conceptualization

The workplace conflicts, issues of tardiness, and the resulting stress in this situation was coming from hair pulling behaviour (trichotillomania) of the patient. Moreover, the obsession with pulling white hair was found to stem from the fear of getting older and not finding a suitor for marriage as her age was showing up in her hair. In many cultures, including some Asian and Middle Eastern societies, there can be significant societal pressure on women to conform to certain beauty standards and expectations. Particularly, marriageability in South Asian societies is commonly tied with age, physical appearance, lineage, and economic status. With women expected to marry before their thirties there is an immense pressure on them which is tied to their chronological age. The patient stated that her grey hair reminded her of her marriageability, which is dropping with age. Patient talked extensively about her fear of not getting married because of greying hair, she stated that in Pakistan suitors and their families scrutinize you a lot. She stated that her self-image had suffered considerably since her hair started greying. Research has established that in Asian countries delayed or late marriages lead to negative consequences for the individuals. This, patient's fears were not irrational and were a reaction to society's attitudes towards marriageability of women and the process of selection of suitors for marriage in Pakistan. The primary goal of the treatment decided by the patient was to stop the hair pulling behaviour.

Course of Treatment and Assessment of Progress

The psychological treatment consisted of Habit Reversal Therapy (HRT) combined with relaxation training, while HRT treatment targeted symptoms of Trichotillomania, the relaxation training was included to manage elevated levels of stress. Treatment lasted for 14 sessions each of forty-five minutes conducted on weekly basis. During the initial phase the assessment and functional analysis of hair pulling behaviour was done, the focus was on exploring

more about the visual trigger (i.e., white hair), provision of psychoeducation about trichotillomania, goal setting, and teaching self-monitoring strategies. The patient was instructed to maintain a record of the duration spent on hair pulling, the number of hair strands pulled, and the visual documentation of pulled hair through photographs. Additionally, the patient was advised to keep track of the ratio of white to black hair strands pulled during each session. The purpose was to make her realize that at this point she was pulling most of the hair on the basis of suspicion of them turning grey and also to make her aware of the hair loss. Relaxation training was introduced during the third and fourth sessions, also during third session it was revealed that the patient was pulling an average of 20-30 strands of hair per day, and the ratio of white to black hair among the pulled hair was 2:20, which was substantiated by the patient's pictorial record. She was given a task to do deep breathing exercise daily particularly after waking up. The fourth session focused on awareness training and introduced the patient to the concept of avoiding triggers. A strengths and weaknesses worksheet was utilized to facilitate the patient's realization that she possessed the necessary resources to manage the issue. The fifth session focused on the patient's fear of greying hair, which was examined in-depth. She acknowledged feeling overwhelmed by societal and parental pressure to get married and that grey hair reminded her of her age and the possibility of rejection by potential suitors. To address this, she was introduced to the concept of cognitive defusion and taught how to distance herself from such unhelpful thoughts. She extensively talked about her fears and brought up some family related issues. Her self-image had lately suffered a lot and she feels hopeless day by day as her problems with hair is aggravating. During the subsequent session, the patient reported continued urges to inspect her hair. To manage her primary trigger, namely white hair, the patient agreed to employ several stimulus response interventions, such as gradually reducing the time spent on hair inspection by 5 minutes each week and engaging in visually stimulating activities like playing video games particularly the ones involving sorting and targeting specific visual cues like Fruit Ninja or sorting games on Lumosity. As most hair pulling occurred in the morning just after waking up, the patient's morning routine was reviewed and restructured to limit hair inspection time, and an alarm was set to indicate when to stop hair inspection. Through seventh, eighth, and ninth session the progress was monitored, and we discussed any obstacles or barriers which showed up during implementation of behavioural strategies. The barriers were discussed, and she was taught how to manage those by positive self-affirmation

techniques and relaxation training. Stress and its management were also monitored. It was reported that issues at the office were resolving slightly since she was being able to manage time. In the tenth session patient reported that she was developing resistance towards hair pulling urge and was finding it easier to avoid hair pulling but still she couldn't resist hair inspection. Additionally, she suggested temporarily dyeing her hair to eliminate the visual trigger. She got her hair dyed and it proved effective in removing the trigger temporarily; she reported in the eleventh session that she felt confident and satisfied. Subsequent progress was monitored throughout the twelfth and thirteenth sessions, with a focus on implementation of behavioural strategies and relaxation training. According to patient, she felt better about herself and realised that she cared about other but not herself and it felt great that she was now focused on her wellbeing. In addition, the patient's stress and its management were continuously monitored. To augment the treatment regimen, a further behavioural strategy involving hair care was introduced, with the patient instructed to engage in activities such as applying hair masks and oiling as a means of promoting self-love and self-care. In the fourteenth therapy session, the patient reported the successful avoidance of tardiness to work for one week and a concurrent ability to refrain from hair pulling and hair inspection for the first time in six months. At the conclusion of the fourteenth week of treatment, a positive outcome was achieved with regards to the resolution of trichotillomania. Furthermore, the patient displayed a significant reduction in stress levels compared to the pre-treatment phase. A follow up session was conducted with a gap of two weeks and it was reported by the patient that she hadn't experienced any urge to inspect or pull hair [18, 19].

Complicating Factors

Patient was not comfortable in discussing her fears surrounding marriageability, prioritizing the cessation of her hair-pulling habit while consciously avoiding delving into the underlying cause. She claimed that because she expected upsetting and unpleasant memories associated with the topic to surface, she did not want to talk about it. The possible scope of her treatment may have been limited by this avoidance.

Access and Barriers to Care

In this instance, there were no obstacles to care or problems with access.

Follow-Up

The patient was booked for a follow-up appointment one month later. She admitted throughout the discussion that she still uses several techniques, namely meditation and hair care. Even so, she no longer had to deal with tension or

disputes at work because of her tardiness. She did express persistent pressure and worry about marriage and possible rejection by potential suitors, though. The patient was counselled to think about counselling and treatment, particularly acceptance and commitment therapy, as a way to deal with these ongoing problems.

Treatment Implications of the Case

In this instance, the trichotillomania symptoms brought on by early greying were resolved by the combination of HRT and RT. Studies have shown that this combined approach is effective. Compared to a control group, HRT plus RT significantly reduced hair-pulling symptoms, according to a randomized controlled experiment by Woods, Twohig, and Flessner (2006). The addition of RT to HRT improved treatment outcomes and led to a higher reduction in the intensity of hair-pulling [1]. In this instance, adding a hair care routine to the Habit Reversal Training (HRT) and relaxation training (RT) interventions was beneficial because it reinforced the outcomes attained and helped to sustain the treatment effects. The patient's relationship with her hair improved as a result of it. The patient countered the destructive inclinations connected with hair pulling by actively devoting time and energy to hair care, which led to a progressive development of respect and appreciation for her hair. A major factor in supporting the outcomes of HRT and RT was this mentality change from destructive to self-nurturing behavior. Additionally, the hair care routine offered a useful substitute for hair removal and examination. The patient was able to swap out the unhealthy and compulsive behaviors for healthier ones by focusing their attention and energy on constructive and pleasant hair care activities. This substitution supported the behavioral adjustments made possible by HRT and assisted in ending the hair-pulling cycle. The hair care routine also served as a reminder and a way to reinforce the gains that were obtained during the sessions [20].

A key limitation of this study is its single-case design, which restricts generalizability and prevents causal conclusions. The reliance on self-reported measures and short follow-up duration further limits the strength of long-term outcome assessment. Future research should employ larger sample sizes, controlled experimental designs, and extended follow-up periods to evaluate the sustained effectiveness of integrated behavioral interventions while also examining sociocultural determinants influencing adult-onset trichotillomania.

Authors' Contribution

Conceptualization: WA

Methodology: SAH, SF, SZAS, SK, SKA, NM, WA, MIA

Formal analysis: SAH, SF, SZAS, SK, SKA, NM, WA, MIA

Writing and Drafting: SAH, SF, SZAS, SK, SKA, NM, WA, MIA

Review and Editing: WA, SAH, SF, SZAS, SK, SKA, NM, WA, MIA

All authors approved the final manuscript and take responsibility for the integrity of the work.

Conflicts of Interest

The authors declare no conflict of interest.

Source of Funding

The author received no financial support for the research, authorship and/or publication of this article.

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