

# Trichotillomania-Associated Personality Characteristics

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## Abstract

**Background:** Patients with Trichotillomania (TC) have an irreversible urge to pull their hair. This self-mutilation behavior is associated with high level of tension before and a sense of gratification and relief after TC.

**Objective:** To investigate the personality characteristics of patients suffering from TC.

**Method:** The study was performed on 43 TC patients and 43 gender and age-matched non-psychiatric control individuals who were asked to complete a Persian version of the NEO Personality Inventory-Revised (NEO PI-R).

**Results:** The TC patients had significantly higher scores on Neuroticism ( $p < 0.0001$ ) and Agreeableness ( $p < 0.05$ ) domains. The TC patients were high scorers in all Neuroticism subscales including anxiety, angry-hostility, depression, self-consciousness, impulsivity, and vulnerability to stress. The patient group had lower scores on the compliance scale, a subscale of Agreeableness.

**Conclusion:** According to Costa and McCrae (founders of the NEO PI-R) suggestions, the picture of the personality traits or characteristics displayed by our data resembles borderline personality disorder.

**Iran J Med Sci 2004; 29(3): 105-108.**

**Keywords** • Trichotillomania • personality • borderline • NEO PI-R

## Introduction

**T**richotillomania (TC) is described as a "traumatic, self-induced breaking, rubbing, plucking, and twisting of hair that lead to alopecia. The scalp is usually affected with possible involvement of the eyebrows and lashes. The patients with this condition may have underlying emotional or psychiatric problems.<sup>1</sup> In fact, TC is a disorder with irreversible urge of patients to pull their hair. It is usually associated with a high level of tension before, and a sense of gratification and relief after pulling hair. The Diagnostic and Statistical Manual of Mental Disorders-fourth edition-Text Revision (DSM-IV-TR)<sup>2</sup> classified TC as an impulse control disorder. TC has been reported to have co-morbidity with many forms of psychiatric disorders including obsessive-compulsive disorder,<sup>3,4</sup> impulse control disorder,<sup>5,6</sup> mental retardation,<sup>7</sup> schizophrenia,<sup>8</sup> or even a form of self-mutilation behavior.<sup>9</sup> The most remarkable report, among few studies on personality of patients suffering reported

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a systematic study on personality characteristics utilizing structured interview, including DSM-third edition-Revised (DSM-III-R) criteria as well as the revised version of the Minnesota Multiphasic Personality Inventory-2<sup>nd</sup> edition (MMPI-2).<sup>10</sup> Their findings on 42 patients with diagnosis of TC were in contrast with 48 matched females who showed that the TC group had lower incidence of cluster A personality symptoms or schizoid, Schizotypal, and paranoid. They concluded that no particular personality disorder could differentiate between TC patients and control individuals.<sup>10</sup>

Although the foregoing report did not show any particular relationship between hair pulling and personality characteristics, such self-mutilating behavior may not develop without any underlying psychological background. The MMPI-2 seems to be less sensitive to normal aspect of personality and is more concerned with pathological aspects.

The present study, therefore, was designed to investigate personality characteristics of patients suffering from TC in contrast to non-psychiatric female individuals. NEO Personality Inventory-Revised (NEO PI-R) was utilized. This inventory was originally designed for evaluating normal aspects of personality and commonly used in counseling and psychotherapy settings.<sup>11</sup>

**Patients and Methods**

The present study was carried out from October 1996 to March 2003 and comprised 43 patients with TC referred by dermatologists to psychotherapy clinics of Hafez Hospital in Shiraz for psychotherapy. Inclusion criteria for the patients consisted of TC diagnosis by interview and clinical judgment, age from 19 to 39 yrs and minimum formal education of 9 yrs. Control individuals were selected from a pool of individuals who participated for standardization of the Iranian version of the NEO PI-R.<sup>12</sup> The groups were matched for age, gender and yrs of formal education. The domestic version of the NEO PI-R was utilized for personality assessment. This is a questionnaire composed of 240 statements measuring 5 major domains of personality.<sup>13</sup> These include Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. The score for each domain was the summation of six lower order facets. For example, the score of Neuroticism was the sum of scores of lower order facets of: anxiety, angry-hostility, depression, self-consciousness, impulsivity and vulnerability to stress. The inventory had been standardized for 502 Iranian individuals and were acceptable, reliable and valid as consistent and internal.<sup>12</sup>

**Table 1: The mean scores for NEO PI-R domains**

Domains	TC patients	Non-psychiatric controls
Neuroticism	119.4 ± 24.9	94.0 ± 24.1
Extraversion	105.4 ± 22.7	112.6 ± 19.7
Openness	111.9 ± 15.6	112.9 ± 16.2
Agreeableness	107.2 ± 16.3	114.1 ± 15.0
Conscientiousness	110.9 ± 18.5	112.8 ± 15.2

*Statistical analysis*

Data are presented as Mean±SD. A multivariate analysis of variance (MANOVA) test was utilized for analysis of the data. In this model gender and groups under study were selected as independent and the scores for NEO PI-R domains as dependent variables. Student t test was also used to compare the group scores of facets.

**Results**

The present study was performed on 43 Patients with TC, including 34 females (79.1%) and 9 males (20.9%) as well as 43 non-psychiatric individuals comprising 34 females and 9 males. The mean age of the TC patients was 21.9±5.35 and that of the control group was 20.9±6.3. The mean yrs of formal education for patient and control groups were 12.6 ±2.1 and 12.9±2.9 respectively. The results showed no gender effect, whereas significant difference was found between groups with respect to the scores of domains (p<0.05). Table 1 shows the means scores for the domains of NEO PI-R.

The univariate analysis tests revealed that (Table 2) groups were different with respect to Neuroticism (p<0.001) and Agreeableness scores (p< 0.05).

The results of t-test analysis for scores of the subscales of Neuroticism and Agreeableness domains showed that TC patients had significantly higher scores on all neuroticism subscales in contrast to normal control individuals. The TC patients statistically had significant lower scores on the compliance subscale of Agreeableness domain as opposed to control group. They also had marginally lower scores on the trust subscale scores as compared with control group.

**Discussion**

The present study was designed to investigate the possible personality characteristics of a group of TC patients in contrast to a group of normal individuals. Earlier reports showed TC may have co-morbidity with obsessive-compulsive disorder,<sup>3,4</sup> impulse control disorder,

**Table 2: The mean scores for Neuroticism and Agreeableness facets**

Domains Subscales	TC Patients	Non- psychiatric controls	p-value
<b>Neuroticism</b>			
Anxiety	19.8 ± 6.4	16.1 ± 5.70	0.006
Angry-Hostility	21.0 ± 6.18	15.2 ± 6.00	0.0001
Depression	22.6 ± 6.05	17.0 ± 6.15	0.0001
Self-consciousness	19.3 ± 4.82	17.3 ± 3.68	0.033
Impulsivity	18.2 ± 4.52	14.3 ± 4.08	0.0001
Vulnerability to Stress	18.5 ± 5.70	14.0 ± 5.42	0.0001
<b>Agreeableness</b>			
Trust	17.2 ± 5.83	19.3 ± 4.47	0.06 NS
Straightforwardness	18.0 ± 4.96	19.2 ± 4.98	0.27 NS
Altruism	20.5 ± 4.26	21.3 ± 3.80	0.42 NS
Compliance	14.7 ± 4.75	17.0 ± 3.95	0.015
Modesty	17.0 ± 5.30	17.8 ± 4.43	0.50 NS
Tender-Mindedness	19.7 ± 3.51	19.5 ± 2.75	0.81 NS

der,<sup>5, 6</sup> mental retardation,<sup>7</sup> and schizophrenia.<sup>8</sup> The clinical picture of the TC also resembles a self-mutilation behavior.<sup>9</sup> Regardless of the wide range of disorders co-morbid with TC, no remarkable personality disorder has yet been reported to differentiate between TC patients and control individuals.<sup>10</sup>

The results of the present study suggested that patients with TC had remarkably negative emotions. According to Costa and McCrae, the initiators of NEO Personality Inventory, people having elevated scores on the neuroticism domain are emotionally unstable with overwhelmingly negative emotions.<sup>14</sup> More details about individuals with high scores on neuroticism domain may be found by searching through the scores of their domain subscales. According to professional manual of the NEO PI-R, people with high anxiety scores are suggested to be apprehensive, fearful, prone to worry, nervous, tense, and jittery.<sup>14</sup> Individuals with high angry-hostility scores are expected to have a tendency to experience anger and related status such as frustration and bitterness. High depression scores are associated with feeling of guilt, sadness, hopelessness, and loneliness. Individuals with high self-consciousness are not at ease with others, sensitive to ridicule, and prone to feelings of inferiority. High impulsiveness is usually associated with inability to control craving and urges. Elevated scores on vulnerability to stress subscale shows inability to cope with stress, becoming dependent, hopeless, or panicky when facing emergency situations. In addition to these characteristics, the TC patients participated in the present study showed significantly lower scores on agreeableness domain in contrast to the control individuals. The lower scorers in this domain were likely to be disagreeable, antagonist or egocentric.<sup>14</sup> They seemed to be skeptical of others' intentions and competitive rather than cooperative. The

patients in the present study had also lower scorers on the compliance subscale with interpersonal conflicts, aggressiveness and were prone to express anger whenever necessary and had marginally lower scorers on the trust subscale that is cynically skeptical of others assuming that they may be dishonest. As described elsewhere,<sup>14</sup> the picture of the personality trait or characteristics displayed by the data presented in our study is more likely to resemble borderline personality traits or even disorder. Self-mutilation, among various personality characteristics of individuals with borderline personality disorders, is performed to elicit help from others, to express anger or numbness against overwhelming stimuli which is best described for the TC patients.<sup>2</sup>

All TC patients participating in the present study showed satisfactory cooperation with their psychotherapists. They were highly honest in reaction to the personality test because, as they were told, it was to be used for planning their psychotherapy. The results obtained are utilized for the patients' cognitive-behavioral psychotherapy. The data for non-psychiatric individuals drawn from a pool prepared for standardization of the Iranian version of NEO PI-R are among limitations imposed on present investigations. The control individuals for future studies maybe selected from the member of patients' family or relevant socioeconomic group for a more appropriate comparison.

**Acknowledgement**

*This research was supported by Research Committee and Psychiatry Research Center of Shiraz University of Medical Sciences, Shiraz, Iran.*

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