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Assessment of Early Maladaptive Schemas: A Psychometric Study of the Turkish Young Schema Questionnaire-Short Form-3

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Abstract

Objective: Schemas are generally assumed to develop as a result of early experiences with attachment figures. Within this theoretical framework Young et al. (1991, 2003) developed a schema questionnaire to evaluate early maladaptive schemas. The aim of the present study was to preliminarily establish the psychometric validity and reliability of the Turkish version of the Young Schema Questionnaire-Short Form-3.

Method: University students from different departments participated in the study. According to phases of psychometric examinations, the number of participants differed in a range of N= 150-1071.

Results: Principal components analysis with equamax rotation was carried out and 14 definable factor structures emerged. Higher-order factor analysis supported 5 schema domains: Impaired autonomy, disconnection, unrelenting standards, other-directedness, and impaired limits. Test-retest and internal consistency analysis revealed statistically significant correlation coefficients, which can be interpreted as evidence of the reliability. As to convergent validity, correlational analysis of theoretically-related variables (SCL-90-R) showed statistically significant coefficients and the direction of the relationships were congruent with theoretical expectations. Furthermore, in a pilot study, we examined the discriminant validity of the scale. Accordingly, t-test analysis that compared the YSQ-subscale scores of clinical and normal populations yielded statistically significant differences in some schemas and schema domains.

Conclusion: As preliminary evidence, our findings show that the factor structure of the Turkish YSQ-SF3 is generally consistent with previous studies and that it has acceptable levels of reliability and validity.

Key Words: Schema Assessment, Reliability and Validity

INTRODUCTION

The 90's have witnessed to emphasis on consideration of core cognitive structures related to fundamental schemas, such as "self", "interpersonal relationships", and the development of schema -focused assessment and treatment approaches (Safran 1990, Hammen 1992, Young et al. 1992). Despite terminological differences, the conceptualization of schemas is based on Bowlby 's (1973) attachment theory and they are defined as the representation of interactions between schemas and attachment figures (Safran et al. 1990, Young et al. 1992). According to Jeffrey Young (1990, 2003), early maladaptive schemas are broad, pervasive theme or patterns that are comprised of memories, emotions, cognitions and bodily sensations regarding oneself and one's relationships with others. They generally develop in childhood or adolescence and are functional in terms of providing adjustment to one's family/ environment. On the other hand, these schemas might become maladaptive in later life because they are rigid and resistant to change. Additionally, maladaptive schemas might be the core of several DSM-IV Axis I and Axis II disorders.

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From this theoretical framework, Young (1991) developed Young Schema Questionnaire (YSQ) to assess early maladaptive schemas. There exist several psychometric studies regarding the short and long form of the YSQ (Young 1990, Young et al. 2003). Factor analysis studies have been conducted in Australia, Spain, Korea, France, and Turkey (Schmidt et al. 1995, Sezgin 1996, 1997, Lee et al. 1999, Welburn et al. 2002, Batur 2004, Cecero et al. 2004, Calvete et al. 2005, Baranoff et al. 2006, Chavallet et al. 2006, Hoffart et al. 2006, Sarıtaş 2007). These studies reported differences between clinical and university samples regarding the factorial structure of the instrument, and showed that clinical samples generally better represent the proposed factors, in terms of the theory. As a conclusion, it was indicated that the obtained factorial structures overlapped with the original factors and although some items could be loaded on different sub-dimensions, schemas were fundamentally universal representations.

Other psychometric studies conducted with YSQ reported that the instrument had adequate test-retest reliability (Schmidt et al. 1995, Rijkeboer et al. 2005) and had high internal consistency (Schmidt et al. 1995, Lee et al. 1999, Baranoff et al. 2006). Studies that assessed the concurrent validity of the instrument revealed correlations in the theoretically expected direction with psychological symptoms (Glaser et al. 2002, Welburn et al. 2002), cognitive structures (Calvete et al. 2005), attachment styles (Cecero et al. 2004), and several personality disorders (Ball et al. 2000). Moreover, discriminant analysis also supported construct validity of the questionnaire (Schmidt et al. 1995, Stopa et al. 2001, Waller et al. 2001, Rijkeboer et al. 2005).

The present study is the first to investigate the psychometric properties of the third version of the Young Schema Questionnaire-Short Form (YSQ-SF3) in a university sample in Turkey. The main aim of this study was to provide the groundwork for schema therapy practice in Turkey. Considering that schema-focused research is in the preliminary phase worldwide, another aim of the present study was to facilitate the use of schema assessment instruments in schema-focused research in Turkey.

METHOD

Participants

1071 university students, who study in different faculties and departments of different universities, participated in the study. Mean age of the participants was 20.94 ± 2.07 years (ranging between 17-35 years). Information regarding sample size is provided in the results section because the number of participants varied during different phases of the study.

Data Collection Instruments

Young Schema Questionnaire-Short Form 3 (YSQ-SF3)

In the frame of Schema Therapy, YSQ-SF3 was developed by Jeffrey Young (1990, 2003). The scale proposes 18 subscales grouped into five schema domains as follow: Rejection, impaired autonomy and performance, impaired limits, other-directedness, overvigilance, and inhibition. The subscales are consecutively: Abandonment/instability, mistrust/abuse, emotional deprivation, defectiveness/shame, social isolation/alienation, dependence/incompetence, vulnerability to harm and illness, enmeshment/undeveloped self, failure, entitlement/grandiosity, insufficient self-control/self-discipline, subjugation, self-sacrifice, approval-seeking/recognition-seeking, negativity/pessimism, emotional inhibition, unrelenting standards/hypercriticalness, and punitiveness. The questionnaire consists of 90 items that are rated on a 6-point Likert-type scale (1 = entirely untrue of me, 6 = describes me perfectly). As each subscale consists of 5 items, the score obtained on the subscales varies between 5 and 30.

Symptom Checklist-90-R (SCL-90-R)

SCL-90-R, which was developed by Deragotis (1977, 1994; cited in Dağ 1991, 2000), was used to assess the concurrent validity of YSQ-SF3. Validity and reliability analysis of the scale were conducted by Dağ (1991) in Turkey. SCL-90-R evaluates psychological and somatic symptoms, stress that individuals are currently experiencing, and the level of stress reaction. It is a self-report scale consisting of 90 items rated on a 5-point Likert-type scale (0 = not at all, 4 = extremely). The scale has 9 subscales that reflect 9 different symptom groups: Somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The scale also has 3 indices; the Global Severity Index (GSI), Positive Symptom Distress Index (PSDI), and Positive Symptom Total (PST), and an additional scale that evaluates guilt feelings, and eating and sleeping problems. Studies conducted with the original and Turkish version of the inventory had showed that the instrument is valid and reliable. The scale has been used in several studies in Turkey.

Table I. Comparison of higher-order factors.

Schema Domains	Schmidt et al. (1995)	Lee et al. (1999)	Cecero et al. (2005)	The Present Study (2007)
Higher-order factor 1	Over-Dependence Dependence/Incompetence, Enmeshment/Undeveloped Self, Vulnerability to Harm and Illness, Failure, Insufficient Self-Control	**Impaired Freedom of Action** Dependence/Incompetence, Vulnerability to Harm and Illness, Failure, Subjugation	**Impaired Autonomy and Performance** Vulnerability to Harm and Illness, Failure, Enmeshment/ Undeveloped Self, Abandonment/Instability, Subjugation	**Impaired Autonomy** Enmeshment/Dependence, Abandonment, Failure, Pessimism, Vulnerability to Harm
Higher-order factor 2	**Disconnection** Abandonment/Instability, Mistrust/Abuse, Emotional Deprivation, Defectiveness, Emotional Inhibition, Fear of Losing Control, Insufficient Self-Control	**Disconnection** Abandonment/Instability, Mistrust/Abuse, Emotional Deprivation, Defectiveness, Social Isolation/Alienation, Emotional Inhibition	**Disconnection and Rejection** Mistrust/Abuse, Social Isolation/Alienation, Emotional Deprivation, Emotional Inhibition	**Disconnection** Emotional Deprivation, Emotional Inhibition, Social Isolation/Mistrust, Defectiveness
Higher-order factor 3	**Unrelenting Standards** Unrelenting Standards/Hypercriticalness, Self-Sacrifice, Insufficient Self-Control	**Unrelenting Standards** Unrelenting Standards/Hypercriticalness, Self-Sacrifice	**Other-Directedness and Over-vigilance-Inhibition Schema Punitiveness** Self-Sacrifice, Unrelenting Standards/Hypercriticalness, Dependence/Incompetence, Insufficient Self-Control	**Unrelenting Standards** Unrelenting Standards, Approval-Seeking
Higher-order factor 4	-	**Impaired Limits** Entitlement/Grandiosity, Fear of Losing Control,	**Impaired Limits** Entitlement/Grandiosity,	**Impaired Limits** Entitlement /Insufficient Self-Control,
Higher-order factor 5	-	-	-	**Other-Directedness** Self-Sacrifice, Punitiveness

Procedure

The volunteer participants completed the demographic form and counter-balanced scales in a class room setting. The participants in the test-retest group were required to identify themselves using a number or nickname.

Statistical Analysis

In order to demonstrate the scale's factorial structure, principal components analysis was conducted using equamax rotation. Correlations between test-retest scores were evaluated to assess the stability of the schema scores. During the assessment of the scale's internal consistency, Cronbach's alpha reliability coefficients were calculated. In order to assess the concurrent validity of the instrument, correlations between YSQ-SF3 subscales and some of the SCL-90-R subscales with the GSI index were analyzed. In addition, as a pre-study, t-test comparisons between groups were conducted in a small sample that consisted of clinical and normal participants.

Pre-Study: Translation Study

The scale was translated by the researchers and administered to a group of 20 students in order to evaluate the language and statement comprehensibility. The scale was finalized following necessary modifications according to the feedbacks received during this evaluation.

RESULTS

Convenience Examination of the Data and Statistical Methods

Univariate outliers were analyzed to determine extreme values, which is one of the criteria for obtaining reliable results with the statistical methods used in the study. First, Z values were calculated in consideration that factor analysis for the items would be conducted as well. Fifteen participants whose items' Z-values were > 5 were excluded from the study. After examination of Z-values on an item basis, Z-values for total scores were calculated and 2 participants whose total score Z-values were higher than ±3.29 were also excluded from the study.

Table II. Correlations between YSQ-SF3 and SCL-90-R.

YSQ-SF3	GSI	Depression	Anxiety	Interpersonal Sensitivity
Emotional Deprivation	0.38**	0.34**	0.22**	0.40**
Failure	0.48**	0.40**	0.40**	0.50**
Pessimism	0.55**	0.58**	0.52**	0.47**
Social Isolation/Mistrust	0.62**	0.50**	0.47**	0.58**
Emotional Inhibition	0.30**	0.47**	0.17**	0.38**
Approval-Seeking	0.35**	0.52**	0.24**	0.37**
Enmeshment/Dependency	0.46**	0.52**	0.37**	0.45**
Entitlement/Insufficient Self-Control	0.30**	0.55**	0.18**	0.20**
Self-Sacrifice	0.38**	0.54**	0.26**	0.30**
Abandonment	0.56**	0.50**	0.47**	0.49**
Punitiveness	0.32**	0.54**	0.21**	0.29**
Defectiveness	0.50**	0.40**	0.38**	0.50**
Vulnerability to Harm	0.41**	0.57**	0.36**	0.39**
Unrelenting Standards	0.19**	0.64**	0.13**	0.15**
YSQ-S3 Schema Domains				
Impaired Autonomy	65**	67**	54**	59**
Disconnection	58**	56**	40**	60**
Unrelenting Standards	34**	68**	24**	34**
Other-Directedness	40**	64**	28**	35**
Impaired Limits	30**	0.55**	0.18**	0.20**

**p < 0.01, n = 362.

Validity

Factor Analysis

Principal components analysis (PCA) was conducted using equamax rotation to determine the construct validity of the scale. The cut off point was determined as 0.33. These analysis were conducted with 1071 participants (597 female [55.7%] and 469 male [(43.8%]). 5 participants did not indicate their gender. Mean age of the participants was 20.94 ± 2.07 years (range 17-35 years).

Although the results showed that at the beginning there were 15 factorial structures, a 14-factor structure of was observed in the interpretable range. The last factor, which consisted of the 27th and 45th items that were loaded on the 15th factor, was excluded from the scale because it was considered as a duplication of factor 7, and was not considered a separate factor. These factors explained 49.11% of total variance. Five items (5, 36, 61, 85, and 87) did not loaded on any factor, and 12 items were cross-loaded on different factors. These cross-loaded items were placed in the factorial structures that were theoretically meaningful. After determination of the factors with PCA, 2 items (46 and 67) which has item-sum score correlations < 0.30 and that were not compatible with the factorial structure were excluded

Table III. Comparison of the clinical and normal samples in terms of YSQ-SF3 subscales and domains.

Subscale	Group	Mean	SS	t
Emotional Deprivation	Normal	7.97	3.18	12.88**
	Clinical	15.5	3.6	
Failure	Normal	11.9	4.99	6.14**
	Clinical	17.1	4.93	
Pessimism	Normal	10.2	3.81	6.80**
	Clinical	15	4.32	
Social Isolation/Mistrust	Normal	15.4	6.58	2.27*
	Clinical	17.7	5.12	
Emotional Inhibition	Normal	10.8	4.4	4.46**
	Clinical	14.1	4.37	
Approval-Seeking	Normal	17.3	5.11	1.01
	Clinical	18.1	3.95	
Enmeshment/Dependence	Normal	15.2	5.34	16.64**
	Clinical	32.4	6.66	
Entitlement/Insufficient Self-Control	Normal	22.8	7.47	.15
	Clinical	22.7	4.25	
Self-Sacrifice	Normal	13.5	4.57	1.82
	Clinical	14.9	4.37	
Abandonment	Normal	8.79	2.89	9.04**
	Clinical	13.9	3.68	
Punitiveness	Normal	19.3	5.49	.03
	Clinical	19.6	5.26	
Defectiveness	Normal	9.63	3.97	7.76**
	Clinical	15.2	4.33	
Vulnerability to Harm	Normal	8.99	3.51	6.50**
	Clinical	12.8	3.23	
Unrelenting Standards	Normal	8.41	3.5	.77
	Clinical	8.85	3.17	
Impaired Autonomy	Normal	55.06	15.57	12.32**
	Clinical	91.16	18.54	
Disconnection	Normal	43.78	14.06	7.68**
	Clinical	62.45	14.28	
Unrelenting Standards	Normal	25.73	7.37	1.06
	Clinical	25.97	6.05	
Other-Directedness	Normal	32.80	7.90	1.16
	Clinical	34.48	8.83	
Impaired Limits	Normal	22.84	7.47	.01
	Clinical	22.68	4.24	

**p < 0.01, * p < 0.05.

from the related factor. Item distribution according to the factors obtained can be summarized as follows: Emotional deprivation (items according to their respective factor loads of 55, 19, 37, 73, and 1), failure (6,

Table IV. YSQ-SF3 internal consistency and test-retest reliability analysis results.

Subscale	Mean	SS	Internal Consistency (Cronbach's Alpha (N = 1071)	Test-retest reliability (N= 150)
Emotional Deprivation	7.96	3.99	0.78	0.71*
Failure	11.87	4.64	0.80	0.70*
Pessimism	11.62	4.96	0.79	0.77*
Social Isolation/Mistrust	16.08	6.29	0.78	0.77*
Emotional Inhibition	10.99	4.56	0.72	0.78*
Approval-Seeking	18.51	5.30	0.74	0.72*
Enmeshment/Dependence	15.90	6.14	0.80	0.76*
Entitlement/Insufficient Self-Control	24.90	6.50	0.72	0.66*
Self-Sacrifice	14.84	4.97	0.74	0.82*
Abandonment	8.78	3.80	0.73	0.72*
Punitiveness	20.87	5.50	0.71	0.67*
Defectiveness	9.38	3.64	0.68	0.75*
Vulnerability to Harm	9.10	3.75	0.63	0.68*
Unrelenting Standards	9.54	3.66	0.70	0.76*
Impaired Autonomy	57.28	17.86	0.81	0.82*
Disconnection	44.40	14.56	0.76	0.83*
Unrelenting Standards	28.05	7.51	0.53	0.76*
Other-Directedness	35.72	8.88	0.60	0.78*
Impaired Limits	24.90	6.50	**	0.66*

*p < 0.01
**Internal consistency analysis was not conducted because only a single factor was found.

60, 78, 24, 42, and 33), pessimism (35, 17, 8, 26, and 80), social isolation/mistrust (58, 4, 76, 3, 57, 75, and 40), emotional inhibition (30, 84, 12, 66, and 48), approval-seeking/recognition-seeking (88, 52, 70, 56, 34, and 16), enmeshment /dependence (63, 81, 9, 79, 7, 64, 10, 25, and 82), entitlement/insufficient self-control (68, 69, 15, 50, 32, 51, and 22), self-sacrifice (83, 47, 29, 65, and 11), abandonment (2, 20, 38, 28, and 74),

punitiveness (54, 72, 18, 53, 49, and 89), defectiveness (90, 41, 23, 43, 59, and 77), vulnerability to harm (62, 71, 44, 21, and 39), and unrelenting standards (13, 31, and 14).

To explore higher-order factors, factor analysis was conducted on the 14 interpretable factors obtained as a result of principal component analysis in order to determine the schema domains, and it was concluded that a 5-factor structure was the most convenient structure. Schema domains and factors covered within these domains are summarized in Table I.

Concurrent Validity

In the subsequent phase of the study correlations between subscales and domains of with psychological symptoms were analyzed using the data obtained from 362 participants to determine the concurrent validity. Correlations between the YSQ-SF3 subscales/domains and the Global Severity Index (GSI), and the anxiety, depression, and interpersonal sensitivity subscales of SCL-90-R were explored on in order to determine the concurrent validity (Table II).

As seen, the correlations between the YSQ-SF3 subscales and the GSI index of SCL-90-R were in the expected direction and statistically significant ($r = 0.19$-0.62 interval, $P < 0.01$). Similarly, the correlations between YSQ-SF3 schema domains and the SCL-90-R GSI index were in the expected direction and statistically significant ($r = 0.30$-0.65 interval, $P < 0.01$).

The correlations between YSQ-SF3 subscales and the SCL-90-R depression subscale varied between $r = 0.34$ and $r = 0.64$ ($p < 0.01$). While significant correlations ($r = 0.13$-0.52 interval, $p < 0.01$) between the SCL-90-R anxiety subscale and YSQ-SF3 subscales was observed, the correlation of the subscales with interpersonal sensitivity varied between $r = 0.15$ and $r = 0.58$ ($p < 0.01$). When the correlations between YSQ-SF3 schema domains and SCL-90-R subscales were analyzed, the following statistically significant correlations were observed: $r = 0.55$-0.68 ($p < 0.01$) with the depression subscale, $r = 0.18$-0.54 ($p < 0.01$) with the anxiety subscale, and $r = 0.20$-0.60 ($p < 0.01$) with the interpersonal sensitivity subscale.

Discriminant Validity

Discriminant Validity Analysis Conducted with the Clinical Sample

In this phase of the study, some analyses were conducted with a clinical sample consisting of a limited number of participants in order to provide support for the discriminant validity. The clinical sample consisted of cases from a private psychotherapy center (N = 68; 47 female [30.9%] and 21 male [69.1%]. The mean age of the group was 27.88 ± 4.39 years (range: 17-38 years). Diagnostic assessment of the patients was conducted by a psychiatrist. Approximately 30% of the participants were diagnosed with an anxiety disorder or depression. The remaining participants did not meet any diagnostic criteria and primarily had interpersonal relationship problems. In the process of constituting a comparison group for the clinical sample, the groups were matched according to age, gender, and education level. The normal sample consisted of a group of individuals who had low psychological symptoms according to SCL-90-R. This group's (N = 68; 39 female [57.4%] and 29 male [42.6%]) mean age was 20.92 ±1.74 years (range: 17-27 years).

Independent groups t-test was used to determine whether the clinical and normal samples differed from each other in terms of YSQ-SF3 subscale scores. According to the results, there were statistically significant differences between the clinical and normal groups in terms of the emotional deprivation, failure, pessimism, social isolation/mistrust, emotional inhibition, enmeshment/dependence, abandonment, defectiveness/shame, and vulnerability to harm YSQ-SF3 subscales ($t = 2.27$-16.64, $p < 0.05$-0.01). Moreover, when group means were compared, it was observed that the clinical sample had higher scores on all the mentioned YSQ-SF3 subscales than the normal sample. The means of the two groups and t-values are presented in Table III.

T-test analyses conducted to determine whether the groups differed in terms of schema domain scores also revealed significant differences in impaired autonomy ($t = 0.12.32$, $p < 0.01$) and disconnection ($t = 7.68$, $p < 0.01$).

Reliability

Test-Retest Reliability

In order to determine the test-retest reliability of the YSQ-SF3 the scale was re-administered with approximately 3 weeks interval to 150 of the participants. Approximately 93 (62.4%) of the individuals in the test-retest group were female and 56 (37.6%) were male. One participant did not indicate gender. The mean age of the participants was 20.54 ± 2.23 years (range: 17- and 35 years). Test-retest results that were grounded on

the subscales and domains scores of the scale are shown in Table IV. As can be seen, Pearson's correlation coefficients for subscales varied between r = 0.66 and r = 0.82 ($p < 0.01$). According to the test-retest reliability analysis, Pearson's correlation coefficients for schema domains varied between r = 0.66 and r = 0.83 ($p < 0.01$). These results show that the coefficients obtained are significant and in the acceptable range.

Internal Consistency

The analyses regarding the internal consistency were conducted on the same sample used for factor analysis. The results show that the internal consistency coefficient for the YSQ-SF3 subscales varied between $\alpha = 0.63$ and $\alpha = 0.80$. Additionally, Cronbach's alpha internal consistency coefficients of schema domains determined by higher-order factor analysis ranged between $\alpha = 0.53$ and $\alpha = 0.81$. Thus, it is possible to say that the scale has a medium-level of internal consistency. The results are presented in Table IV.

DISCUSSION

Overall evaluation of the findings pointed out that the Turkish version of the YSQ-SF3 is reliable and valid in the acceptable level. The results will be discussed in relation to psychometric studies conducted on the long (205 items) and short (75 items) forms because psychometric studies on the original version of the the YSQ-SF3 have not been completed yet. Such a comparison was deemed appropriate because previous findings showed that the YSQ short and long forms are quite compatible, and both were reported to be appropriate for use in research and clinical settings (Stopa et al. 2001).

The factorial structure of the Turkish form revealed 15 factors of which 14 were in an interpretable range. The structure that was observed as the 15th factor was not interpreted as a separate factor, because it consisted of 2 items considered duplicates of the enmeshment/dependence factor, and these 2 items had low item sum score correlation with the entire scale. Accordingly, the factors are as follows: Emotional deprivation, failure, pessimism, social isolation/mistrust, emotional inhibition, approval seeking, enmeshment /dependence, entitlement/insufficient self-control, self-sacrifice, abandonment, punitiveness, defectiveness, vulnerability to harm, and unrelenting standards. It was observed that the factors obtained in the present study overlapped with the original form to a great extent. Notwithstanding, some subscales merged under the factors unlike in the original form. Accordingly, enmeshment/undeveloped self and dependence/incompetence subscales; entitlement/grandiosity and insufficient self control/self discipline subscales; social isolation/alienation and mistrust/abuse subscales merged in the present study and formed new factor structures differing from the theoretically proposed ones. Moreover, the items related to subjugation were placed in the enmeshment/dependence and abandonment subscales. These findings are in accord with the factor analysis results of research conducted in different countries, in terms of numbers of factors and items loaded under different subscales, though in a theoretically expected pattern. In addition to that, in terms of the higher-order factors, similarities are observed (see Table I) with studies conducted in the Western cultures (Schmidt et al. 1995, Lee et al. 1999, Cecero et al. 2004).

The present study is different from those conducted by Sezgin (1996, 1997) and Batur (2004) in Turkey with its use of version, translation, and short/long form of YSQ-SF3. Additionally, the study conducted by Sarıtaş (2007) with adolescents differs from the present study in terms of sample, even though a form adapted by the researchers of the present study was used. Therefore, comparisons made with the previous studies mentioned above have some limitations. Despite limitations, there was a general overlap between the present study and the previous studies in terms of the factor patterns. Researchers in the Western cultures emphasized the universal characteristic of the fundamental factorial structure and showed that the fundamental factorial structure was consistent with different cultures and psychopathology groups. Considering the overlap of fundamental factorial structures obtained in the present study, we also suggest that the YSQ-SF3 could be used in non-western societies.

The concurrent validity of the scale was determined using correlations between the scale and psychological symptoms assessed with SCL-90-R. The analysis of YSQ subscales revealed statistically significant and theoretically meaningful correlations. Nonetheless, the correlation coefficients were low for some subscales and schema domains. Even though the findings were generally in line with previous studies that focused on the relationships between YSQ and psychological symptoms (Glaser et al. 2002, Welburn et al. 2002), low levels of correlations observed is considered as a limitation in terms of the concurrent validity of the scale. Hence, further investigation of the cognitive and relational variables is necessary.

On the other hand, our comparative analysis con-

ducted with clinical and normal samples provided support for the discriminant validity of the scale. The clinical sample revealed higher means compared to the normal sample, in terms of many subscales and domains. We did not observe significant differences between the groups for the subscales approval seeking, entitlement/ insufficient self-control, self-sacrifice, punitiveness, and unrelenting standards. In addition, the discriminant power of the unrelenting standards, other-directedness, and impaired limits schema domains were not adequate; therefore, future research should focus on the mentioned areas.

Although the correlation coefficients of some subscales were relatively low, the internal consistency of each subscale was statistically in the acceptable range. Thus, the findings regarding the scale's reliability supports previous studies conducted with the original form (Schimidt et al. 1995, Lee et al. 1999, Stopa et al. 2001, Batur 2004, Cecero et al. 2004, Calvete et al. 2005, Baranoff et al. 2006). Some differences are observed between the studies when analysis was performed on the basis of subscales. Studies that used the long form reported higher coefficients compared to those that used the short form (Schmidt et al. 1995, Batur 2004). Considering that there are fewer items on the subscales of the short form, this is expected. Nevertheless, some studies that used the short form reported very high coefficients (Welburn et al. 2000, Calvete et al. 2005, Baranoff et al. 2006). These differences should be investigated in greater detail in future studies.

Test-retest analysis showed that the consistency of the scale over time was in the acceptable range, in terms of subscales and schema domains, and most of coefficients were high. Regarding schemas are resistant to change, this finding might be thought of a good indicator of the reliability. To conclude, the Turkish YSQ-SF3 is utilizable in both research and clinical settings. The factor structure of the scale is generally consistent with previous studies and it has acceptable levels of reliability and validity.

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