WCPCG-2011

The Evaluation of Prediction Potential Neuroticism and Extraversion According to Early Maladaptive Schemas

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Abstract

Schemas are a major determinant of how individuals think, feel, behave, and interact socially. According to Young's schema therapy the Early Maladaptive Schemas (EMSs) are thought to be trait-like in that they are stable over time. This study examined the relationship between EMSs with personality traits, Neuroticism and Extroversion of Five-factor model (FMM). One hundred and eighty-six students (100 boys, 86 girls) were included in this study. All participants completed the subscales of Neuroticism and Extraversion of NEO PI-R, and the Young Schema Questionnaire-Short Form (YSQ-SF). The result of Correlation analyses showed EMSs positively associated with Neuroticism and negatively associated with Extraversion. Regression analyses indicated that the EMSs such as Abandonment / Instability and Vulnerability to harm or illness can predict Neuroticism. Social Isolation (SI), Emotional Inhibition (EI) and Entitlement (ET) can predict Extraversion. Implications of these findings are discussed.
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Keywords: Early maladaptive schemas, neuroticism, extroversion, five-factor model, NEO PI-R;

1. Introduction

A fundamental question in personality research is how many basic dimensions are needed to describe individual differences in personality. Over the past decades researchers have made substantial progress in answering this question by using hierarchical models that group behavioural measures into higher-order clusters. One well-known example of such a hierarchical model is the Big Five and five factor model (Digman, 1990; Goldberg, 1981; McCrae & Costa, 1999), consisting of Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. These basic factors can explain and predict individual differences over a wide range of settings, including mental health, job satisfaction, and work performance (e.g., Barrick & Mount, 1991; Judge, Heller, & Mount, 2002). Yet, the theoretical discussion about the number of underlying basic personality dimensions remains open. The FFM has its historical roots in a lexical paradigm, which posits that all trait terms that are important for describing the personality functioning of oneself and others will have been encoded into language (John & Srivastava, 1999). Although the FFM was first derived from studies of the English language, it has since been reported within numerous other languages and cultures (Ashton & Lee, 2001).

Extraversion is the tendency to be sociable, dominant, and have positive emotionality (Watson & Clark, 1997), and has consistently been found to relate highly to dispositional or trait positive affect (PA; Watson & Clark, 1992). Trait PA is conceptualized as the general tendency feel happy, excited, and energetic (Watson & Clark, 1992). Researchers have posited that emotionality is related to different motivational systems, with positive emotionality (e.g., extraverts, high PA) facilitating approach motivation (e.g., goal-directed behavior; Watson, Weise, Vidya, &

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Tellegen, 1999). Neuroticism is the tendency to show poor emotional adjustment and experience greater stress, anxiety, and depression (Judge &. Ilies, 2002). Meanwhile, trait negative affect (NA) is conceptualized as the general tendency to feel anxious, angry, and upset. Not surprisingly, empirical research has consistently found a strong positive relationship between Neuroticism and NA (Watson & Clark, 1992), and NA is "commonly seen as a facet of Neuroticism" (Judge, Higgins, Thoresen, & Barrick, 1999). Given that individuals high in Neuroticism and dispositional NA tend to experience negative emotions, it is not surprising that research has linked these traits to many negative outcomes. For example, a large-scale meta-analysis by Thoresen, Kaplan, Barsky, Warren, and de Chermont (2003) found that NA was related to emotional exhaustion, decreased job satisfaction, and increased intentions to quit. In addition, empirical research has linked NA to increased work-family conflict (Michel & Clark, 2009). The dimension of Neuroticism is composed of the facets of anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability. As can be considered many studies have investigated the relationship between Neuroticism and Extraversion with many behaviors. However, these studies have many benefits; development of these traits should not be ignored. The current study tries to fill this gap in the previous studies with investigating how relation between two factors (N & E) and EMSs.

Schema therapy (Young, 1990) is an integrative therapy approach and theoretical framework used to treat clients with personality disorders, characterological issues, some chronic Axis I diagnoses, and various other difficult individual and couples' problems. Schema therapy evolved from Beck's cognitive therapy to integrate aspects of Cognitive therapy, Behavioural therapy, Object relations, Gestalt therapy, Constructivism, Attachment models, and Psychoanalysis. Schema therapy targets the chronic and characterological aspects of a disorder rather than the acute psychiatric symptoms (Martin, & Young, 2010). In schema therapy (Young, 1999; Young, Klosko, & Weishaar, 2003), (EMSs), are proposed as the core and main target for treatment of personality disorders and longstanding characterological problems. The current definition of an EMS is "a broad, pervasive theme or pattern, comprised of memories, emotions, cognitions, and bodily sensations, regarding oneself and one' s relationships with others, developed during childhood or adolescence, elaborated throughout one's lifetime and dysfunctional to a significant degree" (Thimm, 2010a). According to Young et al. (2003), EMSs arises from the frustration of psychological core needs in childhood (e.g., secure attachment, expression of valid needs, realistic limits) through ongoing patterns of adverse experiences with family members or peers, traumatisation, or inappropriate boundaries. A mismatch between parental rearing behaviour and the innate temperament of the child may also lead to the development of EMSs (Thimm, 2010b). EMSs perpetuate themselves through cognitive distortions, self-defeating life patterns, and maladaptive coping styles and lead directly or indirectly to psychological distress and to personality disorders (Young, 1999; Young et al., 2003). Schemas are a major determinant of how individuals think, feel, behave, and interact socially (Martin, & Yuong, 2010).

EMSs operate on the deepest level of cognition, usually outside of awareness, and make the individual psychologically vulnerable to develop depression, anxiety, dysfunctional relationships, addiction, childhood trauma, social phobia, substance abuse, eating disorders, personality disorders, panic disorder with agoraphobia and psychosomatic disorders (e.g., Thimm, 2010a, Young, 1999; Young et al., 2003; Waller, Kennerly, & Ohanian, 2007; Jovev & Jackson, 2004; Reeves, & Taylor, 2007; Hedley, Hoffart, & Sexton, 2001; Riso, Maddux, & Santorelli, 2007). The EMSs that Young distinguished can be grouped in five schema-domains: Disconnection / Rejection, Impaired Autonomy / Performance, Impaired Limits, Other-Directedness, Over vigilance / Inhibition (Bosmanns, Braet, & vleirberghe, 2010).

The purpose of this study is examining the relationship between EMSs and personality traits, Neuroticism and Extraversion. The second aim is to integrate the schema therapy with two big personality traits, Neuroticism and Extraversion. Based on schemas content and Neuroticism and Extraversion in five-factor model, we hypothesized that the Emotional Deprivation, Abandonment, Social isolation, and Vulnerability to harm or illness, Insufficient self–control schemas would independently predict a significant portion of Neuroticism, and Social isolation, Self – sacrifice, Insufficient self–control and Entitlement schemas would independently predict a significant portion of Extraversion.

2. Method

2.1. Participants

Participants of this study were 200 students (100 men, 100 women, 16 missing) from the University of Tehran. The mean age of the sample was 24.62 years (SD = 2.91); the mean age of male student was 25.71 (SD = 2.63), and for female student was 23.42 years (SD = 2.75). Age ranged between 19 and 37 years.

2.2. Measure

Schema Questionnaire–Short Form (SQ-SF). The Schema Questionnaire–Short Form (SQ-SF) measures 15 EMSs. The scales consist of the five it EMSs with the highest loadings on the 15 factors that emerged in a factor analysis of the long form of the SQ (Schmidt, Joiner, Young, & Telch, 1995). EMSs are grouped in five broad domains: Disconnection and Rejection (Abandonment (AB), Mistrust (MA), Emotional Deprivation(ED), Defectiveness (DS), Social Isolation (SI)), Impaired autonomy and Performance (Dependence (DI), Vulnerability(VH), Enmeshment (EM), Failure (FA)), Impaired Limits (Entitlement (ET), Insufficient self-control(SI)), Other-Directedness (Subjugation (SB), Self-Sacrifice (SS), Approval-Seeking (AS)), and Overvigilance and Inhibition (Negativity (NP), Emotional Inhibition (EI), Unrelenting Standards (US), Punitiveness (PU)). Respondents are asked to rate statements on a six point Likert scale from ''completely untrue of me'' to ''describes me perfectly''. The SQ-SF has in different studies shown adequate reliability, validity in predicting psychopathology, and factor structure (e.g., Calvete, Estevez, Lopez de Arroyabe, & Ruiz, 2005; Riso et al., 2006; Stopa, Thorne, Waters, & Preston, 2001; Waller, Meyer, & Ohanian, 2001). In Iran, Yousefi, Yousefi, Etemadi, Bahrami, Ahmadi, and Fatehizade (2010) examined the validity and reliability of EMSs questionnaire on a sample of 579 people (in two stages of 394 and 185 people), and using split-half Cronbach's alpha, the reliability for the whole sample, females and males was reported as 91% and 86%, 87% and 84%, and 84% and 81% respectively. The calculated Cronbach's alpha for all factors was above 81%, and it was 91% for the whole questionnaire. The highest and lowest Cronbach's alpha was calculated for Social Isolation/Alienation (α=91%) and Insufficient Self-control/Self-discipline (α=81%) respectively.

NEO-FFI. FFM personality traits were measured by the NEO Five Factor Inventory (NEO-FFI), a shortened version of the Neo-PI-R. The NEO-FFI contains 60 items that are to be rated on a 5-point scale (1–5; totally disagree, disagree, neutral, agree, totally agree) and derives scores for the personality traits Neuroticism, Extraversion, openness to experience, agreeableness, and conscientiousness. A score was calculated if no more than nine items in total or three items per subscale were left unanswered. Missing and ambiguous answers were substituted with the neutral option. In this study we used two subscales of this questionnaire, Neuroticism and Extraversion. In Iran, Kiamehr (2001) examined the validity and reliability of NEO questionnaire. The calculated Cronbach's alpha for all factors was 0.54-0.79, and it was 91% for the whole questionnaire.

2.3. Procedure

At the beginning of a lecture, students were invited to participate in the study. It was emphasized that participation was not obliged. The students who agreed to participate filled out an informed consent. Then the questionnaires were administered in a random order to avoid order effects in the data.

3. Results

To analyze the data we used correlation and regression analysis. Correlation coefficients were used to examine the association of the EMSs with the Neuroticism and Extraversion. Table 1 describes correlations between the variables of the study. With the exception of self–sacrifice and entitlement, all EMSs were negatively associated with Extroversion. Also the result of Correlation analyses showed EMSs positively associated with Neuroticism, too

Table 1. Correlation coefficients between EMSs and, N and E

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. N	1																
2.E	-0.41**	1															
3.ED	0.31**	-0.32**	1														
4.AB	.058**	-0.25**	0.27**	1													
5.MA	0.41**	-0.18**	0.37**	0.45**	1												
6.SI	0.45**	-0.41**	0.66**	0.43**	**0.47	1											
7.DS	0.35**	-0.33**	0.40**	0.39**	**0.29	0.56**	1										
8.FA	0.40**	-0.37**	0.44**	0.39**	**0.34	0.55**	0.62**	1									
9.DI	0.52**	-0.22**	0.33**	0.40**	**0.41	0.46**	0.41**	0.57**	1								
10.VH	0.43**	0.25**	0.37**	0.36**	**0.26	0.47**	0.55**	0.65**	0.65**	1							
11.EM	0.47**	-0.17*	0.22**	.041**	**0.32	0.35**	0.40**	0.51**	0.55**	0.66**	1						
12.SB	.047**	-0.23**	0.41**	0.45**	**0.27	0.47**	0.50**	0.60**	0.62**	0.73**	0.62**	1					
13.SS	0.18*	0.09	0.11**	0.20**	**0.21	0.15**	0.09	0.18*	0.24**	0.16*	0.28**	0.35**	1				
14.EI	0.30**	-0.31**	0.30**	0.28**	**0.27	0.42**	0.37**	0.36**	0.39**	0.34**	0.33**	0.39**	0.14*	1			
15. US	.026**	0.04	0.07	0.12	0.23**	0.28**	0.22**	-0.04	0.07	0.08	0.32**	0.27**	0.23**	0.28**	1		
16.ET	0.27**	0.08	0.30**	0.15*	**0.33	0.32**	0.18*	0.05	0.32**	0.20**	0.25**	0.26**	0.26**	0.23**	0.58**	1	
17.IS	0.39**	-0.18**	0.30**	0.39**	**0.28	0.41**	0.30**	0.40**	0.44**	0.42**	0.47**	0.50**	0.25**	0.30**	0.36**	0.55**	1

*p<0.05   **p<0.01

Entering EMSs as predictors of Neuroticism and Extraversion, linear regression was conducted. The regression resulted in a significant overall model predicting approximately 47% of the variance in Neuroticism ($R^2 = 0.47$, $p < 0.05$). The regression resulted in a significant overall model predicting approximately 47% of the variance in Extraversion ($R^2 = 0.47$, $p < 0.05$). Based on schemas content and Neuroticism and Extraversion in five-factor model, we hypothesized that the ED, AB, SI, and VH, IS schemas would independently predict a significant portion of Neuroticism, and SI, SS, IS and ET schemas would independently predict a significant portion of Extraversion; however only AB ($\beta = 0.35$, $t = 4.93$, $p < 0.05$) and VH illness ($\beta = 0.19$, $t = 2.25$, $p < 0.05$) schemas emerged as independent predictors of Neuroticism, and only SI ($\beta = -0.28$, $t = -2.61$, $p < 0.05$) and EI ($\beta = -0.19$, $t = -2.51$, $p < 0.05$) and ET ($\beta = 0.30$, $t = 3.09$, $p < 0.05$) schemas emerged as independent predictors of Extraversion.

4. Discussion

This study aimed at investigating the relationship between EMSs, and the Neuroticism and Extraversion traits in the five - factor model   personality dimensions. The results confirm that both Neuroticism (positively) and Extraversion (negatively) are associated with the EMSs, as proposed Young et al (2003).
These findings were largely consistent with the previous researches (2010) and with our hypotheses that the vulnerability to harm or illness, abandonment / instability schemas would be significantly correlated with Neuroticism, and social isolation, emotional inhibition and entitlement would be significantly correlated with Extraversion.
The results of this study showed that the Abandonment / Instability and Vulnerability to harm or illness schemas maybe lead to outstanding Neuroticism. To explain these results it should be paid attention to properties of individuals with these schemas high Neuroticism. According to Young et al (2003) mistrust to getting kindness, expected loss of important people, emotional instability and being unpredictable, and mistrustibility present only erratically are from features that are observable in the underpinning of formation of Abandonment / Instability schema. Exaggerated fear that imminent catastrophe will strike at any time and that one will be unable to prevent it, is the underpinning of Vulnerability to harm or illness schema. These experiences explain that why neurotistic individuals have negative perspective to self and others without paying attention to external reality and evaluate the world as insecure. So the results of this study suggested that contents and early experiences that cause the formation of Abandonment / Instability and vulnerability to harm or illness can be considered as developmental roots of big trait of Neuroticism.

Regarding Extraversion, these findings indicate that a combination of the properties of social isolation / alienation, emotional inhibition and entitlement / grandiosity schemas leads to personal traits that are in line with Extraversion. Extraversion refers to social activities, behaviours and interactions. Recent studies have, also, suggested that extravert persons adjust themselves more easily with environmental requirements and have more emphasis on positive traits such as happiness, excitement, confidence, and being active and energetic. Negative relations between the schemas and Extraversion significantly verify this theory. For instance, a person's feeling of being isolated from the world and being different from others or not belonging to a specific group are underpinning social isolation schema, and are obviously incompatible with extraversion traits. At the other hand, a person with entitlement / grandiosity schema thinks he stands a head and shoulder above other people and entitles himself to have privilege, and has no commitment to follow the principles of reciprocal relations, that are the guidelines of normal social interactions. Excessive inhibition of spontaneous actions, emotions and communications that frequently takes place in order to avoid being outcast, feeling ashamed and losing control of personal momentums are some traits of persons with EI schema. Hence, as it is shown, extraversion traits are completely incompatible with traits of emotional inhibition and entitlement / grandiosity schemas.

Beside the theoretical significance of these findings that allows integration of two competing approaches of personality and psychotherapy, it promotes our understanding of psychological pathology. Despite theoretically-relevant findings some important study limitations warrant consideration. First, this study relied on self-report of schemas and self-report traits personality. Although the YSQ-SF is a well-validated measure, direct questions about schemas may not actually measure implicit aspects of cognitive processing relevant to personality traits. Second, this study used a cross-sectional design to examine the relationships between schemas and personality traits. Although the current study suggests that schemas may lead to particular types personality traits, longitudinal research is needed to establish temporal associations. Young et al. (2003) have stated that maladaptive coping strategies, such as avoidance and emotional inhibition, can maintain schemas that contribute to personality disorder severity; further research might examine the association of schemas, coping strategies, and personality traits. Another area for further investigation might involve examination of schema modes and the association of current contextual variables with schema activation. For instance, Stopa and Waters (2005) found that a depressed mood induction resulted in increased scores on Emotional Deprivation and Defectiveness schema scales.

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