J. Behav. Ther. & Exp. Psychiat. 41 (2010) 373–380

Contents lists available at ScienceDirect

Journal of Behavior Therapy and Experimental Psychiatry

journal homepage: www.elsevier.com/locate/jbtep

Personality and early maladaptive schemas: A five-factor model perspective

Jens C. Thimm [a,b,*]

[a] Helgeland Hospital Trust Mo i Rana, Psychiatric Centre, Mo i Rana, Norway
[b] Norwegian University of Science and Technology, Department of Psychology, Trondheim, Norway

ARTICLE INFO

Article history:
Received 29 November 2009
Received in revised form
25 March 2010
Accepted 31 March 2010

Keywords:
Early maladaptive schemas
Five-factor model
NEO PI-R
Schema questionnaire
Schema therapy
Depression

ABSTRACT

According to Young's schema model (Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy: A practitioner's guide*. New York: Guilford Press), innate personality tendencies are important for the understanding of early maladaptive schemas (EMS). The current study examined the relations between EMS and the dimensions of the five-factor model of personality (FFM). One hundred and forty-seven adult outpatients completed the NEO PI-R, the Schema Questionnaire-Short Form (SQ-SF), and the Beck Depression Inventory (BDI). Correlational analyses showed a substantial overlap between EMS and the FFM, neuroticism in particular. EMS predicted depressive symptoms above and beyond the FFM personality dimensions. Implications of these findings are discussed.

1. Background

In schema therapy (ST; Young, 1999; Young, Klosko, & Weishaar, 2003), early maladaptive schemas (EMS), are proposed as the core and main target for treatment of personality disorders and long-standing 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" (Young et al., 2003, p. 7).

In the formation of schemas, innate temperament interacts with early adverse relational experiences (Young et al., 2003). More specifically, EMS develop when universal psychological core needs (e.g., secure attachment, autonomy, freedom to express valid needs and emotions, realistic limits) are not met. According to Young et al. (2003), the child's temperament plays a major role in the development of schemas since an extreme temperament makes the child more likely to be exposed to aversive parental rearing or may even override an ordinary early environment. Early maladaptive schemas operate on the deepest level of cognition, usually outside of awareness, and make the individual psychologically vulnerable to develop depression, anxiety, dysfunctional relationships, addiction, and psychosomatic disorders (Young, 1999). When a schema is triggered, the individual may respond to it with a maladaptive coping style (e.g., overcompensation, avoidance, surrender) that perpetuates the schema (Young et al., 2003). EMS are thought to be trait-like (Weishaar & Beck, 2006; Young et al., 2003) in that they are stable over time. Recently, this assumption has been supported by empirical findings showing high stability correlations over a 2.5–5 year interval despite significant changes in depression severity (Riso et al., 2006). However, an EMS is not necessarily activated at every moment. In order to account for rapid shifts in emotional state, e.g., in patients suffering from borderline or antisocial personality disorder (Lobbestael, Arntz, & Sieswerda, 2005), the concept of schema modes has been integrated in ST. Young et al. (2003) define a schema mode as "those schemas or schema operations – adaptive or maladaptive – that are currently active for an individual" (p. 37).

In ST, EMS are assessed through several questionnaires, a focused life history, imagery exercises, and the therapeutic relationship. The Schema Questionnaire – Short Form (SQ-SF) is an abbreviated version of the 205-item Schema Questionnaire (SQ; Young & Brown, 1999) and comprises 75 items, reflecting 15 EMS (briefly described in Table 1). Overall, the SQ-SF has shown similar internal consistency and predictive validity with respect to psychopathology as the SQ (e.g., Oei & Baranoff, 2007; Stopa, Thorne, Waters, & Preston, 2001; Waller, Meyer, & Ohanian, 2001). Its factor structure has been examined and largely confirmed in several studies (e.g., Calvete, Estevez, Lopez de Arroyabe, & Ruiz, 2005; Hoffart et al., 2005; Welburn, Coristine,

* Helgeland Hospital Trust Mo i Rana, Psychiatric Centre, Mo i Rana, Norway. Tel.: +47 75125270; fax: +47 75125268.
E-mail address: jens.thimm@ntnu.no

0005-7916/$ – see front matter © 2010 Published by Elsevier Ltd.
doi:10.1016/j.jbtep.2010.03.009

Table 1
SQ-SF scales.

Early maladaptive schema	Description
Abandonment/ instability	The perceived instability or unreliability of significant others for emotional support and connection.
Mistrust/abuse	The expectation that others will hurt, abuse, humiliate, manipulate, or take advantage intentionally.
Emotional deprivation	The expectation that one's needs for nurturance, empathy, and protection will not be met by others.
Defectiveness/ shame	The belief that one is inwardly defective, flawed, and unlovable to significant others if exposed.
Social isolation	The feeling that one is isolated from the world, different from others, and/or not part of any community.
Dependence	The belief that one is incapable to handle day-to-day responsibilities competently and independently.
Vulnerability to harm	An exaggerated fear that an imminent and unpreventable catastrophe (financial, natural, medical, criminal) will strike at any moment.
Enmeshment	Excessive emotional over involvement and closeness with significant others at the expense of full individuation.
Failure	The belief that one is fundamentally inadequate in areas of achievement compared to peers.
Entitlement	The belief that one should be able to do what one wants regardless of what is realistic or considered reasonable by others.
Insufficient self-control	The pervasive difficulty to exercise sufficient self-control and frustration tolerance to achieve one's goals, as well to restrain expression of feelings and impulses.
Subjugation	The belief that one has to surrender control to others in order to avoid negative consequences.
Self-sacrifice	The excessive focus on meeting the needs of others at the expense of one's own gratification.
Emotional inhibition	The belief that one must inhibit spontaneous emotions and actions, often to avoid disapproval by others or feelings of shame.
Unrelenting standards	The belief that one must strive to meet very high internalized standards of behaviour and performance.

Dagg, Pontefract, & Jordan, 2002). In accordance with theory, EMS have shown to be related to recollections of adverse parenting (Harris & Curtin, 2002) and childhood trauma (e.g., Cecero, Nelson, & Gillie, 2004). In addition, meaningful relations of the SQ and SQ-SF with a number of clinical disorders have been found, e.g., social phobia (Pinto-Gouveia, Castilho, Galhardo, & Cunha, 2006), substance abuse (Brotchie, Meyer, Copello, Kidney, & Waller, 2004), eating disorders (Waller, Kennerly, & Ohanian, 2007), personality disorders (e.g., Jovev & Jackson, 2004; Reeves & Taylor, 2007), panic disorder with agoraphobia (Hedley, Hoffart, & Sexton, 2001), or chronic depression (Riso, Maddux, & Santorelli, 2007). These studies show that certain EMS are more strongly related to some disorders than others. However, EMS are apparently a general vulnerability factor for psychopathology as they are relevant for a broad range of psychiatric diagnoses.

The purpose of the present study is to expand the nomological network surrounding the concept of EMS by investigating how EMS are associated with personality traits, i.e., enduring tendencies to show consistent patterns of thoughts, feelings, and actions (McCrae & Costa, 2003). More specifically, the present study aims to examine the relations between the SQ-SF scales and the dimensions of the five-factor model of personality (FFM).

The FFM has its origins in the psycholexical approach to the study of the dimensions of personality (Goldberg, 1993; McCrae & John, 1992). The lexical hypothesis holds that the most important individual differences will become encoded in language (Ashton & Lee, 2005; Goldberg, 1993). In analyses of personality-descriptive terms (e.g. Angleitner, Ostendorf, & John, 1990), five broad dimensions have consistently emerged as the major dimensions of personality variation. Although the FFM has been criticized for various reasons (Block, 1995; McAdams, 1994), there is a strong consensus today that the five factors "do a reasonably good job of summarizing and organizing the universe of trait descriptors" (McAdams & Pals, 2006, p. 208). In Costa and McCrae's (1992) conceptualization of the FFM, the five domains are labelled neuroticism, extraversion, openness, agreeableness, and conscientiousness. Briefly, neuroticism represents the general tendency of an individual to experience unpleasant emotions. Extraversion refers to individual differences in preference for social interaction and activity. Openness describes the receptiveness to new ideas and experiences. A compassionate, trusting, cooperative, humble, and softhearted attitude towards other people characterize individuals scoring high in agreeableness. Conscientiousness concerns individual differences in organization and goal-directed behaviour (McCrae & Costa, 2003; Piedmont, 1998). The FFM captures the dimensions of most personality inventories (O'Connor, 2002) and has been replicated in many different languages, cultures, and populations (McCrae & Costa, 1997). Because of its comprehensiveness, the FFM is especially useful as a framework for the clarification and evaluation of psychological scales (Funder, 2001; John, Naumann, & Soto, 2008). Genetic studies suggest that the five factors have a biological basis and are heritable (e.g., Jang, McCrae, Angleitner, Riemann, & Livesley, 1998; Yamagata et al., 2006). Further, the five personality dimensions can be distinguished early in childhood (Mervielde, De Clercq, De Fruyt, & Van Leeuwen, 2005) and are "quite consistent over the life course" (Roberts & DelVechio, 2000, p. 20). Therefore, the conceptual distinction between temperament and personality traits has been challenged by proponents of the FFM (McCrae et al., 2000). Caspi, Roberts, and Shiner (2005) observed that "temperament and personality traits increasingly appear to be more alike than different" (p. 454).

The relationships between FFM dimensions and psychopathology have been extensively investigated. Meta-analyses have demonstrated strong associations between the FFM and axis I and axis II disorders (Malouff, Thorsteinsson, & Schutte, 2005; Samuel & Widiger, 2008; Saulsman & Page, 2004). It has further been shown that shared personality dimensions can account for comorbidity between disorders, e.g., between anxiety and depressive disorders (Spinhoven, de Rooij, Heiser, Smit, & Penninx, 2009) or among the personality disorders (Lynam & Widiger, 2001). However, findings regarding the prediction of response to psychological or pharmacological treatment of depression from the five factors have been mixed (Bagby, Quilty, Segal et al., 2008; Blom et al., 2007).

Thus, by relating the SQ-SF scales to the five-factor model of personality, one can gain a better understanding of which personality dimensions are covered by the inventory and similarities and differences between EMS with respect to associated personality characteristics. Riso (Riso, 2007; Riso et al., 2006) suggests that the investigation of these relationships may improve the discriminant validity of the schemas proposed by Young (1999) and lead to a new taxonomy of EMS. Further, from a more theoretical point of view, the examination of the relationships between EMS and innate personality tendencies is important because temperament is considered to be a significant vulnerability factor for the formation of EMS (Young et al., 2003).

To the present author's knowledge, only two studies have explored the associations between EMS and the personality factors of the FFM so far. Muris (2006) investigated these relationships in a non-clinical adolescent sample (mean age approximately 13 years), using an age-adjusted version of the SQ (YSQ-A) and the Big Five Questionnaire for Children (Barbaranelli, Caprara, Rabasca, & Pastorelli, 2003). He reported that all EMS were significantly correlated with neuroticism. In addition, the unrelenting standards schema was positively related to extraversion, agreeableness, openness, and conscientiousness. The self-sacrifice schema was positively associated with agreeableness, and the vulnerability for

harm schema with openness. When discussing the results, the author emphasizes the role of neuroticism for EMS, but offers no explanation for the remaining personality factors although some findings may seem counterintuitive, e.g., the positive correlations of the unrelenting standards and vulnerability schemas with the openness personality dimension. Recently, Sava (2009), applying a canonical correlation analysis, found associations between EMS and low agreeableness and high neuroticism in an undergraduate sample. An important shortcoming of the studies conducted by Muris (2006) and Sava (2009) is the use of non-clinical samples. However, non-clinical and clinical samples may differ in important ways, and previous research on EMS in non-clinical samples has, as in Muris (2006) study, produced some contradictory results. For example, Reeves and Taylor (2007) reported a *negative* relation between borderline personality disorder symptoms and the enmeshment schema among college students. Therefore, research on the relations between the EMS and the FFM using an adult clinical sample is needed.

The purpose of the present study is twofold. The first aim is to investigate the relationships between EMS and the dimensions of the five-factor model of personality in an adult psychiatric outpatient sample in order to identify the personological content of EMS.

Based on the descriptions of EMS and previous research, it is hypothesized that all SQ-SF scales are positively associated with neuroticism. Further, it is expected that the defectiveness, social isolation, and emotional inhibition schemas are related to low extraversion. The mistrust and entitlement schemas are hypothesized to be associated with low levels of agreeableness and the subjugation and self-sacrifice schemas with high agreeableness. Finally, the dependence, failure, and insufficient self-control schemas are expected to be negatively correlated with conscientiousness. The unrelenting standards schema is hypothesized to be positively related to conscientiousness.

The second goal of the study is to investigate the prediction of depressive symptoms from FFM personality dimensions and EMS. Despite expected associations, EMS and the five factors of personality are distinct constructs with different foci. Although strongly related to clinical disorders (Malouff et al., 2005; Samuel & Widiger, 2008), the FFM is primarily a model of normal personality functioning, whereas EMS refer to maladaptive cognitive and emotional themes regarding oneself and relationships in individuals with longstanding psychological and interpersonal problems. In terms of the five-factor theory of personality (McCrae & Costa, 2008), personality traits are biologically based, basic dispositions and EMS dysfunctional characteristic adaptations, shaped through the interaction of the individual with his/her social environment. Therefore, it can be hypothesized that EMS have incremental validity in predicting psychological distress above and beyond the five personality dimensions. Depression is a common mental disorder (e.g., Alonso et al., 2004), and associations of depressive symptoms with both the FFM (Bagby & Ryder, 2000) and EMS (Abela, Auerbach, Sarin, & Lakdawalla, 2009) have been shown. Thus, the second aim of the study is to test the hypothesis that EMS predict depressive symptoms when controlled for the five personality dimensions.

2. Method

2.1. Participants

A total of 147 patients from the psychiatric outpatient clinics at Helgeland Hospital Trust Mo i Rana and Levanger Hospital in Norway participated in the present study. They were referred by general practitioners for treatment at the clinics. The sample consisted of 108 females (74%) and 39 males with a mean age of 39.2 years (SD = 11.9, range = 18–67). Current marital status was married (32%), cohabitated (29%), single (27%), divorced/separated (10%), and widowed (2%). The highest educational level was lower secondary school for 18% of the sample, upper secondary school for 37%, and higher education for 34% (10% did not report their educational level). Participants were diagnosed by their therapist according to ICD-10 criteria. At both clinics, the Mini International Neuropsychiatric Interview (Sheehan et al., 1998) is routinely used in the diagnostic evaluation of patients. The most common diagnoses in the sample were depressive disorders (44%), social phobias (24%), agoraphobia (16%), personality disorders (10%), panic disorder (10%), posttraumatic stress disorder (10%), dysthymia (8%), and generalized anxiety disorder (7%). Sixty-one patients (41%) had two or more diagnoses.

2.2. Measures

The Schema Questionnaire–Short form (SQ-SF; Young & Brown, 1999) is a 75-item self-report questionnaire, designed to assess 15 EMS (Table 1). Items of are answered on a six-point scale from *completely untrue of me* to *describes me perfectly*. Studies on the SQ-SF have previously shown that the inventory has adequate internal consistency and factorial structure (e.g., Hoffart et al., 2005).

The authorized Norwegian translation of the NEO PI-R (Costa & McCrae, 1992; Nordvik, Østbø, & Martinsen, 2003) was used to measure the five-factor model. The NEO PI-R is a 240-item self-report questionnaire, designed to assess the five domain factors and their 30 facets. Respondents are asked to rate statements on a five-point Likert scale from *strongly disagree* to *strongly agree*. Bagby et al. (1999) demonstrated the replicability of the factor structure of the NEO PI-R in a psychiatric sample. The Norwegian version of the NEO PI-R has shown satisfying reliability, and its factor structure is highly congruent with the structure found in the original manual with two exceptions: the impulsiveness facet of neuroticism and the assertiveness facet of extraversion had their highest loadings on extraversion and neuroticism, respectively (Nordvik, 2005).

The Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) was used to assess levels of depressive symptoms. The BDI comprises 21 items that are rated on a scale from 0 to 3. Numerous studies have supported the reliability and validity of the BDI (Beck, Steer, & Garbin, 1988).

2.3. Procedure

The present study was part of a research project on the relationships of EMS with perceptions of parental rearing, personality, and psychopathology. After receiving information about the study from their therapists, patients interested in participating signed an informed consent form. The instruments were then mailed to the participants for completion at home. Out of 211 patients who have signed the informed consent form, 149 (71%) returned the questionnaires to the researcher. Due to missing data, two participants were excluded from the current investigation. One participant did not return the BDI. Participants were at different stages of treatment when completing the inventories. Median time period between starting treatment and study participation was seven months. When retested after six month, 85% of a subsample of the current sample ($N = 112$) reported that they had received individual therapy, 40% (predominantly cognitive-behaviourally oriented) group therapy, and 40% medications. Patients were rewarded with a lottery ticket for their participation. The study has been approved by the Regional Committee for Medical Research Ethics for Northern Norway and the Norwegian Social

Science Data Services regarding the collection and storage of patient information.

3. Results

3.1. Descriptive statistics

Means, standard deviations, and scale reliabilities (Cronbachs α) for the NEO PI-R, SQ-SF, and BDI are shown in Table 2. NEO PI-R domain scores are represented as *T*-scores with a mean of 50 and a standard deviation of 10. On average, patients participating in the present study are characterized by high neuroticism and low extraversion, low openness, average agreeableness, and low conscientiousness. This pattern of NEO PI-R scores is similar to profiles previously described in psychiatric samples (e.g., Bagby, Costa, Widiger, Ryder, & Marshall, 2005; Østbø & Nordvik, 2008; Wilberg, Karterud, Pedersen, Urnes, & Costa, 2009). Means of SQ-SF scales are comparable to those previously obtained in mixed outpatient samples (e.g., Hoffart et al., 2005). The average BDI score indicate moderate to severe depressive symptoms (cf. Beck et al., 1988).

Internal consistencies (Cronbachs α) for the dimensions of the NEO PI-R, the SQ-SF scales, and the BDI are also displayed in Table 2. In the present study, NEO PI-R dimensions showed good to excellent internal consistencies, with a median α of 0.90. Alpha-coefficients for all but one SQ-SF scales were in the range indicating good to excellent internal consistencies, with a median α of 0.87. The α for the entitlement scale was somewhat lower (0.77), but still acceptable. The BDI displayed good internal consistency ($\alpha = 0.89$).

3.2. Correlations between FFM personality dimensions and EMS

Prior to data analyses, distribution of all variables was examined for normality. Highly skewed variables (the SQ-SF scales mistrust, defectiveness, failure, dependence, enmeshment, entitlement, and insufficient self-control) were log transformed. Correlational analyses were conducted to examine the relationships between NEO PI-R dimensions and SQ-SF scales. Due to the large number of tests, a Bonferroni adjustment of the significance level was applied, and correlations were judged significant at $p < 0.001$. In addition to bivariate correlations, semipartial correlations, and squared multiple correlation coefficients were computed. Semipartial correlations were calculated in order to assess the unique contribution of each personality dimension to the prediction of EMS when controlling for shared variance among the NEO PI-R domains. Squared multiple correlation coefficients were used to measure the total proportion of variance in the SQ-SF scales accounted for by the five personality dimensions (cf. Tabachnick & Fidell, 2007). Results of these analyses are presented in Table 3.

Table 2
Means, standard deviations, and scale reliabilities for the NEO PI-R domains, SQ-SF scales, and BDI.

	M	SD	α
NEO PI-R			
Neuroticism	62.99	10.32	0.93
Extraversion	37.21	11.02	0.91
Openness	43.07	10.33	0.89
Agreeableness	50.99	11.25	0.87
Conscientiousness	45.44	10.95	0.90
SQ-SF			
Emotional deprivation	2.92	1.29	0.88
Abandonment	2.90	1.38	0.90
Mistrust	2.30	1.12	0.90
Social isolation	2.67	1.35	0.93
Defectiveness	2.21	1.18	0.90
Failure	2.36	1.33	0.95
Dependence	1.91	0.91	0.83
Vulnerability	2.35	1.11	0.83
Enmeshment	1.92	1.04	0.84
Subjugation	2.56	1.23	0.88
Self-sacrifice[a]	3.64	1.15	0.85
Emotional inhibition[a]	2.38	1.20	0.88
Unrelenting standards[a]	3.42	1.13	0.81
Entitlement[a]	2.00	0.81	0.77
Insufficient self-control[a]	2.52	1.09	0.86
BDI[a]	19.63	10.49	0.89

$N = 147$.
[a] $N = 146$.

Bivariate correlations showed that most SQ-SF scales were, consistent with expectations, significantly related to neuroticism, with the exception of the self-sacrifice and entitlement schemas. Seven SQ-SF scales (emotional deprivation, mistrust, social isolation, failure, defectiveness, subjugation, and emotional inhibition) were negatively associated with the domain of extraversion. The failure and emotional inhibition schemas were negatively correlated with openness. With respect to agreeableness, there were negative associations with the mistrust, entitlement, and insufficient self-control schemas, whereas the self-sacrifice schema was positively related to this dimension. The dependence and insufficient self-control schemas were negatively correlated with conscientiousness.

Generally, correlations were significantly reduced when the effect of the remaining personality dimensions were partialled out. Correlations between the emotional deprivation, enmeshment, and emotional inhibition scales and neuroticism did not longer reach the level of significance set in the present study. Extraversion remained a significant individual predictor of the social isolation and emotional inhibition schemas. None of the SQ-SF scales had significant semipartial correlations with the domain of openness. Agreeableness was significantly related to the entitlement and insufficient self-control schemas, but no longer to the mistrust and self-sacrifice schemas. When controlling for the other four personality dimensions, conscientiousness was positively related to the unrelenting standards schema and negatively with the insufficient self-control schema.

In order to further explore the relationships between EMS and the five-factor model of personality, squared multiple correlation coefficients were calculated. As shown in Table 3, NEO PI-R dimensions explained between 9% and 42% of the variance in the SQ-SF scales (mean $R^2 = 0.27$). The NEO PI-R domains were particularly effective in predicting the insufficient self-control, dependence, social isolation, failure, subjugation, entitlement, and defectiveness schemas, but poorer predictors of the enmeshment, emotional deprivation, and self-sacrifice scales.

3.3. Prediction of depressive symptoms from FFM domains and EMS

A hierarchical regression analysis was performed in order to test the hypothesis that EMS add to the prediction of depressive symptoms above the five-factor model personality dimensions. In the first step, NEO PI-R dimensions were entered as a block in the regression. Next, in the second step, the SQ total score (the sum of all SQ-SF scales) was entered. The results of these analyses are presented in Table 4. The SQ-SF total score predicted 11% ($p < 0.001$) of the variance in BDI scores when controlled for the five personality dimensions.

4. Discussion

The present study sought to examine the relationships between EMS and the five-factor model personality dimensions in order to

Table 3
Zero-order (r), semipartial (sr), and squared multiple correlation coefficients (R^2).

SQ-SF	NEO PI-R										R^2
	Neuroticism		Extraversion		Openness		Agreeableness		Conscientiousness		
	r	sr	r	sr	r	sr	r	sr	r	sr	
Emotional deprivation	0.32*	0.20	−0.29*	−0.14	−0.11	0.06	0.07	0.13	−0.15	−0.08	0.15
Abandonment	0.48*	0.42*	−0.22	0.00	−0.08	0.04	−0.12	−0.05	−0.08	0.08	0.24
Mistrust	0.45*	0.27*	−0.34*	−0.19	−0.10	0.11	−0.29*	−0.23	−0.16	0.06	0.29
Social isolation	0.49*	0.30*	−0.43*	−0.30*	−0.06	0.22	−0.04	0.02	−0.16	0.01	0.34
Defectiveness	0.53*	0.45*	−0.27*	−0.03	−0.09	0.06	0.00	0.10	−0.15	−0.02	0.30
Failure	0.47*	0.29*	−0.44*	−0.12	−0.31*	−0.09	0.10	0.21	−0.26	−0.18	0.34
Dependence	0.57*	0.47*	−0.23	0.02	−0.06	0.06	−0.18	−0.03	−0.29*	−0.10	0.35
Vulnerability	0.49*	0.42*	−0.21	0.00	−0.08	0.04	−0.19	−0.11	−0.10	0.08	0.26
Enmeshment	0.28*	0.19	−0.18	−0.08	−0.05	0.06	−0.13	−0.09	−0.10	0.02	0.09
Subjugation	0.53*	0.48*	−0.28*	−0.06	−0.05	0.12	0.10	0.18	−0.08	0.03	0.34
Self-sacrifice[a]	0.11	0.26	0.07	0.16	0.01	−0.04	0.27*	0.25	0.21	0.16	0.16
Emotional inhibition[a]	0.38*	0.17	−0.47*	−0.29*	−0.28*	0.00	−0.10	−0.11	0.00	0.16	0.28
Unrelenting standards[a]	0.27*	0.38*	0.01	0.08	0.10	0.12	0.06	0.05	0.19	0.26*	0.20
Entitlement[a]	0.18	0.13	0.07	0.05	0.17	0.13	−0.51*	−0.43*	−0.25	−0.06	0.31
Insufficient self-control[a]	0.44*	0.25*	−0.18	0.02	−0.05	0.01	−0.42*	−0.23*	−0.53*	−0.33*	0.42

*$p < 0.001$. $N = 147$.
[a] $N = 146$.

enhance the understanding of EMS and associated cognitive, behavioural, and emotional tendencies. A sample of psychiatric outpatients completed the SQ-SF and the NEO PI-R as measures of EMS and the FFM.

The first aim of the current study was to evaluate and clarify the personological content of the SQ-SF scales by means of the FFM. In addition to bivariate correlations, semipartial correlations were calculated in order to examine the unique contribution of each personality dimension to the prediction of the different EMS.

As hypothesized, and in line with the studies conducted by Muris (2006) and Sava (2009) results from correlational analyses showed that most EMS were significantly associated with neuroticism, with the exception of the emotional deprivation, enmeshment, emotional inhibition, and entitlement schemas. Significant correlations were also found between EMS and the dimensions of extraversion, agreeableness, and conscientiousness. As expected, EMS were only weakly related to the domain of openness. Most hypotheses regarding the relationships between EMS and the five personality factors were confirmed when bivariate correlations were computed. In addition, a number of non-predicted correlations emerged. The number of significant relations and confirmed hypotheses decreased markedly when examining semipartial correlations. For example, the hypothesized associations between the defectiveness schema and low extraversion and the dependence schema and low conscientiousness did no longer reach statistical significance. However, both schemas were still significantly related to neuroticism. Thus, the examination of semipartial correlations suggests that these two schemas are mainly characterized by high neuroticism.

If one adopts Riso's (Riso, 2007; Riso et al., 2006) suggestion that the FFM may be used to improve the taxonomy of schemas, it can be noted that the SQ-SF scales showed relatively low discriminant validity with respect to the FFM personality dimensions. Further, the SQ-SF does not cover the whole range of personality traits offered by the FFM. The domain of openness dimension was largely unrelated to EMS, but also traits associated with high extraversion, high conscientiousness, and high agreeableness are not or weakly represented in the SQ-SF. These findings may suggest that these personality tendencies, which are not well captured by the SQ-SF, are irrelevant or unnecessary for the conceptualization of EMS. Young et al. (2003), for example, argue that sociability, a trait associated with high extraversion, characterizes resilient children. On the other hand, these traits may represent potentially important aspects that are lacking in the current taxonomy of EMS, but should be considered to be integrated in the definition and assessment of schemas. There are typical problems associated with each pole of the dimensions of the FFM (McCrae, Löckenhoff, & Costa, 2005; Widiger, Costa, & McCrae, 2002; Widiger, De Clercq, & De Fruyt, 2009). Some of these problems may reflect EMS or coping responses to EMS.

Generally, the FFM dimensions accounted for a considerable proportion of the variance in most SQ-SF scales. Although causal

Table 4
Summary of hierarchical regression analysis for variables predicting depressive symptoms.

Dependent variable	Step	Predictors	β	t	Significance	R^2	R^2 change	Significance
BDI	1	Neuroticism	0.50	6.06	$p < 0.001$	0.35		
		Extraversion	−0.21	2.17	$p < 0.05$			
		Openness	0.26	3.10	$p < 0.01$			
		Agreeableness	0.10	1.38	ns			
		Conscientiousness	−0.08	−1.11	ns			
	2	Neuroticism	0.25	2.78	$p < 0.01$	0.46	0.11	$p < 0.001$
		Extraversion	−0.15	−1.68	ns			
		Openness	0.21	2.73	$p < 0.01$			
		Agreeableness	0.11	1.60	ns			
		Conscientiousness	−0.09	1.29	ns			
		SQ-SF total score	0.43	5.28	$p < 0.001$			

$N = 145$. ns = not significant at $p < 0.05$.

inferences can not be made due to the cross-sectional design of the current study, findings are in accordance with Young's (Young et al., 2003) schema model that asserts a relationship between innate temperament and EMS. It has been argued that the concepts of temperament and personality traits are highly similar (Caspi et al., 2005; McCrae et al., 2000). The results from the present study suggest that EMS are associated with high neuroticism in particular, but also low extraversion, low agreeableness, and/or low conscientiousness. However, compared with the other SQ-SF scales, a relatively small amount of variance was accounted for by the FFM domains in the emotional deprivation, self-sacrifice and enmeshment scales. Thus, these schemas may primarily reflect negative views of the self and others and may not be as strongly associated with specific personality tendencies than the other EMS. Findings of the current study seem to be consistent with recent research on the relationships between EMS and the temperament and character dimensions proposed by Cloninger, Svrakic, and Przybeck (1993). Halvorsen et al. (2009) reported positive correlations of EMS with harm avoidance and negative associations with self-directedness, persistence, and cooperativeness. However, according to Young et al. (2003), a vulnerable temperament is not sufficient for the formation of EMS. More important are the ways in which the early environment handles the child's temperament. Future studies should, therefore, focus on the interaction between temperament and adverse relational experiences when investigating the development of EMS. Results from Muris (2006) study and the present findings suggest that the relative impact of temperamental and environmental factors on the development of EMS may vary between different EMS. However, long-term longitudinal studies are needed to answer the question of how adverse relational experiences interact with temperament/personality in the development of EMS. Future research should also address the role of personality traits for other key concepts of ST, i.e., coping styles and schema modes (Lobbestael, Van Vreeswijk, & Arntz, 2008).

The second aim of the present study was to test the hypothesis that EMS predict depressive symptoms above the FFM personality dimensions. Results from regression analysis gave support to this hypothesis, demonstrating that EMS have incremental validity over the FFM in the prediction of depressive symptoms. This finding, although in need of replication, may have implications for the understanding of depression and assessment of depression in clinical practice. The importance of taking into account personality features when treating depression has been proposed (e.g., Bagby, Quilty, & Ryder, 2008; Zinbarg, Uliaszek, & Adler, 2008). However, the finding of the present study suggests that measuring EMS contributes significantly to the understanding of depressive symptoms. EMS reflect dysfunctional conceptualisations of the self and others which also have been shown to be related to depression (Riso et al., 2007), whereas the FFM dimensions represent broad general personality tendencies. It may seem that it is the specific maladaptive cognitive content of EMS that adds to the prediction of depressive symptoms above and beyond normal personality traits. An advantage of assessing EMS in addition to personality traits is that there are numerous cognitive-behavioural techniques for the modification of schemas (Beck, Freeman, Davis, & Associates, 2004; Young et al., 2003), but a lack of specific psychotherapeutic interventions for personality traits, e.g., high neuroticism.

The present study had some limitations that need to be considered. First of all, emotional state may have influenced the description of general personality traits (Widiger & Smith, 2008). In particular, the dimensions of neuroticism and extraversion have shown to be possibly susceptible to the effects of depressive mood with patients describing themselves considerable higher on neuroticism and somewhat lower on extraversion when depressed (Griens, Jonker, Spinhoven, & Blom, 2002; Wilberg et al., 2009). Further, three EMS from the current schema list are not covered by the SQ-SF (approval-seeking, negativity/pessimism, and punitiveness). Future studies will show how these EMS are related to the FFM. In addition, EMS are, by definition, partly unconscious. For example, according to Young et al. (2003), the emotional deprivation schema is common among patients, but many do not know that they have it. Thus, the SQ-SF measures only the EMS an individual is aware of. Moreover, coping responses to EMS as schema avoidance may have influenced the completion of the inventory. As an alternative to self-report questionnaires, future studies may use projective tests or physiological indicators of information processing in the assessment of EMS (Pretzer & Beck, 2004; Welburn et al., 2002) or a life history approach as applied by Abela et al. (2009). Another limitation that arises from the solely use of self-report measures is that shared method variance might have inflated the correlations between EMS and personality traits. An obvious limitation regards sample composition. The current sample consisted mostly of patients with depression and anxiety disorders, and the generalization of the findings to other populations (e.g., psychiatric inpatients, forensic samples) is unclear. In addition, personality disorders had not been systematically assessed in the present sample.

In conclusion, results of the present study showed a generally high degree of overlap between EMS, as measured by the SQ-SF, and the dimensions of the FFM, neuroticism in particular. EMS contributed significantly to the prediction of depressive symptoms when controlled for the five personality dimensions.

Acknowledgments

The author is indebted to the participating patients and the therapists from the psychiatric centres at Helgeland Hospital Trust and Levanger Hospital for their contribution to the data collection, especially Trine Drage, Lesley Smith, Wenche Nordnes, and Erling Østnes. The study was supported by a grant from the Psychiatric Research Center of Northern Norway.

References

Abela, J. R. Z., Auerbach, R. P., Sarin, S., & Lakdawalla, Z. (2009). Core beliefs and history of major depressive episodes in currently non-depressed university students. *Cognitive Therapy and Research, 33*, 50–58.

Alonso, J., Angermeyer, M. C., Bernert, S., et al. (2004). Prevalence of mental disorders in Europe: results from the European study of the epidemiology of mental disorders (EseMeD) project. *Acta Psychiatrica Scandinavica, 109*, 21–27.

Angleitner, A., Ostendorf, F., & John, O. P. (1990). Towards a taxonomy of personality descriptors in German: a psycho-lexical study. *European Journal of Personality, 4*, 89–118.

Ashton, M. C., & Lee, K. (2005). A defence of the lexical approach to the study of personality structure. *European Journal of Personality, 19*, 5–24.

Bagby, R., Costa, P. T., McCrae, R. R., Livesley, W. J., Kennedy, S. H., Levitan, R. D., et al. (1999). Replicating the five factor model of personality in a psychiatric sample. *Personality and Individual Differences, 27*, 1135–1139.

Bagby, R., Costa, P. T., Widiger, T. A., Ryder, A. G., & Marshall, M. (2005). DSM-IV personality disorders and the five-factor model of personality: a multi-method examination of domain- and facet-level predictions. *European Journal of Personality, 19*, 307–324.

Bagby, R., Quilty, L. C., & Ryder, A. C. (2008). Personality and depression. *Canadian Journal of Psychiatry, 53*, 14–25.

Bagby, R., Quilty, L. C., Segal, Z. V., McBride, C. C., Kennedy, S. H., & Costa, P. T. (2008). Personality and differential treatment response in major depression: a randomized controlled trial comparing cognitive-behavioural therapy and pharmacotherapy. *Canadian Journal of Psychiatry, 53*, 361–370.

Bagby, R., & Ryder, A. C. (2000). Personality and the affective disorders: past efforts, current models, and future directions. *Current Psychiatric Reports, 2*, 465–472.

Barbaranelli, C., Caprara, G. V., Rabasca, A., & Pastorelli, C. (2003). A questionnaire for measuring the big five in late childhood. *Personality and Individual Differences, 34*, 645–664.

Beck, A. T., Freeman, A., Davis, D. D., & Associates. (2004). *Cognitive therapy of personality disorders* (2nd ed.). New York: Guilford Press.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford.

Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: twenty-five years of evaluation. *Clinical psychology Review, 8*, 77–100.

Block, J. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin, 117*, 187–215.

Blom, M. B. J., Spinhoven, P., Hoffman, T., Jonker, K., Hoencamp, E., Haffmans, P. M. J., et al. (2007). Severity and duration of depression, not personality factors, predict short term outcome in the treatment of major depression. *Journal of Affective Disorders, 104*, 119–126.

Brotchie, J., Meyer, C., Copello, A., Kidney, R., & Waller, G. (2004). Cognitive representations in alcohol and opiate abuse: the role of core beliefs. *British Journal of Clinical Psychology, 43*, 337–342.

Calvete, E., Estevez, A., Lopez de Arroyabe, E., & Ruiz, P. (2005). The schema questionnaire-short form: structure and relationship with automatic thoughts and symptoms of affective disorders. *European Journal of Psychological Assessment, 21*, 90–99.

Caspi, A., Roberts, B. W., & Shiner, R. L. (2005). Personality development: stability and change. *Annual Review of Psychology, 56*, 453–484.

Cecero, J. J., Nelson, J. D., & Gillie, J. M. (2004). Tools and tenets of schema therapy: toward the construct validity of the Early Maladaptive Schema Questionnaire-Research Version (EMSQ-R). *Clinical Psychology and Psychotherapy, 11*, 344–357.

Cloninger, C. R., Svrakic, D. M., & Przybeck, T. R. (1993). A psychobiological model of temperament and character. *Archives of General Psychiatry, 50*, 975–990.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO personality inventory: Professional manual*. Odessa, FL: Psychological Assessment Ressources.

Funder, D. C. (2001). Personality. *Annual Review of Psychology, 52*, 197–221.

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist, 48*, 26–34.

Griens, A. M. G. F., Jonker, K., Spinhoven, P., & Blom, M. B. J. (2002). The influence of depressive state features on trait measurement. *Journal of Affective Disorders, 70*, 95–99.

Halvorsen, M., Wang, C. E., Richter, J., Myrland, I., Pedersen, S. K., Eisemann, M., et al. (2009). Early maladaptive schemas, temperament and character traits in clinically depressed and previously depressed subjects. *Clinical Psychology and Psychotherapy, 16*, 394–407.

Harris, A. E., & Curtin, L. (2002). Parental perceptions, early maladaptive schemas, and depressive symptoms in young adults. *Cognitive Therapy and Research, 26*, 405–416.

Hedley, L. M., Hoffart, A., & Sexton, H. (2001). Early maladaptive schemas in patients with panic disorder with agoraphobia. *Journal of Cognitive Psychotherapy, 15*, 131–142.

Hoffart, A., Sexton, H., Hedley, L. M., Wang, C. E., Holthe, H., Haugum, J. A., et al. (2005). The structure of maladaptive schemas: a confirmatory factor analysis and a psychometric evaluation of factor-derived scales. *Cognitive Therapy and Research, 29*, 627–644.

Jang, K. L., McCrae, R. R., Angleitner, A., Riemann, R., & Livesley, W. J. (1998). Heritability of facet-level traits in a cross-cultural twin sample: support for a hierarchical model of personality. *Journal of Personality and Social Psychology, 74*, 1556–1565.

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative big five taxonomy: history, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality. Theory and research* (3rd ed.). (pp. 114–158) New York: Guilford Press.

Jovev, M., & Jackson, H. J. (2004). Early maladaptive schemas in personality disordered individuals. *Journal of Personality Disorders, 18*, 467–478.

Lobbestael, J., Arntz, A., & Sieswerda, S. (2005). Schema modes and childhood abuse in borderline and antisocial personality disorders. *Journal of Behavior Therapy and Experimental Psychiatry, 36*, 240–253.

Lobbestael, J., Van Vreeswijk, M. F., & Arntz, A. (2008). An empirical test of schema mode conceptualizations in personality disorders. *Behaviour Research and Therapy, 46*, 854–860.

Lynam, D. R., & Widiger, T. A. (2001). Using the five-factor model to represent the DSM-IV personality disorders: an expert consensus approach. *Journal of Abnormal Psychology, 110*, 401–412.

Malouff, J., Thorsteinsson, E., & Schutte, N. (2005). The relationship between the five-factor model of personality and symptoms of clinical disorders: a meta-analysis. *Journal of Psychopathology and Behavioral Assessment, 27*, 101–114.

McAdams, D. P. (1994). A psychology of the stranger. *Psychological Inquiry, 5*, 145–148.

McAdams, D. P., & Pals, J. L. (2006). A new big five: fundamental principles for an integrative science of personality. *American Psychologist, 61*, 204–217.

McCrae, R. R., & Costa, P. T. (1997). Personality trait structure as a human universal. *American Psychologist, 52*, 509–516.

McCrae, R. R., & Costa, P. T. (2003). *Personality in adulthood: A five-factor theory perspective* (2nd ed.). New York: Guilford Press.

McCrae, R. R., & Costa, P. T. (2008). The five-factor theory of personality. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality. Theory and research* (3rd ed.). (pp. 159–181) New York: Guilford Press.

McCrae, R. R., Costa, P. T., Ostendorf, F., Angleitner, A., Hrebickova, M., Avia, M. D., et al. (2000). Nature over nurture: temperament, personality, and life span development. *Journal of Personality and Social Psychology, 78*, 173–186.

McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality, 60*, 175–215.

McCrae, R. R., Löckenhoff, C. E., & Costa, P. T. (2005). A step toward DSM-V: cataloguing personality-related problems in living. *European Journal of Personality, 19*, 269–286.

Mervielde, I., De Clercq, B., De Fruyt, F., & Van Leeuwen, K. (2005). Temperament, personality, and developmental psychopathology as childhood antecedents of personality disorders. *Journal of Personality Disorders, 19*, 171–201.

Muris, P. (2006). Maladaptive schemas in non-clinical adolescents: relations to perceived parental rearing behaviours, big five personality factors and psychopathological symptoms. *Clinical Psychology and Psychotherapy, 13*, 405–413.

Nordvik, H. (2005). Personality traits: their nature and number. *Tidsskrift for Norsk Psykologforening, 42*, 994–997.

Nordvik, H., Østbø, L. E., & Martinsen, Ø. L. (2003). *Norsk utgave av Revised NEO Personality Inventory (NEO PI-R)*. Oslo: Gyldendal Akademisk.

O'Connor, B. P. (2002). A quantitative review of the comprehensiveness of the five-factor model in relation to popular personality inventories. *Assessment, 9*, 188–203.

Oei, T. P., & Baranoff, J. (2007). Young schema questionnaire: review of psychometric and measurement issues. *Australian Journal of Psychology, 59*, 78–86.

Østbø, L. E., & Nordvik, H. (2008). Personlighetsinventoriet NEO PI-R: Klinisk validitet. *Tidsskrift for Norsk Psykologforening, 45*, 845–848.

Piedmont, R. L. (1998). *The revised NEO personality inventory: Clinical and research applications*. New York: Plenum Press.

Pinto-Gouveia, J., Castilho, P., Galhardo, A., & Cunha, M. (2006). Early maladaptive schemas and social phobia. *Cognitive Therapy and Research, 30*, 571–584.

Pretzer, J. L., & Beck, A. T. (2004). A cognitive theory of personality disorders. In M. F. Lenzenweger, & J. F. Clarkin (Eds.), *Major theories of personality disorder* (2nd ed.). (pp. 43–113) New York: Guilford.

Reeves, M., & Taylor, J. (2007). Specific relationships between core beliefs and personality disorder symptoms in a non-clinical sample. *Clinical Psychology and Psychotherapy, 14*, 96–104.

Riso, L. P. (2007). Afterword. In L. P. Riso, P. L. du Toit, D. J. Stein, & J. E. Young (Eds.), *Cognitive schemas and core beliefs in psychological problems. A scientist-practitioner guide* (pp. 221–223). Washington, DC: American Psychological Association.

Riso, L. P., Froman, S. E., Raouf, M., Gable, P., Maddux, R. E., Turini-Santorelli, N., et al. (2006). The long-term stability of early maladaptive schemas. *Cognitive Therapy and Research, 30*, 515–529.

Riso, L. P., Maddux, R. E., & Santorelli, N. T. (2007). Early maladaptive schemas in chronic depression. In L. P. Riso, P. L. du Toit, D. J. Stein, & J. E. Young (Eds.), *Cognitive schemas and core beliefs in psychological problems. A scientist-practitioner guide* (pp. 41–58). Washington, DC: American Psychological Association.

Roberts, B. W., & DelVechio, W. F. (2000). The rank-order consistency of personality traits from childhood to old age: a quantitative review of longitudinal studies. *Psychological Bulletin, 126*, 3–25.

Samuel, D. B., & Widiger, T. A. (2008). A meta-analytic review of the relationships between the five-factor model and DSM-IV-TR personality disorders: a facet level analysis. *Clinical Psychology Review, 28*, 1326–1342.

Saulsman, L. M., & Page, A. C. (2004). The five-factor model and personality disorder empirical literature: a meta-analytic review. *Clinical Psychology Review, 23*, 1055–1085.

Sava, F. A. (2009). Maladaptive schemas, irrational beliefs, and their relationship with the five-factor personality model. *Journal of Cognitive and Behavioral Psychotherapies, 9*, 135–147.

Sheehan, D. V., Lecrubier, Y., Harnett Sheehan, K., Amorim, P., Janavs, J., Weiller, E., et al. (1998). The Mini-International Neuropsychiatric Interview (M.I.N.I.): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *Journal of Clinical Psychiatry, 59*(Suppl. 20), 22–33.

Spinhoven, P., de Rooij, M., Heiser, W., Smit, J. H., & Penninx, B. W. J. H. (2009). The role of personality in comorbidity among anxiety and depressive disorders in primary care and specialty care: a cross-sectional analysis. *General Hospital Psychiatry, 31*, 470–477.

Stopa, L., Thorne, P., Waters, A., & Preston, J. (2001). Are the short and long forms of the Young Schema Questionnaire comparable and how well does each version predict psychopathology scores? *Journal of Cognitive Psychotherapy, 15*, 253–272.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston: Pearson.

Waller, G., Kennerly, H., & Ohanian, V. (2007). Schema-focused cognitive-behavioral therapy for eating disorders. In L. P. Riso, P. L. du Toit, D. J. Stein, & J. E. Young (Eds.), *Cognitive schemas and core beliefs in psychological problems. A scientist-practitioner guide* (pp. 139–175). Washington, DC: American Psychological Association.

Waller, G., Meyer, C., & Ohanian, V. (2001). Psychometric properties of the long and short versions of the Young Schema Questionnaire: core beliefs among bulimic and comparison women. *Cognitive Therapy and Research, 25*, 137–147.

Weishaar, M. E., & Beck, A. T. (2006). Cognitive theory of personality and personality disorders. In S. Strack (Ed.), *Differentiating normal and abnormal personality* (2nd ed.). (pp. 113–135) New York: Springer.

Welburn, K., Coristine, M., Dagg, P., Pontefract, A., & Jordan, S. (2002). The Schema Questionnaire-Short Form: factor analysis and relationship between schemas and symptoms. *Cognitive Therapy and Research, 26*, 519–530.

Widiger, T. A., Costa, P. T., & McCrae, R. R. (2002). A proposal for axis II: diagnosing personality disorders using the five-factor model. In P. T. Costa, & T. A. Widiger (Eds.), *Personality disorders and the five-factor model of personality* (2nd ed.). (pp. 431–456) Washington, DC: American Psychological Association.

Widiger, T. A., De Clercq, B., & De Fruyt, F. (2009). Childhood antecedents of personality disorder: an alternative perspective. *Development and Psychopathology, 21*, 771–791.

Widiger, T. A., & Smith, G. T. (2008). Personality and psychopathology. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality. Theory and research* (3rd ed.). (pp. 743–769) New York: Guilford Press.

Wilberg, T. A., Karterud, S., Pedersen, G., Urnes, Ø., & Costa, P. T. (2009). Nineteen-month stability of revised NEO personality inventory domain and facet scores in patients with personality disorders. *Journal of Nervous and Mental Disease, 197*, 187–195.

Yamagata, S., Suzuki, A., Ando, J., Ono, Y., Kijima, N., Yoshimua, K., et al. (2006). Is the genetic structure of human personality universal? A cross-cultural twin study from North America, Europe, and Asia. *Journal of Personality and Social Psychology, 90*, 987–998.

Young, J. E. (1999). *Cognitive therapy for personality disorders: A schema-focused approach* (3rd ed.). Sarasota, FL: Professional Resource Press.

Young, J. E., & Brown, G. (1999). Young schema questionnaire. In J. E. Young (Ed.), *Cognitive therapy for personality disorders: A schema-focused approach* (3rd ed.). Sarasota, Fl: Professional Ressource Press.

Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy: A practitioner's guide*. New York: Guilford Press.

Zinbarg, R. E., Uliaszek, A. A., & Adler, J. M. (2008). The role of personality in psychotherapy for anxiety and depression. *Journal of Personality, 76*, 1649–1687.