

Psychometric Properties of the Defense Style Questionnaire: A Reliability and Validity Study

Nilgün YILMAZ, Tülin GENÇÖZ, Mehmet AK

Abstract

Objective: To examine the psychometric properties of the Turkish form of the Defense Style Questionnaire (DSQ).

Method: The study included 190 participants, of which 85 with a depressive disorder or obsessive-compulsive disorder diagnosis composed the clinical group, and 105 individuals without any psychiatric diagnosis composed the control group. Participants completed the DSQ, Beck Depression Inventory (BDI), and Trait Anxiety Scale (TAS).

Results: As for the psychometric properties of the DSQ-40, the internal consistency of the mature, neurotic, and immature defense styles was 0.70, 0.61, and 0.83, respectively. Additionally, results revealed that the 3 defense styles had acceptable split-half reliability and test-retest reliability coefficients. Considering the concurrent validity, the mature defense style was negatively correlated with the symptoms of depression and anxiety, whereas the immature defense style was positively correlated with these symptoms. The neurotic defense style, on the other hand, had a positive correlation with anxiety symptoms, but did not reveal a significant correlation with depressive symptoms. The examination of criterion validity revealed results were consistent with our expectations. Significant differences were found in the expected direction between the control and clinical groups.

Conclusion: The psychometric properties of DSQ-40 seem to be quite acceptable; therefore, this questionnaire can be utilized for research purposes.

Key Words: Defense Style Questionnaire, Validity, Reliability, Defense

INTRODUCTION

The concept of defense mechanisms was first defined by Sigmund Freud (1894) in *Neuropsychosis of the Defenses* and was expanded by Anna Freud (1966), Kernberg (1967), and Klein (1973). According to A. Freud (1966), in addition to their function of protecting the ego from the unwanted and anxiety-provoking situations, defense mechanisms are psychological processes that establish control over impulsive behaviors, emotions, and innate impulses.

According to psychoanalytical theory, one of the main functions of the ego is to use defenses in order to maintain psychological homeostasis (Freud, 1961). Defense mechanisms have an important role in the development of personality and adaptation to the environment, and they protect us from internal conflicts and emotional

distress. From this perspective, defense mechanisms are closely related to ego development and psychopathology. Defense mechanisms first appeared in the third version of the *Diagnostic and Statistical Manual of Mental Disorders*, (DSM-III-R), (American Psychiatric Association (APA), 1987). In DSM-IV (APA, 1994) defense mechanisms are defined as automatic psychological processes that protect an individual from anxiety and the awareness of internal or external threats or stressors.

In researches conducted to understand the concept of defense mechanisms and their relationship to psychopathology, clinical interviews, projective tests, autobiographies, and questionnaires have been used (Battista, 1982; Haan, 1965; Ihilevic and Gleser, 1995; Semrad et al., 1963; Vaillant, 1976). Some of these methods are Vaillant's (1976) interview-based assessment method

that uses short stories, Perry and Cooper's (1989) defense mechanisms assessment scales based on observer ratings, and Bond et al.'s (1983) Defense Style Questionnaire (DSQ).

The Defense Style Questionnaire is a self-rating scale composed of 88 items and includes 26 defense mechanisms. The construct validity study yielded 4 factors for the defenses in the DSQ: immature, image distorting, self-sacrificing, and mature defenses.

The above-mentioned form of DSQ was developed before the DSM-III in 1983, and after the inclusion of the defense mechanisms in DSM III-R (APA, 1987), Andrews et al. (1989) revised the 88-item DSQ according to DSM III-R, and formed 72-item DSQ (DSQ-72). The DSQ-72 included 20 defense mechanisms that were loaded onto 3 factors. These factors were immature, neurotic, and mature defense mechanisms. Andrews et al. (1993) reported that the numeric distribution of the defenses in DSQ-72 was not equal, as some defenses were measured with 10 items, while others were only measured by one item. In addition to this statistical weakness of the test, they reported that the high number of items may lead fatigue and boredom during its administration. Based on these limitations they developed the 40-item DSQ (DSQ-40). Construct validity of this final form of the DSQ was similar to DSQ-72, and items were loaded onto 3 factors. These factors were defined as immature, neurotic, and mature defense mechanisms.

DSQ-88 and DSQ-40 were adapted to various languages, including Italian (Martini et al., 2004) and Japanese (Hayashi et al., 2004, Nishimura 1998), and reliability and validity studies were conducted. In addition, in his revision study of the DSQ, Bond (2004) reported that the DSQ reliability and validity have been studied in other countries, such as Italy, Portugal, France, and Germany, and that it is being used in various studies.

The development of DSQ and the realization of validity and reliability studies in various countries paved the way for various studies on defense styles used in different clinical populations. Studies of borderline personality disorder, anxiety disorders, depressive disorder, and controlled studies of eating disorders showed that individuals with psychiatric disorders use immature defense mechanisms more than healthy individuals. These findings support that there is a relationship between defense mechanisms and psychopathology for various clinical populations. Bond (2004) proposed that defense mechanisms should be evaluated as reflections of psychopathology. The DSQ is an important tool used for explaining

psychopathology by assessing adaptive and non-adaptive defense styles.

When the defense scales that were adapted to Turkish are evaluated, it was seen that the Defense Mechanisms Inventory (DMI) developed by Ihilevic and Gleser (1995) was adapted by Sorias, Leblebici, and Uysal (1995), and DSQ-88 was adapted by Bodur (1999).

DMI examines 5 types of defense mechanisms: turning against the object, projection, turning against the self, principalization and reversal within 10 vignettes case stories. Due to DSQ's advantages over DMI, such as assessing more defense mechanisms and being based on DSM, efforts for conducting research on adapting the DSQ for use in Turkey began. The psychometric properties of the Turkish version of DSQ-88 was studied by Bodur (1999). The reliability study of the Turkish DSQ-88 revealed that the defenses did not show a similar factor structure with the original version and that the reliability of the scale was low; therefore, a 26-item short form that measures 14 defenses was developed (DSQ-26).

DSQ-26 has certain limitations, such as it assesses fewer defense mechanisms, includes a small number of items, has inconsistent item distribution of the defenses, and does not include the mature defenses. On the other hand, DSQ-40 has advantages in terms of the number of its items, as well as its widespread usage and its consistency with the defense styles defined in DSM III-R. In the light of above-mentioned information, this study aimed to measure the psychometric properties of the Turkish form of DSQ-40.

METHODS

Sample

The control group included 105 (53 men, 53 women) healthcare personnel from the Gülhane Military Medical Academy (GATA) and their relatives, all who had no psychiatric treatment history. The clinical group was composed of 50 depressive disorder patients and 35 obsessive-compulsive disorder patients (both inpatients and outpatients) diagnosed according to DSM-IV.

The age range of the clinical group were 19-48 years (mean: 27.92; SD: 7.31), the age range of the control group were 20-45 years (mean: 30.02; SD: 6.33). Among the clinical group, 52% were single, 42% were married and 6% were widowed, whereas 42% of the control group were single, 54% were married, and 4% were widowed. In terms of education level, 19% of the clinical group were primary school graduates, 59% were

high school graduates, and 22% were university graduates, as compared to the control group in which 11% were primary school graduates, 49% were high school graduates, and 40% were university graduates.

These two groups were significantly different in terms of gender ($t [188] = 2.85, p < .01$), age ($t [188] = 2.12, p < .05$), and duration of education ($t [188] = 2.62, p < .01$); therefore, in the analysis of criterion validity, age, gender, and education level were considered as covariates.

Data Collection Tools

Defense Styles Questionnaire (DSQ-40)

DSQ-40 is a 40-item self-rating instrument that experimentally assesses conscious derivatives of unconscious defense mechanisms and includes 20 defense mechanisms. In the test developed by Andrews, Singh, and Bond (1993) each item is evaluated on a scale of 1 to 9, where 1 indicates, completely disagree, and 9 indicates, fully agree. Andrews et al. (1993) conducted the reliability and validity study of DSQ-40 with control, anxiety disorder, and abusive parent group. 20 defense mechanisms are grouped into the 3 dimensions, termed as neurotic, mature, and immature defenses. Immature defenses include acting out, passive-aggression, regression, withdrawal, inhibition, projection, denial autistic fantasy, replacement, dissociation, splitting, rationalization, and somatization while neurotic defenses include pseudo altruism, reaction formation, undoing, and idealization. Finally mature defenses consist of humor, suppression, sublimation, and anticipation.

In the same study the internal consistency coefficients of immature, neurotic, and mature defenses were reported to be 0.68, 0.58, and 0.80, respectively. The four-week test-retest coefficients were 0.75 for mature defenses, 0.78 for neurotic defenses, and 0.85 for immature defenses. The Turkish adaptation study of DSQ-40 was based on Bodur's (1999) language equivalence study for the DSQ-88.

Beck Depression Inventory (BDI)

The BDI, developed by Beck, Rush, Shaw and Emer (1979), is a 21-item self report questionnaire that examines the severity of somatic, emotional, mental, and motivational symptoms of depression. Each item is rated between 0 and 3. Higher scores indicate an increase in depressive symptoms (Beck et al., 1961; Beck et al., 1979). The reliability and validity coefficients of the Turkish form are similar to the original form (Hisli, 1989; Tegin, 1980).

Trait Anxiety Scale (TAS)

TAS was developed by Spielberger, Gorsuch, and Lushene (1970) in order to assess anxiety levels. The scale includes 2 sections; the 20-item state anxiety section evaluates the feeling of individuals in particular conditions, and the 20-item trait anxiety section evaluates how individuals feel generally, independent of particular conditions. Each item is rated between 1 (never) and 4 (always); higher scores indicate higher levels of state and trait anxiety. Only the trait anxiety section was used in this study. The Turkish adaptation study was conducted by Öner and Le Compte (1975), and the internal consistency coefficients were between 0.83 and 0.87.

Procedure

The Gülhane Military Medical Academy (GATA) Hospital Ethics Committee approved the study protocol. Data were collected on healthcare personnel working in the GATA Psychiatry Department and their relatives, all of whom had no psychiatric treatment history, and on inpatients and outpatients diagnosed with depressive disorder and obsessive-compulsive disorder.

Individuals who volunteered to participate were informed about the content and the procedure of the study, and were asked to complete a sociodemographic form, the BDI, TAS, and DSQ-40. These instruments were administered in a random order. For the test-retest administration, DSQ-40 was administered randomly to 40 individuals from the control group one week after they first completed the form.

Statistical Analysis

The differences between the groups in terms of the test results were examined with t-test analysis. For the reliability analyses, the internal consistency coefficients, split-half reliability, and test-retest reliability were computed. The Cronbach's alpha coefficients of the 8-item mature and neurotic defense style and 24-item immature defense style subscales were analyzed for internal consistency. In addition, item total test correlations were analyzed, and the relationship between each defense style and the related total score was analyzed with Spearman's correlation test. In order to evaluate the split-half reliability, the 8 items that measured mature and neurotic defenses styles were randomly divided in two, each half with 4 items, and similarly the 24 items that measured immature defense style were randomly divided in two halves, each with 12 items, then, Guttman split-half reliability was evaluated. For test-retest reliability, the

Table I. Means and standard deviations of total scores of the DSQ, BDI, and TAS, and t-test values that show the difference between the clinical and the control groups.

	Clinical Group (n= 85)		Control Group (n= 105)		t (df= 188)
	Mean	SD	Mean	SD	
Mature Defenses	32.00	(10.62)	44.00	(9.95)	8.20**
Sublimation	8.04	(4.12)	10.04	(3.85)	3.45**
Humor	6.47	(3.69)	10.69	(4.09)	7.38**
Anticipation	9.94	(4.22)	12.63	(3.92)	4.54**
Suppression	7.14	(3.86)	10.50	(3.61)	6.18**
Neurotic Defenses	41	(11.16)	38.00	(11.30)	-2.30*
Undoing	10.28	(4.25)	9.02	(4.54)	-1.95*
Pseudo Altruism	11.34	(3.90)	11.41	(3.65)	0.12
Idealization	9.46	(4.75)	8.02	(4.48)	-2.14*
Reaction formation	9.87	(4.51)	8.70	(3.95)	-1.90
Immature Defenses	123	(27.65)	90.00	(22.77)	-9.18**
Projection	11.94	(5.09)	6.37	(3.41)	-8.99**
Passive aggression	10.88	(4.58)	6.51	(3.70)	-7.27**
Acting out	12.55	(4.37)	8.62	(4.40)	-6.15**
Isolation	11.24	(4.59)	8.07	(3.76)	-5.21**
Devaluation	8.76	(4.21)	6.18	(3.58)	-4.57**
Autistic fantasy	9.58	(4.14)	7.39	(3.60)	-3.89**
Denial	8.35	(4.37)	7.63	(3.59)	-1.25
Displacement	8.84	(4.06)	5.70	(3.46)	-5.73**
Dissociation	6.76	(3.77)	7.61	(3.46)	1.61
Splitting	11.64	(4.79)	7.61	(3.76)	-6.49**
Rationalization	9.95	(3.74)	8.75	(3.79)	-2.19*
Somatization	86.86	(4.31)	9.31	(4.49)	-5.51**
BDI	31.04	(11.29)	7.05	(4.55)	-19.87**
TAS	56.45	(8.61)	31.03	(11.29)	-13.07**

*p < 0.05, **p < 0.001

consistency over time of mature, neurotic, and immature defenses was evaluated. With this aim the scale was randomly administered to 40 individuals from the control group one week after they first completed the test. In terms of validity analysis, the criterion related validity and concurrent validity were assessed. In order to analyze the criterion validity, correlations with BDI and TAS were computed. In order to assess the criterion validity of the scale and compare the mature, neurotic, and immature defense styles in the control and clinical groups, a 2 (clinical and control groups) $\times$ 3 (mature, neurotic, and immature defense styles) ANCOVA was composed.

FINDINGS

The means and standard deviations of the DSQ, BDI, and TAS, and t-test comparisons of the 2 groups are presented in Table I. As is seen from the comparisons between the clinical and control groups, individuals in the control group used mature defenses more ($t [188] = 8.20, p < 0.001$) than those in the clinical group and the clinical group used neurotic ($t [188] = -2.30, p < 0.05$) and immature defenses ($t [188] = -9.18, p < 0.001$) more than the control group. In addition, the level of depressive symptomatology ($t [188] = -19.87, p < 0.001$) and

Table II. The internal consistency coefficients and test-retest coefficients of the original form (DSQ-40) and the Turkish form (DSQ-40).

Defenses	DSQ-40 Cronbach's alpha coefficient (n = 712)	Turkish DSQ-40 Cronbach's alpha (n = 190)	DSQ-40 test-retest correlation coefficients (n = 89)	Turkish DSQ-40 test-retest correlation coeff (n = 40)
Mature Defenses	0.68	0.70	0.75	0.75
Sublimation	0.42	0.35	0.67	0.68
Humor	0.59	0.50	0.66	0.85
Anticipation	0.32	0.54	0.63	0.66
Suppression	0.39	0.44	0.38	0.58
Neurotic Defenses	0.58	0.61	0.78	0.88
Undoing	0.37	0.36	0.61	0.69
Pseudo Altruism	0.19	0.21	0.62	0.83
Idealization	0.52	0.40	0.72	0.82
Reaction Formation	0.32	0.37	0.75	0.84
Immature Defenses	0.80	0.83	0.85	0.86
Projection	0.64	0.66	0.77	0.73
Passive aggression	0.38	0.49	0.67	0.80
Acting Out	0.49	0.62	0.72	0.78
Isolation	0.56	0.36	0.70	0.55
Devaluation	-0.01	0.31	0.57	0.61
Autistic fantasy	0.89	0.19	0.73	0.68
Denial	0.10	0.14	0.48	0.62
Displacement	0.17	-0.05	0.80	0.88
Dissociation	0.44	0.12	0.75	0.78
Splitting	0.19	0.49	0.73	0.83
Rationalization	0.73	0.02	0.53	0.87
Somatization	0.56	0.46	0.72	0.87

Note: The DSQ-40 results were taken from Andrews et al. (1993).

trait anxiety ($t [188] = -13.07, p < 0.001$) in the clinical group were higher than the control group.

Reliability Study

The internal consistency coefficients, split-half reliability, and test-retest reliability results of the DSQ-40, and internal consistency coefficients and test-retest reliability coefficients of the original scale are presented in Table II.

Internal consistency coefficients and Item total coefficients

The internal consistency of the mature, neurotic, and

immature defense styles was 0.70, 0.61, and 0.83, respectively (the original internal consistency coefficients are shown in Table II). In addition, item total test correlations ranged from 0.49 to 0.66 for mature defense style, the coefficients were between 0.42 and 0.63 for the neurotic defense style and between 0.42 and 0.63 for the immature defense style. The item total correlations of the 20 defenses and the findings of the original study are presented in Table II.

Split-half reliability

The Guttman split-half reliability for mature defense style was 0.72 (for these 2 halves internal consistency

Table III. Inter-Correlations Between Mature Defense Style (MDS), Neurotic Defense Style (NDS), Immature Defense Style (IDS), Beck Depression Inventory (BDI), Trait Anxiety Scale (TAS), and Mean and (Standard Deviation) Values of these Variables (on the diagonal).

	MDS	NDS	IDS	BDI	TAS
MDS	38.37 (11.91)	.18*	-.28**	-.57**	-.52**
NDS		38.86 (11.44)	.41**	.12	.25**
IDS			104.79 (30.09)	.57**	.56**
BDI				17.78 (14.53)	.80**
TAS					47.45 (11.76)

* $p < .05$, ** $p < .001$

Note. For all correlation coefficients $N = 190$.

coefficients were 0.51 and 0.55, respectively), for the neurotic defense style it was 0.60 (for these 2 halves internal consistency coefficients were 0.46 and 0.44, respectively), and for the immature defense style it was 0.82 (for these 2 halves internal consistency coefficients were 0.73 and 0.69, respectively).

Test-retest reliability

The test-retest reliability was found to be 0.75 for mature defense style, 0.88 for neurotic defense style, and 0.86 for immature defense style (details and comparisons with the original scale are shown in Table II).

Validity Analyses

For the validity analyses, concurrent validity and criterion related validity were assessed based on the original factors, and the defenses related to these factors. In order to test the scale's efficacy on the Turkish population by comparison to other adaptations of the scale, the factor structure and distribution were not changed.

Concurrent validity

As presented in Table III, correlations between BDI, and mature defense style and immature defense style were -0.57 and 0.57 , respectively (for both values, $p < 0.001$), and there was no significant correlation between neurotic defense style and depressive symptoms.

The possible reasons for this finding will be covered in the discussion section. The correlation coefficients between TAS and the defense styles were -0.52 for mature defenses, 0.25 for neurotic defenses, and 0.56 for immature defenses (for each of the 3 values, $p < 0.001$). According to these results, as the level of depression and

anxiety increased the frequency of using mature defenses decreased, whereas the frequency of using immature defenses increased. In addition, neurotic defenses also increased with increased anxiety.

Criterion validity

In order to assess the criterion validity of the scale the differences in main defense mechanisms between the groups were evaluated. With this aim, the total of each defense style was divided by the number of items in that dimension and defense style means were then computed for each of the 3 dimensions. Following this procedure, a 2 (clinical and control groups) $\times$ 3 (mature, neurotic, and immature defense styles) ANCOVA was composed. In this analysis age, gender, and education level were considered as covariates. In the result of this analysis, whereas group ($F [1, 185] = 0.74$, $p > 0.05$) and defense style ($F [2, 370] = 0.18$, $p > 0.05$) main effects were not significant, group $\times$ defense style interaction was found as significant; $F [2, 370] = 78.05$, $p < 0.001$. One-way variance analysis conducted for this interaction, and it was found that the control group most often used mature defenses, followed by neurotic and immature defenses, while the clinical group most frequently used neurotic and immature defenses, both at the same rate, followed by mature defenses (Figure I). As the diagnoses in the clinical group were not supported with the Structured Clinical Interview for DSM-IV, (SCID-I) (Özkürkçügil et al., 1999), depressive disorders and obsessive-compulsive disorder were not analyzed separately.

DISCUSSION

This study aimed to examine the properties of the

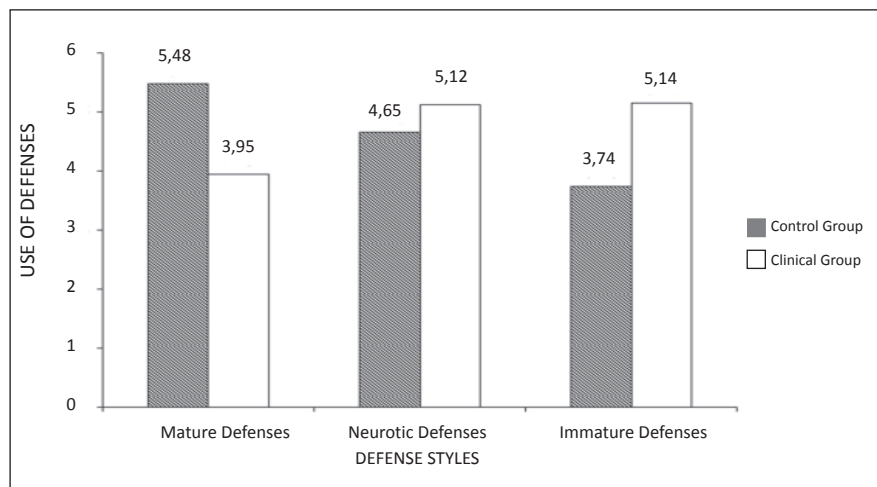


Figure 1. The Interaction Between Groups and Defense Styles

Turkish DSQ-40 with clinical and control groups, and it was concluded that the psychometric properties of DSQ-40 were compatible with the original version of the scale (Andrews et al., 1993). The internal consistency coefficients of the mature, neurotic, and immature defense styles in the original study were, 0.68, 0.58 and 0.80; respectively. Similarly, in this study, the internal consistencies of mature, neurotic, and immature defense styles were 0.70, 0.61, and 0.83, respectively, all acceptable levels. The reliability coefficients of the sub defenses that accumulated under mature, neurotic, and immature defense styles ranged from -0.05 to 0.66 . In the original study the coefficients of the sub defenses were between -0.01 and 0.89 . It was proposed that the item number of each sub defense (each was measured with two items) affected the reliability coefficients. In this regard, as in the original study, the reliability of the sub defenses is limited and it is suggested that the scale should be used as a whole. Both this study and the original study conducted a test-retest study with healthy individuals, and test-retest coefficients of the original scale (0.75, 0.78, and 0.85 for mature, neurotic and immature defenses, respectively) and of this scale (0.75, 0.88, and 0.86 for mature, neurotic and immature defenses, respectively) were found to be similar and acceptable. In addition, according to the present study, the split-half reliability for mature defense style (0.72), neurotic defense style (0.60), and immature defense style (0.82), internal consistency coefficients (Cronbach's Alpha), and test-retest reliability coefficients were compatible with the literature findings, which supports that the Turkish DSQ-40 is a reliable instrument.

In terms of the validity analyses, utility of this questionnaire with the Turkish population was evaluated by criterion-related and concurrent validity analysis, with-

out changing the factor structure of the scale. This approach permitted making comparisons with other population adaptation studies.

In order to examine the concurrent validity, the correlations with BDI and TAS were examined, demonstrating that there was a negative relationship between mature defense style and a positive relationship with the immature defense style and symptoms of depression.

As the severity of depressive symptoms increased, the use of a mature defense style related to adaptive behaviors decreased and the frequency of an immature defense style related to disruptive behaviors increased. Results are compatible with the literature.

In their studies of defense styles among depressive individuals, including those that attempted and did not attempt suicide, Corruble et al., (2004) found a significant negative relationship between depression severity and mature defense style. Akkerman et al., (1999), Bond et al. (1989), Bond and Perry (2004), and Mullen et al. (1999) all reported that depressive patients used immature defenses more often than mature defenses. Akkerman et al. (1989) reported that as depressive symptoms subside, the frequency of mature defenses increased and immature defenses decreased. In the present study, with regard to not being able to find a significant relationship between depression level and neurotic defense style, items that measured pseudo altruism, undoing, idealization, and reaction formation defenses were analyzed, and it was concluded that these items were related more to threat, avoidance, and protection (anxiety) than to depression; therefore, it is believed that neurotic defenses are more sensitive to anxiety and less sensitive in depressive symptoms.

In studies conducted with individuals with anxiety

disorders, a positive relationship between immature defense style and anxiety severity was reported (Kipper et al., 2004; Spinhoven and Kooiman, 1997). Spinhoven and Kooiman (1997) evaluated defense styles with anxiety and depressive patient groups, and a control group, concluding that the clinical group used immature and neurotic defenses more than the control group.

As expected, the present study found a negative relationship between trait anxiety and a mature defense style, and a positive relationship between trait anxiety and neurotic and immature defenses. As the level of anxiety increased, use of immature and neurotic defense styles increased. This finding was consistent with Bodur (1999)'s study. He also reported a negative relationship between trait anxiety and all defense styles, except for the mature defense style.

Within the criterion validity analyses, as the diagnoses in the clinical group were not supported by SCID-I, depressive disorders and obsessive-compulsive disorder were not analyzed separately. Instead, participants were divided into 2 groups; healthy individuals, who did not have any psychiatric diagnosis (control group), and individuals who were diagnosed with a depressive disorder or obsessive-compulsive disorder (clinical group). Results showed that in addition to the differences between the groups in terms of defense mechanisms used, there were also within group differences. Accordingly, individuals in the clinical group used mature defenses less than they used immature and neurotic defenses. In addition, while mature defenses were used more often

in the control group, neurotic and immature defenses were mostly preferred in the clinical group. When these findings were compared to the findings of the original study (Andrews et al., 1993) the authors concluded that the defense styles used by the control and clinical groups were different, and that the clinical group used neurotic and immature defense styles more, and used mature defense styles less than the control group.

In terms of criterion validity, assessment of the defense styles by comparing the participants only as clinical and control group was a limitation of this study. Further studies are needed in order to determine the discriminant validity of DSQ-40 among different diagnostic groups. Another limitation of the study was its being a cross sectional design and the inability to assess the cause-and-effect relationships between defense styles and psychopathology. Therefore, a causality relationship should be established between the defense styles in DSQ-40 and psychopathology. It is thought that future studies with longitudinal designs would be beneficial in determining this causality.

In conclusion, based on these findings, the acceptable psychometric properties of the Turkish DSQ-40 support the cross cultural value of this test that includes 3 dimensions (mature, neurotic, and immature defense styles). In addition, the findings of this study seem to be important, as the scale was found to be practical and beneficial for future researches on defense mechanisms in Turkey, with an acceptable level of psychometric characteristics.

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