Research Paper: Effects of Personality Traits and Perfectionism in Predicting Core Self-evaluations of Women With Trichotillomania and Healthy Women

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ABSTRACT

Objective: This study aimed to investigate the effects of the personality traits and perfectionism in predicting core self-evaluations of women with trichotillomania and healthy women.

Methods: This was a cross-sectional study. A total of 50 women affected with trichotillomania (age-matched with 50 normal women) were selected by convenience sampling method from counseling centers of Tabriz City, Iran. The participants completed the NEO Five Factor Inventory, perfectionism, and core self-evaluation scales. Data were analyzed by the stepwise multiple regression using SPSS16.

Results: The results indicated that the neuroticism and conscientiousness traits predict core self-evaluations in the normal women. Moreover, the neuroticism and openness to experience also predicted the core self-evaluation in those with trichotillomania, while the perfectionism could not predict core self-evaluation.

Conclusion: In this study, findings showed that personality traits contribute to predict core self-evaluations of women with trichotillomania and healthy women.

1. Introduction

Personality is a construct characterized by a complicated pattern of deeply individual characteristics that affects most areas of psychological functions (Millon, Millon, Migher, Grossman, & Ramnath, 2004). In other words, personality is a psychological organization that determines individual's thoughts and behaviors (Schultz & Schultz, 2012). Personality can be broken into components that are called personality traits, including openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Costa and McCrae believed that personality traits could be responsible for many behaviors and characteristics of individuals (Costa & McCrae, 1985). Several studies revealed that the effects of personality traits on psychological disorders and maladaptive behaviors are prominent (Bleek, Montag, Faber &

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Reuter, 2011; Moroz & Dunkley, 2015). Trichotillomania is one of these disorders that besides damaging psychological functions, impairs physical health such as appearance (Boudjouk, Woods, Miltenberger, & Long, 2000; Flessner, Woods, Franklin, Keuthen, & Piacentini, 2009; Franklin et al., 2008; Tay, Levy, & Metry, 2004; Tolin, Franklin, Diefenbach, Anderson, & Meunier, 2007).

Trichotillomania is a repetitive, chronic, debilitating period of pulling out one's own hair from scalp, eyebrows, eyelashes, or other areas. Based on DSM-IV-TR classification, trichotillomania was as an impulse control disorder (not classified elsewhere). However, in the DSM-5, trichotillomania is inserted in obsessive compulsive and related disorders category and the term "hair pulling disorder" has been added to the disorder's name. This change signifies the important similarity between trichotillomania and Obsessive-Compulsive Disorder (OCD) (Rufer et al., 2014).

Also, many studies revealed that trichotillomania is accompanied with negative psychosocial consequences such as low self-esteem, feelings of shame, and avoidance of social activities (Diefenbach, Tolin, Meunier, & Worhunsky, 2008; Woods, Flessner, Franklin, Keuthen et al., 2006). Investigators suggested that these consequences may be particularly associated with comorbid OCD or depression with trichotillomania that are often related to a "tendency toward perfectionism" (Mansueto, Golomb, Thomas, & Stemberger, 1999). Perfectionism is a personality characteristic described by setting extremely high standards for performance that is accompanied by critical self-evaluation and concern about other's evaluations (Stoeber & Childs, 2010; Flett & Hewitt, 2002). Although several self-help books written by researchers and therapists, e.g., Keuthen, Stein, & Christianson, 2001; Penzel, 2003, on trichotillomania indicate a connection between trichotillomania and perfectionism, most of the studies have stressed on OCD and perfectionism, and only one article has investigated the association of perfectionism with trichotillomania so far (Pelissier & O'Connor, 2004).

On the other hand, previous research has revealed that hair pulling behavior in trichotillomania disorder has an emotion regulation function and is a coping response style (Diefenbach, Tolin, Meunier, & Worhunsky, 2008; Shusterman, Feld, Baer, & Keuthen, 2009). The processes of coping with stress and the emotion regulation play an important role in the development of psychopathology (Compas et al., 2014). In consistent with these findings, the patients with trichotillomania usually pull hair to reduce their tension. In addition, stressful situations which are associated with unpleasant emotions usually stimulates hair pulling behavior which reflects maladaptive coping style (Shusterman et al., 2009; Teng, Woods, Twohig, & Marcks, 2002; Diefenbach et al., 2008).

Although there are various explanations for why some individuals successfully manage stressful situations and some not, several organizational behavior investigators have emphasized the role of self-esteem, locus of control, and emotional stability in coping (Spector, Zapf, Chen, & Frese, 2000). Self-esteem, locus of control and emotional stability are closely related to the concept described as core self-evaluation (Judge & Ilies, 2002). Core self-evaluation is a useful unifying framework for understanding individual diversity in the appraisal and response to the stressful situations. Core self-evaluation is a complex concept that includes self-evaluation of own self-worth, competence, and abilities, which is composed of 4 personality traits: self-esteem, locus of control, generalized self-efficacy, and neuroticism (Judge, Locke, Durham, & Kluger, 1998). These personality traits indicate the self-appraisal of personal competence, appraisal of own emotional functioning and control. Previous studies indicate that core self-evaluation is strongly and positively correlated with well-being (Brunborg, 2008; Yan & Su, 2012). In other words, individuals with positive core self-evaluations appraise themselves in a consistently positive manner across situations; such individuals see themselves as capable, worthy, and in control of their lives, so they are less prone to psychological disorders (Judge, VanVianen, & de Pater, 2004).

Although previous studies on trichotillomania have been focused on predisposing factors, the role of personality traits and perfectionism in the development of core self-evaluation of patients with trichotillomania had been neglected and needed more research. Thus based on previous research, the present study aimed to investigate the role of personality traits and perfectionism in predicting core self-evaluations of women with trichotillomania and normal ones.

2. Methods

This was a descriptive-correlational and cross-sectional study. The study population comprised all women aged between 20 and 50 years living in Tabriz City. The sample consists of 50 patients meeting DSM-IV diagnostic criteria for trichotillomania and 50 normal participants. Subjects were selected by convenience sampling method from counseling centers of Tabriz and then referred to Azad University of Tabriz to identify clinical and subclinical trichotillomania. Subjects were recruited over a 3-year period (2012-2015).

Inclusion criteria were as follows: 1) having the diagnostic criteria of trichotillomania based on DSM-IV; 2) being woman; 3) aged between 20 and 50 years. Furthermore, normal participants were being women who matched by gender, age and education with patient group. The exclusion criteria were reluctance to participate in the study and having past or present psychosis. After obtaining permission from these centers, individuals were diagnosed. Then all participants were informed about the purposes of the study and received the instructions of filling out the questionnaires. Participants agreed to take part in a study on investigating the effects of personality trait and perfectionism on trichotillomania, while they were free to leave the study whenever they want. Afterwards, they completed the questionnaires. Finally, data of 100 participants were used in analysis.

Study instruments are Core Self-Evaluations Scale and NEO Five-Factor Inventory (NEO-FFI). The Core Self-Evaluations Scale (CSES) (Judge, Erez, Bono, & Thoresen, 2003) is a 12-item questionnaire designed to assess the underlying self-evaluative factor. This scale consists of 4 subscales of self-esteem, generalized self-efficacy, neuroticism, and locus of control. The participants were asked to respond to items on a 5-point Likert-type scale ranging from 1=strongly disagree to 5=strongly agree. The higher score indicates higher core self-evaluation. In Judge et al. (2003) study, the internal consistency of the scale was good, α=0.80 (2003). The Cronbach α coefficients in another study for 4 discrete groups were between 0.80 and 0.84 (Sharati, Garosi, Babapour, 2010). In this study, the scale had a Cronbach α coefficient of 0.79.

NEO Five-Factor Inventory (NEO-FFI) (Costa & McCrae, 1992) consists of 60 items with a 5-Likert scale response format (0–4 points). This scale was designed to measure the personality dimensions, including extraversion, neuroticism, openness to experience, conscientiousness, and agreeableness; their coefficient α values were reported as 0.92, 0.89, 0.87, 0.86, and 0.90, respectively (Costa & McCrae, 1992). In other studies, the reliability of this scale was 0.53 to 0.87 (Besharat, 2005).

Multidimensional perfectionism questionnaire (Hewitt & Flett, 1990) is a 45-item scale (Hewitt & Flett, 2004) used to determine socially prescribed, other-oriented, and self-directed perfectionism. It has exhibited satisfactory reliability and validity in numerous studies, e.g., Hewitt & Flett, 2004. The Persian version of multidimensional perfectionism questionnaire has high internal consistency (Cronbach α=0.91) and acceptable test-retest reliability, r=0.85 (Soofiani, 2007). The current sample also demonstrated adequate internal consistency and acceptable test-retest

reliability in socially prescribed perfectionism (Cronbach α=0.81, r=0.60), other-oriented perfectionism (Cronbach α=0.74, r=0.66), and self-directed perfectionism (Cronbach α=0.88, r=0.69). Participants were asked to what degree they agreed with each statement and responded on a scale from 1 (strongly disagree) to 7 (strongly agree).

Statistical analysis was performed using the SPSS16. In order to analysis the data, we used descriptive (mean and standard deviation) and inferential statistics (multiple regression by stepwise method). At first, the Pearson correlation was assessed to examine the relationship between study variables. After that, a stepwise regression analysis was performed in order to determine the proportion of personality traits and perfectionism in predicting core self-evaluation in women with trichotillomania and normal women (P<0.05).

3. Results

Table 1 shows the mean and standard deviation of personality traits, perfectionism, and core self-evaluation in normal and trichotillomania women. Based on the result of variance homogeneity test, except other-directed perfectionism (other-oriented perfectionism F=4.014, P=0048), variance of other variables between two groups are homogenous. Table 2 presents the results of independent t test between patients with trichotillomania and healthy individuals. Based on significance of t-test, the difference between groups in neuroticism, self-directed perfectionism, socially prescribed perfectionism, total perfectionism and core self-evaluation are significant. But with respect to extraversion, openness to experience, agreeableness, and conscientiousness, the difference is not significant.

Regression analysis by stepwise method was used to determine the proportion of personality traits and perfectionism in explaining the variance of core self-evaluation in women with trichotillomania and normal women. Results are summarized in Table 4 and 6.

Table 3 and Table 5 show the Pearson correlation among variables. Table 3 shows the Pearson correlation test among all variables of normal women and Table 5 shows result of the Pearson correlation test among all variables of women with trichotillomania.

At first we tested multiple regression statistical assumption by checking for multivariate outliers with the Mahalanobis distance. Based on this outcome, no cases was eliminated from the analysis. After that, we assessed collinearity statistics and our result showed that the tolerance of all the predictors are far in excess 0.01 suggesting that multicollinearity is not a problem.

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According to Table 4 when neuroticism enters the regression, adjusted R^2 is 0.39, which means that 39% of the variance of core self-evaluation of normal women is explained by neuroticism. In the next step, conscientiousness is entered and adjusted R^2 is 0.43, which means that neuroticism and conscientiousness can explain 43% of the variance of core self-evaluation of normal women. In the present study, the equation representing the prediction model is this:

Core self-evaluation of healthy women=-0.59, neuroticism; and=+0.22, conscientiousness, meaning that when the score of neuroticism increases one point, the mean severity of core self-evaluation of normal women decreases 0.59 point and also one point increase in conscientiousness corresponds to 0.22 rise in core self-evaluation of normal women.

According to Table 6, when neuroticism enters the regression, adjusted R^2 is 0.31, which means that 31% of the variance of core self-evaluation of healthy women is explained by neuroticism. In the next step, openness to experience is entered and adjusted R^2 is 0.40, which means that neuroticism and openness to experience can explain 40% of the variance of core self-evaluation of women with trichotillomania in the present study.

4. Discussion

The present study aimed to investigate the role of personality traits and perfectionism in predicting core self-evaluations of women with trichotillomania and normal women. Results showed that the neuroticism trait and conscientiousness can predict the core self-evaluations in the nor-

Table 1. The means and standard deviation of variables

Variable			Mean	SD
Personality traits	Healthy women	Neuroticism	20.6	8.08
		Extraversion	28.84	5.86
		Openness to experience	29.96	5.22
		Agreeableness	31.18	6.73
		Conscientiousness	34.72	7.65
	Women with trichotillomania	Neuroticism	24.32	7.78
		Extraversion	26.80	6.13
		Openness to experience	31.34	5.54
		Agreeableness	30.24	6.60
		Conscientiousness	33.28	6.23
Perfectionism	Healthy women	Self-directed perfectionism	24.18	5.81
		Other-directed perfectionism	26.86	7.43
		Socially prescribed perfectionism	24.28	6.46
		Total perfectionism	75.32	16.50
	Women with trichotillomania	Self-directed perfectionism	29.80	6.98
		Other- directed perfectionism	32.18	5.57
		Socially prescribed perfectionism	28.14	6.42
		Total perfectionism	90.12	14.63
	Healthy women	Core self- evaluation	44.12	6.16
	Women with trichotillomania	Core self-evaluation	39.80	5.92

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Table 2. Result of T-test among all study variables to compare the mean score of women with trichotillomania and healthy individuals

Dependent Variables	F	P value	t	df	P value
Neuroticism	0.005	0.941	2.344	98	0.021
Extraversion	0.053	0.818	-1.701	98	0.092
Openness to experience	0.728	0.396	1.281	98	0.203
Agreeableness	0.007	0.933	-7.05	98	0.482
Conscientiousness	0.389	0.534	-1.032	98	0.305
Self-directed perfectionism	1.555	0.215	4.374	98	0.0001
Other-directed perfectionism	4.014	0.048	4.049	98	0.0001
Socially prescribed perfectionism	0.353	0.554	2.995	98	0.003
Total perfectionism	0.004	0.952	4.746	98	0.0001
Core self- evaluation	0.456	0.501	-3.575	98	0.001

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mal group, while neuroticism and openness to experience can predict the core self-evaluation in those with trichotillomania. Nevertheless, this hypothesis that perfectionism could predict core self-evaluation was not confirmed in this study. These findings are consistent with previous results demonstrating that trichotillomania disorder is strongly

influenced by the perception of individual about stressful situations and their ability to cope (Teng et al., 2002). Trichotillomania disorder is a coping response with an emotion regulation function similar to many psychological disorders such as binge eating, substance abuse, or self-harm which relate to the emotion regulation. And

Table 3. Result of the Pearson correlation test among all variables of normal women

Variables	Neuroticism	Extraversion	Openness to Experience	Agreeableness	Conscientiousness	Self-directed Perfectionism	Other-directed Perfectionism	Socially Prescribed Perfectionism	Total Perfectionism	Core self-evaluation
Neuroticism	1									
Extraversion	-0.42**	1								
Openness to experience	0.15	0.01	1							
Agreeableness	-0.2	0.25	0.47**	1						
Conscientiousness	-0.22	0.43**	0.3*	0.49**	1					
Self-directed perfectionism	0.38**	-0.22	-0.05	-0.33*	-0.11	1				
Other-directed perfectionism	0.38**	-037**	-0.1	-0.43**	-0.13	0.54**	1			
Socially prescribed perfectionism	0.47**	-0.17	-0.21	-0.19	-0.22	0.48**	0.61**	1		
Total perfectionism	0.49**	-0.31*	-0.15	-0.39**	-0.18	0.78**	0.88**	0.84**	1	
Core self- evaluation	-0.64**	0.45**	0.08	0.12	0.36*	-0.25	-0.34*	-0.43**	-0.41**	1

*P<0.05., **P<0.01.

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Table 4. Results of stepwise multiple regression for personality traits and perfectionism, predicting core self-evaluation of healthy women

Model		R²	Unstandardized Coefficient		Standardized Coefficient	T	P Value
			B	SE	Beta		
Step 1	Constant		54.19	1.86		29.06	0.001
	Neuroticism	0.39	-0.48	0.08	-0.64	-5.79	0.001
Step 2	Constant		47.06	3.88		12.10	0.001
	Neuroticism	0.43	0.45	0.08	-0.59	-5.39	0.001
	Conscientiousness		0.18	0.08	0.22	2.06	0.044

that patients with trichotillomania pull their hair to regulate aversive internal experiences (Diefenbach et al., 2008; Grant, Odlaug, & Potenza, 2007; Shusterman, et al., 2009). Several studies supported these findings that core self-evaluations play an important role in the stress coping strategies (Bolger & Zuckerman, 1995; Maddi, 1999) and thus are associated with well-being (Klag & Brad- ley, 2004; Tougas, Rinfret, Beaton, & de la Sablonniere, 2005). This means that self-esteem and locus of control as subscales of core self-evaluation are associated with better management of stressful situations. Individuals who perceive themselves worthy and capable

of coping with stressors could better encounter the situations, whereas individuals who do not see themselves as worthy and capable could not manage their stressful situations well (Judge et al., 1998).

The results of this study also provided some evidence to explain the link between personality traits and core self-evaluation of normal women and those with trichotillomania. Personality traits are related to the specific patterns of behavior and social consequences that can be expected (John & Srivastava, 1999). Neuroticism is one of these personality traits that reflects individual dif-

Table 5. Result of the Pearson correlation test among all variables of women with trichotillomania

Variables	Neuroticism	Extraversion	Openness to Experience	Agreeableness	Conscientiousness	Self-directed Perfectionism	Other-directed Perfectionism	Socially Prescribed Perfectionism	Total Perfectionism	Core self- Evaluation
Neuroticism	1									
Extraversion	-0.35*	1								
Openness to experience	0.22	0.35	1							
Agreeableness	-0.29*	0.14	-0.02	1						
Conscientiousness	-0.39**	0.54**	0.09	0.38**	1					
Self-directed perfectionism	0.43**	-0.82	0.14	-0.53**	-0.39**	1				
Other-directed perfectionism	0.2	0.04	0.04	-0.43**	-0.05	0.59**	1			
Socially prescribed perfectionism	0.28**	0.1	-0.09	-0.12	-0.22	0.34*	0.23	1		
Total perfectionism	0.4**	0.02	0.05	-0.47**	-0.3*	0.85**	0.76**	0.69**	1	
Core self- evaluation	-0.58**	0.48**	0.29*	0.06	0.45**	-0.11	0.07	-0.36*	-0.18	1

*P<0.05. **P<0.01.

Table 6. Results of stepwise multiple regression for personality traits in predicting core self-evaluation of women with trichotillomania

Model		R²	Unstandardized Coefficient		Standardized Coefficient	T	P Value
			B	SE	Beta		
Step 1	Constant		50.43	2.29		21.99	0.001
	Neuroticism	0.31	0.43	0.09	0.57	4.86	0.001
Step 2	Constant		40.25	4.23		9.49	0.001
	Neuroticism	0.40	0.44	0.08	0.58	5.26	0.001
	Openness to experience		0.32	0.11	-0.30	2.78	0.008

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ferences of experiencing stress, depression, and anxiety. Higher neuroticism score is associated with irrational thinking, lower self-esteem, and utilizing ineffective coping strategies (McCrae & John, 1992; Watson & Hubbard, 1996). Thus it seems that neuroticism play an important role in predicting core self-evaluation. The results also stress on the role of conscientiousness factor in predicting core self-evaluation of normal women. Conscientiousness is described as the ability to be goal directed, lag immediate pleasure, think about the future, and have preference to follow social norms or outside expectations and act dutifully (John & Srivastava, 1999; McCrae & John, 1992). Theses characteristic are associated with the control, regulation, and direct individual's impulses. High scores on conscientiousness show a tendency to do planned behavior rather than spontaneous actions (Costa & McCrae, 1992). Thus, the higher score in conscientiousness indicates better emotion regulation and less likelihood of trichotillomania.

Openness to experience was another important personality trait in this study. It is defined as intelligence, imaginative, perceptive, creative, flexible, and willingness to experience different things (McAdams, 1992). The core feature of openness to experience is a characteristic that is related to the ability of imagination, creativity, emotional and fantasy richness, as well as unconventionality. As a result, individuals with high scores in this subscale would experience lower psychological disorders. In line with literature that demonstrated a negative relationship between openness to experience and psychological disorders (Butler, 2000), results of this study showed a significant negative correlation between openness to experience and core self-evaluation of those with trichotillomania. These findings indicate that openness to experience is related to adoption of diversity and using appropriate coping strategies to regulate stressors, so

the lower score in this subscale is predictor of core self-evaluation of women with trichotillomania (Jost, 2006).

Altogether, the findings of the current study indicate the difference between personality traits in predicting core self-evaluations of normal women and those with trichotillomania. Neuroticism predicts core self-evaluation in normal women and those with trichotillomania. Neuroticism is a vulnerability factor for many psychological disorders, so in the current study it negatively predicted core self-evaluation of normal women and positively correlated with core self-evaluation of women with trichotillomania. Also conscientiousness as a personality trait is associated with emotion regulation and has positive association with core self-evaluation of normal women. In addition, these findings showed that women with trichotillomania had lower openness to experience as a factor that showed lower ability for coping with stressors.

On the other hand, the other findings of this study showed that there are significant difference between normal women and those with trichotillomania. Women with trichotillomania had higher score in neuroticism and perfectionism (self-oriented perfectionism, other-oriented perfectionism, socially prescribed perfectionism, and total perfectionism) and lower score in core self-evaluation compared to normal women. These findings are supported by previous studies that showed higher association of core self-evaluation with well-being, life satisfaction, and lower possibility of mental disorder, (Danna & Griffin, 1999; Schat, Kelloway, & Desmarais, 2005), while higher perfectionism is related to many psychological disorders (Gámez, Chmielewski, Kotov, Ruggero, & Watson., 2011).

In conclusion, based on the findings of this study, it can be argued that attention to some underlying factors such

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as perfectionism, evaluation of the self, and personality factors are more effective and important in the treatment of patients with trichotillomania. It is also important to mention several limitations of the study. First of all, it was a cross sectional study, so that we cannot infer causal relationships in our findings. Second, participants' data were collected by self-report method. Moreover, the sample of this study comprised only women so we cannot generalize the findings of this study to all population. Thus, it is recommended to include wider samples, both men and women, in future studies, to investigate the clinical correlations of trichotillomania, and perform longitudinal studies for comprehensive understanding of trichotillomania.

Acknowledgments

Conflict of Interest

The authors declared no conflict of interests.

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