

# Defence styles and social adaptation during a depressive episode: bipolar depression vs. major depression

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## Abstract

**Objective:** The aim of this study was to perform a comparative investigation of defense styles in major and bipolar depression patients and to determine the relationship between defense styles and social functions.

**Method:** Patients in an acute depressive episode diagnosed with major depressive disorder or bipolar disorder were included, along with healthy controls. The Defense Styles Questionnaire-40 was used to determine participants' defense styles and the Social Adaptation Self-evaluation Scale to determine social adaptation. **Results:** Total mature defense scores were lower in both depression groups than in the controls. Total immature defense scores were higher in the bipolar group than in the controls. A positive correlation was determined between social adaptation and mature defense in both depression groups. Self-esteem emerged as a predictor for social adaptation in both depression groups, and depression level as a predictor for social adaptation in the bipolar group. **Conclusion:** Focus on mature defenses, self-esteem and severity of depression is required in order to enhance social adaptation in depressive episodes.

**Keywords:** Mood disorders; Bipolar disorder; Recurrent; Mania; Unipolar mania

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## Introduction

The DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition) defines defense mechanisms as 'automatic psychological processes that protect the individual against anxiety and from the awareness of internal or external dangers or stressors'. Individuals are generally unaware of the defense mechanisms they use. DSM-IV contains 31 defense mechanisms, including seven at the adaptive level.<sup>1</sup> There are several ways of identifying the defense mechanisms that individuals use. These include psychiatric interviews, psychological tests and autobiographical reports. Another method is the use of self-report questionnaires.<sup>2</sup> The Defense Style Questionnaire-40 (DSQ-40) is a self-report scale frequently used in the literature to measure defense mechanisms. This evaluates reflections at the conscious level of defense mechanisms used unconsciously. The 20 defenses in the scale are divided into three groups; immature (projection, passive aggression, acting out, isolation, devaluation, autistic fantasy, denial, displacement, dissociation, splitting, rationalization and somatization), neurotic (undoing, pseudo-altruism, idealization, reaction formation) and mature (sublimation, humor, anticipation, suppression).<sup>2</sup>

Studies have used DSQ-40 to investigate defense mechanisms in major depressive disorder. Some of these

have compared depression patients with healthy controls, while others have investigated changes in defense styles following treatment. In their meta-analysis involving seven studies performed using DSQ-40 during depressive episode, Calati et al.<sup>4</sup> reported lower mature defense, and higher neurotic and immature defense in depression patients compared to the control groups. Immature defense styles are reported to be more used by depressive patients who have attempted suicide<sup>4-8</sup>. Corruble et al.<sup>5</sup> reported that impulsivity was positively correlated with immature and neurotic defense in depression patients, and negatively correlated with mature defense<sup>9</sup>. Low mature defense<sup>10</sup> and higher immature defense<sup>9</sup> levels have been determined in patients with recurrent depression. Three studies in the literature reported that depression patients' mature defense styles increased, immature defense styles decreased and neurotic defense styles remained unchanged after therapy (psychotherapy and/or antidepressants)<sup>6,11,12</sup>. Akkerman et al.<sup>13</sup> determined a decrease in immature defense styles after therapy, but no change in immature or neurotic defense styles. Van et al.<sup>10</sup> reported that mature styles are a predictor of a positive therapeutic course. Our scan of the literature revealed no comparative investigations of major and bipolar depressive patients' defense mechanisms.

Social functioning is defined as the mutual relationship with the individual's environment and the ability to perform roles within that environment. It includes adequacy and satisfaction in such social roles as work, house work, family relations (spouse, children, parents etc.) and friends and social circle, as well as enjoyable activities such as hobbies and use of spare time<sup>14</sup>. Depression is closely correlated with impairment of social functioning. With amelioration in

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depression, not only depressive symptoms, but also social functioning improves<sup>15</sup>. Various self-report scales are used in the measurement of social functions. One such is the Social Adaptation Self-evaluation Scale (SASS). This investigates all aspects of social functions (work, domestic tasks, family relations, friends, social circle, hobbies, spare time activities, etc.)<sup>16</sup>. Studies in the literature on social functioning in depression patients using the SASS have focused on the effectiveness of antidepressant drugs. These studies have noted the positive effects of antidepressant drugs on social functions<sup>17-24</sup>. The number of studies other than research into drug efficacy is limited. These studies have investigated the association between social functioning and personality traits<sup>25-28</sup> and quality of life<sup>29</sup> in depression patients. To the best of our knowledge, there have been no previous studies investigating the relationship between defense styles and social adaptation in depression patients (both major and bipolar).

Our study had two aims: the first was to perform a comparative investigation of defense styles in major and bipolar depression patients, and the second was to determine the relationship between defense style and social functions in both depression groups.

## Methods

### *Participants and procedures*

This study was performed at the Ondokuz Mayıs University, Faculty of Medicine, Department of Psychiatry, Mood Disorders Unit, Turkey, between April and December, 2012. A total of 150 volunteers; 50 with a diagnosis of major depression, 50 with bipolar depression and 50 healthy controls, aged 18 or above, were enrolled. Patients undergoing acute depressive episode among those diagnosed with major depressive disorder or bipolar disorder on the basis of DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition text revision) diagnostic criteria between these dates were included. Healthy controls were selected from a social sample particularly including relatives of the authors and hospital personnel. Exclusion criteria for the major and bipolar depressive disorder groups were illiteracy, mental retardation, severe or unstable organic conditions, depressive episode of a psychotic nature, psychotic disorders, alcohol-substance abuse and dependency, dementia, delirium and other cognitive disorders. Exclusion criteria for the control group were the presence of a psychiatric disorder, illiteracy, mental retardation, brain injury or trauma, neurological disease and alcohol-substance abuse and dependency.

Major depression, bipolar depression and control group sociodemographic characteristics, including age, gender, marital status, income level, residence and total years spent in education were recorded using a semi-structured form. DSQ-40 was used to determine major depression, bipolar depression and control group defense styles, and SASS was employed to determine social adaptations. Additionally, the Beck Depression, Beck Anxiety and Rosenberg Self-Esteem scales were used to determine depression, anxiety and self-esteem levels for major and bipolar depression patients. The patient and control groups were compared in terms of their DSQ-40 and SASS scores. Social adaptation correlations with defense styles, depression, anxiety and self-esteem were subsequently investigated separately in both depression groups.

The study protocol was approved by the Local Ethics

Committee (Ondokuz Mayıs University Samsun/TURKEY) and all patients gave written informed consent.

### *Instruments*

#### *Defense Styles Questionnaire (DSQ-40)*

Developed by Andrews et al.<sup>3</sup>, this is a self-report scale consisting of 40 items and 20 defenses that analyzes reflections at the conscious level of defense mechanisms employed subconsciously. Each item in the scale is evaluated between 1 (not at all applicable to me) and 9 (highly applicable to me). The 20 defenses in the scale are grouped under three headings; immature, neurotic and mature defenses. Immature defenses are projection, passive aggression, acting out, isolation, devaluation, autistic fantasy, denial, displacement, dissociation, splitting, rationalization and somatization. Neurotic defenses are undoing, pseudo-altruism, idealization and reaction formation. Mature defenses are sublimation, humor, anticipation and suppression. Higher mean scores indicate greater use of individual defense mechanisms and styles. Internal consistency coefficients for immature, neurotic and mature defenses have been reported as .68, .58, and .80, respectively. Test repeat test consistency at a 4-week interval has been determined at .75 for mature defenses, .78 for neurotic defenses and .85 for immature defenses. Turkish-language version validity and reliability were evaluated by Yilmaz et al.<sup>30</sup>. Internal consistency coefficients in the determination of the validity and reliability of the Turkish-language version of the scale were .70, .61 and .83 for Mature Defense Style, Neurotic Defense Style and Immature Defense Style, respectively.

#### *Social Adaptation Self-Evaluation Scale (SASS)*

This 21-item self-report scale was developed by Bosc et al.<sup>16</sup> to be used in clinical investigations for the purpose of determining levels of "social functioning" in depressed patients. Each item is scored between 0 and 3. The first item enquires into the subject's employment, if any and his/her interest in it. The second item enquires into interest in housework in the absence of any employment. Since only one of these two can apply, 20 items are evaluated in total. It enquires into four main areas of social functioning (work, spare time, family and environmental organization and coping ability). Subjects completing the scale respond to mutually complementary questions for the purpose of evaluating their motivations and behaviors, self-perception, interest in the different roles they assume in daily life and the satisfaction they derive from these. Scores range from 0 to 60. An individual needs to score at least 35 in order to have normal social functioning. If an individual scores less than<sup>25</sup>, they are thought to have a problem in social functioning. The test has been shown to have high reliability and to be sensitive to changes in depressive symptoms. Turkish-language validity and reliability was evaluated by Akkaya et al.<sup>31</sup>. An internal consistency co-efficient of .87 was determined for the Turkish-language version.

#### *Beck Depression Inventory (BDI)*

This scale was developed by Beck et al.<sup>32</sup> and is widely used in measuring depression symptom levels. The relevance and reliability of this scale for Turkey was evaluated by Hisli<sup>33</sup>.

#### *Beck Anxiety Inventory (BAI)*

Developed by Beck et al.<sup>34</sup>, this is a self-evaluation scale used for the purpose of determining the frequency and intensity of individuals' anxiety symptoms. It is a Likert-type scale scored between 0 and 3 and consisting of 21 items. The

reliability and validity of the Turkish-language version was evaluated by Ulusoy et al.<sup>36</sup>.

#### Rosenberg Self-esteem Scale (RSES)

Developed by Rosenberg<sup>36</sup> in 1965. The scale consists of 63 multiple choice questions in 12 sub-categories. The first 10 items are used to measure self-esteem. Only the first 10 items of this scale were used for evaluation in this study. High values indicate high self-esteem<sup>37</sup>. The relevance and reliability for Turkey was established by Çuhadaroğlu<sup>37</sup>.

#### Data analysis

Statistical analysis was carried out using SPSS 16.0 for Windows. The chi square test was used to compare categorical variables. Student's t test was used for comparison of the data obtained between the major depression and bipolar depression groups. Analysis of variance (one-way ANOVA) was used to compare data obtained by measurement among the major depression, bipolar depression and controls groups. As variances for the post-hoc test were equal, Tukey's test was used. Cohen's method was used to determine effect size in comparison the major and bipolar depression groups. For this index, cutoffs of 0.2, 0.5 and 0.8 are, by convention, interpreted as small, medium and large effect sizes, respectively. Effect size index (as partial eta-squared,  $\eta^2$ ) for one-way ANOVA is computed using a general linear model procedure. For this index, cutoffs of 0.01, 0.06 and 0.14 are, by convention, interpreted as small, medium, and large effect sizes, respectively. Separate Pearson correlation analyses were performed between DSQ-40 subscale, SASS, BDI, BAI and RSES scores in the major depression and bipolar depression groups. Correlation coefficients between 0.30–0.49 were regarded as low, those between 0.50–0.69 as moderate, those between 0.70–0.89 as high, and those between 0.90–1.00 as very high<sup>38</sup>. Once the correlation analysis results had been analyzed, SASS scores

were regarded as dependent variables and mature defense, self-esteem, depression and anxiety scores (anxiety in the bipolar group only) as independent variables in both the major and bipolar depression groups. Multiple regression analysis was performed using the enter method. Data obtained by measurement were expressed as arithmetical mean  $\pm$  standard deviation, and those obtained by counting as %.  $p < 0.05$  was regarded as significant.

## Results

### Comparison of sociodemographic and clinical data

No significant difference was found between the major depression, bipolar depression and control groups in terms of age, gender, marital status, income level, residence or education level ( $p > 0.05$ ) (Table 1).

The mean number of depressive episodes experienced was  $3.24 \pm 3.99$  (Min:1 Max:2) in the major depression group and  $4.72 \pm 4.86$  (Min:0 Max: 18) in the bipolar group ( $t = -1.66$ ,  $p = 0.10$ ). Mean number of manic (and mixed) episodes in the bipolar group was  $2.40 \pm 1.69$  (Min:1 Max:7) and mean number of hypomanic episodes  $0.72 \pm 1.29$  (Min:0 Max:6) (Table 2).

Age at onset of disease was  $33.28 \pm 12.24$  years in the major depression group and  $27.52 \pm 4.70$  in the bipolar group ( $t = 2.53$ ,  $p = 0.013$ ). Duration of disease was  $2.73 \pm 4.70$  years in the major depression group and  $10.06 \pm 10.16$  in the bipolar depression group ( $t = -4.97$ ,  $p = 0.000$ ) (Table 2).

### Comparison of the major and bipolar depression groups in terms of BDI, BAI and RSES scores

No difference was found between the major and bipolar depression groups in terms of BDI and BAI scores ( $p > 0.05$ ). RSES scores were lower in the bipolar depression group ( $p = 0.024$ , small effect size) (Table 2).

**Table 1: Comparison of Groups in Terms of Sociodemographic Characteristics**

		Major depression (n=50) %	Bipolar depression (n=50) %	Control (n=50) %	$\chi^2/F$	p
Age		39.14 $\pm$ 12.44	39.06 $\pm$ 12.12	37.56 $\pm$ 11.25	0.28	0.76
Gender	Female	32 64%	33 66%	34 68%	0.18	0.91
	Male	18 36%	17 34%	16 32%		
Marital status	Single	17 34%	16 32%	23 46%	2.45	0.29
	Married	33 66%	34 68%	27 54%		
Income level	Low	9 18%	10 20%	5 10%	2.08	0.35
	Average/High	41 82%	40 80%	45 90%		
Residence	City	36 72%	40 80%	35 70%	1.45	0.48
	Town/village	14 28%	10 20%	15 30%		
Educational level (in years)		9.96 $\pm$ 3.15	9.58 $\pm$ 4.34	10.72 $\pm$ 4.63	1.00	0.37
Total		50 100%	50 100%	50 100%		

**Table 2: Depression groups' mean episode numbers and BDI, BAI and RSES scores**

	Major depression (n=50)	Bipolar depression (n=50)	T	p
Mean number of depressive episodes	3.24 $\pm$ 3.99	4.72 $\pm$ 4.86	-1.66	n.s
Mean number of manic (and mixed) episodes	-	2.40 $\pm$ 1.69	-	-
Mean number of hypomanic episodes	-	0.72 $\pm$ 1.29	-	-
Age at onset of disease	33.28 $\pm$ 12.24	27.52 $\pm$ 4.70	2.53	0.013*
Duration of disease	2.73 $\pm$ 4.70	10.06 $\pm$ 10.16	-4.97	0.000*
BDI	29.06 $\pm$ 10.00	29.90 $\pm$ 9.68	-0.43	n.s
BAI	25.98 $\pm$ 13.67	29.18 $\pm$ 14.04	-1.15	n.s
RSES	15.76 $\pm$ 5.82	13.26 $\pm$ 5.03	2.30	0.025*

Note: significance  $p < 0.05$ , n.s: non-significant, \*small effect size

### Comparison of the depression and control groups in terms of DSQ-40 and SASS scores

A difference was identified between the groups in terms of total mature defense scores ( $p=0.000$ , large effect size). A difference was also determined in the mature defense sublimation ( $p=0.013$ ), humor ( $p=0.001$ ) and anticipation ( $p=0.001$ ) subscale scores. Only in the suppression subscale was no difference identified ( $p>0.05$ ). Total mature defense scores and sublimation, humor and anticipation subscale scores were lower in both the major and bipolar depression groups than in the controls. No difference was determined between the major and bipolar depression groups in terms of total mature defense and subscale scores. No difference was also determined between the groups in terms of total neurotic defense and subscale scores ( $p>0.05$ ) (Table 3).

A difference was determined between the groups in terms of total immature defense scores ( $p=0.003$ , medium effect size). A difference was also determined between the groups in terms of immature defense projection ( $p=0.002$ ), passive aggression ( $p=0.038$ ), acting out ( $p=0.036$ ), autistic fantasy ( $p=0.008$ ) and somatization ( $p=0.000$ ) subscale scores, but none for the other subscale scores ( $p>0.05$ ). Total immature defense scores and projection, passive aggression and acting out subscale scores were higher in the bipolar depression group than in the control group. Autistic fantasy and somatization subscale scores were higher in both the major and bipolar depression groups compared to the control group. No difference was determined between the major and bipolar depression groups in terms of total immature defense or subscale scores (Table 3).

There was a difference between the groups in terms of SASS scores ( $p=0.000$ ). These were lower in the major and bipolar depression groups than in the controls. No difference in SASS scores was determined between the major and bipolar depression groups (Table 3).

### SASS score correlations with DSQ, BDI, BAI and RSES scores

In the major depression group, SASS scores exhibited a low-degree, positive correlation with mature defense scores, a moderate, negative correlation with BDI scores and a high-degree, positive correlation with RSES scores ( $p<0.05$ ). No correlation was determined between SASS scores and neurotic defense, immature defense and BAI scores ( $p>0.05$ ) (Table 4).

In the bipolar depression group, SASS scores exhibited a low-degree, positive correlation with mature defense scores, a high-degree, negative correlation with BDI scores, a moderate-degree, negative correlation with BAI scores and a moderate-degree, positive correlation with RSES scores ( $p<0.05$ ). No correlation was determined between SASS scores and neurotic defense and immature defense scores ( $p>0.05$ ) (Table 4).

### Multiple regression analysis results in the major and bipolar depression groups

In the major depression group, when SASS was considered as dependent variable, and mature defense, RSES and BDI as independent variables, only self-esteem was identified as a predictor for social adaptation ( $\beta=0.51$ ,  $p=0.000$ ) (Table 5).

**Table 3: Comparison of the major depression, bipolar depression and control groups in terms of DSQ-40 and SASS scale scores**

	Major depression(1) (n=50)	Bipolar depression(2) (n=50)	Control(3) (n=50)	Effect size	F	P	Post hoc (Tukey)
<b>DSQ-40</b>							
<b>Mature defense</b>	36.22 ± 11.15	35.82 ± 11.91	45.38 ± 10.98	1.14 <sup>c</sup>	11.34	<b>0.000</b>	1/3, 2/3
Sublimation	9.18 ± 4.49	9.12 ± 4.34	11.4 ± 4.21	0.06 <sup>b</sup>	4.46	<b>0.013</b>	1/3, 2/3
Humor	7.30 ± 4.89	7.76 ± 4.20	10.48 ± 4.26	0.09 <sup>b</sup>	7.41	<b>0.001</b>	1/3, 2/3
Anticipation	9.68 ± 4.41	9.78 ± 4.18	10.70 ± 4.53	0.09 <sup>b</sup>	7.49	<b>0.001</b>	1/3, 2/3
Suppression	9.98 ± 4.76	9.36 ± 4.62	10.46 ± 3.90		0.77	0.465	n.s.
<b>Neurotic defense</b>	41.38 ± 10.01	44.38 ± 11.47	39.36 ± 12.21		2.51	0.085	n.s.
Undoing	10.74 ± 4.30	11.96 ± 4.42	10.00 ± 3.87		2.77	0.066	n.s.
Pseudo altruism	12.16 ± 3.99	12.40 ± 3.90	11.76 ± 3.91		0.34	0.714	n.s.
Idealization	8.54 ± 4.79	9.68 ± 4.50	8.34 ± 4.61		1.21	0.300	n.s.
Reaction formation	10.26 ± 4.42	10.34 ± 4.75	9.28 ± 4.11		0.88	0.415	n.s.
<b>Immature defense</b>	106.60 ± 27.33	114.28 ± 26.32	93.66 ± 35.97	0.08 <sup>b</sup>	5.96	<b>0.003</b>	2/3
Projection	9.92 ± 4.61	11.24 ± 4.56	7.92 ± 4.50	0.08 <sup>b</sup>	6.73	<b>0.002</b>	2/3
Passive aggression	9.04 ± 4.03	9.82 ± 4.13	7.68 ± 4.41	0.04 <sup>a</sup>	3.33	<b>0.038</b>	2/3
Acting out	9.68 ± 5.04	10.14 ± 3.93	7.86 ± 4.80	0.04 <sup>a</sup>	3.41	<b>0.036</b>	2/3
Isolation	10.68 ± 4.95	11.18 ± 3.99	9.14 ± 5.19		2.51	0.084	n.s.
Devaluation	6.64 ± 3.75	8.04 ± 3.49	6.68 ± 4.11		2.21	0.114	n.s.
Autistic fantasy	9.28 ± 5.27	9.00 ± 4.18	6.62 ± 4.49	0.06 <sup>b</sup>	4.92	<b>0.008</b>	1/3, 2/3
Denial	8.14 ± 4.21	7.86 ± 4.16	7.32 ± 4.59		0.46	0.629	n.s.
Displacement	8.20 ± 4.83	8.88 ± 2.97	7.56 ± 5.59		1.03	0.360	n.s.
Dissociation	6.34 ± 4.57	6.62 ± 3.57	7.70 ± 4.39		1.46	0.235	n.s.
Splitting	8.84 ± 4.15	9.58 ± 4.31	7.62 ± 4.23	0.16 <sup>c</sup>	2.74	0.068	n.s.
Rationalization	9.36 ± 3.84	9.88 ± 4.22	8.72 ± 3.09		1.20	0.303	n.s.
Somatization	11.54 ± 5.10	13.06 ± 4.21	8.54 ± 3.57		14.03	<b>0.000</b>	1/3, 2/3
<b>SASS</b>	33.86 ± 9.59	29.82 ± 10.02	44.06 ± 6.16	0.32 <sup>c</sup>	35.04	<b>0.000</b>	1/3, 2/3

Note: significance  $p<0.05$ , n.s: non-significant,  $\eta^2$ : partial eta-squared for ANOVA results, <sup>a</sup>small effect size, <sup>b</sup>medium effect size, <sup>c</sup>large effect size

**Table 4: Correlation of SASS and other scale scores in the major and bipolar depression groups**

Major Depression	Mature Defense	Neurotic Defense	Inmature Defense	Bdi	Bai	Rses
Sass	<b>R=0.482</b>	R=-0.076	R=-0.206	<b>R=-0.658</b>	R=-0.136	<b>0.741</b>
	P=0.000	P=0.600	P=0.151	P=0.000	P=0.346	P=0.000
Bipolar Depression	Mature Defense	Neurotic Defense	Inmature Defense	Beck-D	Beck-A	Rses
SASS	<b>r=0.315</b>	r=-0.174	r=-0.249	<b>r=-0.727</b>	<b>r=-0.504</b>	<b>r=0.586</b>
	p=0.026	p=0.227	p=0.081	p=0.000	p=0.000	p=0.000

Coefficients greater than or equal to 0.30 are shown in bold.

**Table 5: Multiple linear regression analysis in the major depression group**

Model	B	Standard error	Beta	t	Sig	95% confidence interval
(Constant)	22.476	7.261		3.095	0.003	7.860-37.093
Mature defense	0.131	0.091	0.152	1.443	0.156	-0.052-0.314
Rosenberg Self-esteem Scale	0.837	0.220	0.508	3.807	0.000	0.395-1.279
Beck Depression Scale	-0.225	0.127	-0.235	-1.777	0.082	-0.481-0.030

Dependent variable SASS

In the bipolar depression group, when SASS was considered as a dependent variable, and mature defense, RSES, BAI and BDI as independent variables, severity of depression ( $\beta=-0.54$ ,  $p=0.001$ ) and self-esteem ( $\beta=0.26$ ,  $p=0.031$ ) were identified as predictors for social adaptation (Table 6).

## Discussion

No significant difference was found between the major and bipolar depression groups in terms of sociodemographic characteristics, number of previous depressive episodes or severity of current episode depression and anxiety. Self-esteem was lower in the bipolar group (small effect size). These findings suggest that the two depression groups are similar to one another in terms of the clinical features in question. Age at onset of disease was more advanced in the major depression group and duration of disease longer in the bipolar depression group.

Mature defenses (humor, sublimation and anticipation) were used less during depressive episodes in both major and bipolar depression patients compared with the healthy controls. This finding is compatible with the literature. In a meta-analysis of seven studies performed during a depressive episode using the DSQ-40, Calati et al.<sup>4</sup> identified less mature defense in depressed patients compared to the control group. Bond reported less use of humor and suppression during a depressive episode<sup>2</sup>. However, none of these studies differentiated between major and bipolar depression. These findings show that mature defenses such as the realistic anticipation of or planning for future inner discomfort (anticipation), the overt expression of feelings without personal discomfort or immobilization and without unpleasant effect on others (humor) and the gratification of an impulse whose goal is retained but whose aim or object is changed from a socially objectionable one to a socially valued one (sublimation), decrease during depressive episode in both major and bipolar depressive disorder patients<sup>39</sup>. Ours is the first study in the literature to show that mature defenses decrease during depressive episodes, not only in major depression, but also in bipolar depression. Psychotherapeutic measures directed toward increasing mature defenses may be beneficial in the treatment of depressive episodes in both major and bipolar depression.

Neurotic defenses in both our depression groups did not differ from those of the healthy controls. In contrast,

however, in their meta-analysis involving seven studies performed during depressive episode using DSQ-40, Calati et al.<sup>4</sup> reported higher neurotic defense in depression patients compared to the control groups. Akkerman et al.<sup>13</sup> determined higher neurotic defense in depression patients with Axis I disorder and/or personality disorder compared to those with pure depression. Axis I patients and/or personality disorders were not excluded in the studies cited in the meta-analysis<sup>4</sup>, as well as in our own study. Spinhoven et al.<sup>40</sup> determined higher neurotic defenses in anxiety disorder patients than in subjects with depressive disorder. Corruble et al.<sup>9</sup> suggested that neurotic defense was associated with impulsivity and attempted suicide in depression patients. Bond reported that mature defenses increase with treatment of depression, immature defenses decrease and neurotic defenses remain unchanged<sup>2</sup>. He therefore suggests that neurotic defenses may be a trait rather than a state in depression patients<sup>2</sup>. Further studies regarding clinical conditions which may be associated with neurotic defenses (additional Axis I disorder, personality disorder, impulsivity, suicidality etc.) in both major and bipolar depression are needed.

Immature defenses in our bipolar group (total score and projection, passive aggression, acting out, isolation, autistic fantasy and somatization) were higher than in the healthy controls. In the major depression group, while total immature defense scores did not differ from those of the healthy controls, autistic fantasy and somatization scores were lower than in the controls. This finding shows that immature defenses such as perceiving and reacting to unacceptable inner impulses and their derivatives as though they were outside the self (projection), aggression toward an object expressed indirectly and ineffectively through passivity, masochism and turning against the self (passive aggression), the direct expression of an unconscious wish or impulse in action to avoid being conscious of the accompanying affect (acting out), intrapsychic splitting or separation of affect from content, resulting in repression of either idea or affect, or the displacement of affect to a different or substitute content (isolation), increase during depressive episodes in bipolar disorder patients. In addition, immature defenses, such as the tendency to use fantasy and to indulge in autistic retreat for the purpose of conflict resolution and gratification (autistic fantasy) and transforming psychic derivatives into bodily symptoms for

**Table 6: Multiple linear regression analysis in the bipolar depression group**

Model	B	Standard error	Beta	t	Sig	95% confidence interval
(Constant)	36.545	7.150		5.111	<b>0.000</b>	22.144-50.946
Mature defense	0.096	0.085	0.114	1.130	0.265	-0.075-0.267
Rosenberg Self-Esteem Scale	0.515	0.231	0.258	2.225	<b>0.031</b>	0.049-0.980
Beck Anxiety Scale	-0.014	0.092	-0.019	-0.147	0.884	-0.199-0.172
Beck Depression Scale	-0.555	0.150	-0.536	-3.693	<b>0.001</b>	-0.858- -0.252

Dependent variable SASS

defense purposes (somatization) increase in both major and bipolar depression patients in depressive episodes<sup>39</sup>.

Studies in the literature have determined higher immature defenses in depression during depressive episodes compared to healthy controls<sup>6-7,11-13,40</sup>. Greater use of projection, passive aggression and acting out have been reported during depression<sup>2,7,40</sup>. None of these studies differentiated between bipolar and major depression, however. Our study finding is interesting in showing that bipolar depression patients make more use of immature defenses during depressive episodes than major depression patients. Bipolar depression may be a more severe form of depression in psychodynamic terms. Studies regarding the causal relation between bipolar depression and increased immature defenses are now needed. Immature defenses in depressive patients (particularly acting out, passive aggression, autistic fantasy, somatization, splitting and projection) have been found to be associated with suicidal thoughts/behavior<sup>5,9</sup>. Seemüller et al.<sup>41</sup> reported that bipolar depression patients had a greater association with suicidal behavior than major depression patients. Although we did not investigate suicidal thoughts/behavior, the high immature defenses in bipolar depression patients may be one reason for this association.

Social adaptation was lower in both our depressive disorder groups compared to the healthy volunteers. Depression is closely correlated with impaired social functioning<sup>15</sup>. No difference was determined between our major and bipolar depression patient groups in terms of social adaptation. Similarly, Dorz et al.<sup>42</sup> determined no difference in terms of social adaptation in major and bipolar depression patients. It may be that the decrease in social adaptation in depressive episodes emerging in both major and bipolar depression patients with these results is similar for both diseases.

We encountered no studies in the literature regarding the relation between defense styles and social adaptation in depression patients. A positive correlation was determined between mature defense and social adaptation in both bipolar and major depression patients in our study. No correlation was determined between neurotic and immature defense styles and social adaptation. We also determined a positive correlation between social adaptation and self-esteem in major and bipolar depression patients and a negative correlation with severity of depression. Additionally, there was a negative correlation between social adaptation and severity of anxiety in the bipolar depression group. This correlation was not reflected in the major depression patients. Multiple regression analysis revealed that self-esteem was a predictor of social adaptation in major depression patients, and that self-esteem and severity of depression were predictors in bipolar patients. Mature defense was not identified as a predictor of social adaptation.

In conclusion, lower mature defenses emerge in both major and bipolar depression patients during depressive episodes. Immature defenses rise in both depression groups. However, immature defenses increase more in the bipolar group. Further studies are needed to establish the reason for greater use of immature defenses in bipolar depression patients. Social adaptation was identified as being positively correlated with mature defense in depressive episode, and self-esteem and severity of depression emerged as predictors for social adaptation. Mature defenses, self-esteem and severity of depression should be focused on in order to enhance social adaptation in depressive episode.

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### References

1. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders. (4th edn)* American Psychiatric Press, Washington, DC, USA, 1994.
2. Bond M. Empirical studies of defense style: relationships with psychopathology and change. *Harv Rev Psychiatry* 2004; 12: 263-278.
3. Andrews G, Singh M, Bond M. The defense style questionnaire. *J Nerv Ment Dis* 1993; 181: 246-256.
4. Calati R, Oasi O, De Ronchi D, Serretti A. The use of the defence style questionnaire in major depressive and panic disorders: a comprehensive meta-analysis. *Psychol Psychother Theory Res Practice* 2010; 83: 1-13.
5. Corruble E, Bronnec M, Falissard B, Hardy P. Defense styles in depressed suicide attempters. *Psychiatry Clin Neurosci* 2004; 58: 285-288.
6. Bronnec M, Corruble E, Falissard B, Reynaud M, Guelfi JD, et al. Reports on defense styles in depression. *Psychopathology* 2005; 38: 9-15.
7. Blaya C, Dornelles M, Blaya R, Kipper L, Heldt E, et al. Do defense mechanisms vary according to the psychiatric disorder? *Rev Bras Psiquiat* 2006; 28: 179-83.
8. Hovanessian S, Isakov I, Cervellione KL. Defense mechanisms and suicide risk in major depression. *Arch Suicide Res* 2009; 13: 74-86.
9. Corruble E, Hatem N, Damy C, Falissard B, Guelfi JD, et al. Defense styles, impulsivity and suicide attempts in major depression. *Psychopathology* 2003; 36: 279-284.
10. Van Henricus L, Dekker J, Peen J, Abraham RE, Schoevers R. Predictive value of self-reported and observer-rated defense style in depression treatment. *Am J Psychother* 2009; 63: 25-39.
11. Kneepkens RG, Oakley LD. Rapid improvement in the defense style of depressed women and men. *J Nerv Ment Dis* 1996; 184: 358-361.

12. Akkerman K, Lewin TJ, Carr VJ. Long-term changes in defense style among patients recovering from major depression. *J Nerv Ment Dis* 1999; 187: 80-87.
13. Akkerman K, Carr V, Lewin T. Changes in ego defenses with recovery from depression. *J Nerv Ment Dis* 1992; 180: 634-638.
14. Weissman MM. The assessment of social adjustment. A review of techniques. *Arch Gen Psychiatry* 1975; 32: 357-365.
15. Bosc M. Assessment of social functioning in depression. *Comp Psychiatry* 2000; 41: 63-69.
16. Bosc M, Dubini A, Polin V. Development and validation of a social functioning scale, the Social Adaptation Self-evaluation Scale. *Eur Neuropsychopharmacol* 1997; 7: 57-70.
17. Oakes TM, Myers AL, Marangell LB, Ahl J, Prakash A, et al. Assessment of depressive symptoms and functional outcomes in patients with major depressive disorder treated with duloxetine versus placebo: primary outcomes from two trials conducted under the same protocol. *Hum Psychopharmacol* 2012; 27: 47-56.
18. Briley M, Moret C. Improvement of social adaptation in depression with serotonin and norepinephrine reuptake inhibitors. *Neuropsychiatr Dis Treat* 2010; 6: 647-655.
19. Trivedi MH, Dunner DL, Kornstein SG, Thase ME, Zajecka JM, et al. Psychosocial outcomes in patients with recurrent major depressive disorder during 2 years of maintenance treatment with venlafaxine extended release. *J Affective Disord* 2010; 126: 420-429.
20. Bech P. Social functioning: should it become an endpoint in trials of antidepressants? *CNS Drugs* 2005; 19: 313-324.
21. Papakostas GI, Petersen T, Denninger JW, Tossani E, Pava JA, et al. Psychosocial functioning during the treatment of major depressive disorder with fluoxetine. *J Clin Psychopharmacol* 2004; 24: 507-511.
22. Gorenstein C, Andrade L, Moreno RA, Artes R. Social adjustment in depressed patients treated with venlafaxine and amitriptyline. *Int Clin Psychopharmacol* 2002; 17: 171-175.
23. Mbaya P. Safety and efficacy of high dose of venlafaxine XL in treatment resistant major depression. *Hum Psychopharmacol* 2002; 17: 335-339.
24. Keller M. Role of serotonin and noradrenaline in social dysfunction: a review of data on reboxetine and the Social Adaptation Self-evaluation Scale SASS. *Gen Hosp Psychiatry* 2001; 23: 15-19.
25. Luty SE, Joyce PR, Mulder RT, McKenzie JM. Social adjustment in depression: the impact of depression severity, personality, and clinic versus community sampling. *J Affective Disord* 2002; 70: 143-154.
26. Ranjith G, Farmer A, McGuffin P. Personality as a determinant of social functioning in depression. *J Affective Disord* 2005; 84: 73-76.
27. Tse WS, Rochelle TL, Cheung JC. The relationship between personality, social functioning, and depression: a structural equation modeling analysis. *Int J Psychol* 2011; 46: 234-240.
28. Takai Y, Terao T, Goto S, Hoaki N, Wang Y, et al. Effect of temperaments on quality of life and social adaptation in depressive patients with mood disorder. *Psychiatry Clin Neurosci* 2011; 65: 505-509.
29. Stanković Z, Nikolić-Balkoski G, Leposavić L, Popović L. Perception of quality of life and social adjustment of patients with recurrent depression. *Srp Arh Celok Lek* 2006; 134: 369-374.
30. Yılmaz N, Gençöz T, Ak M. Savunma biçimleri Tesiti'nin psikometrik özellikleri: Güvenirlilik ve geçerlik çalışması *Türk Psikiyatri Derg* 2007; 18: 244-253.
31. Akkaya C, Sarandöl A, Danacı AE S. Sosyal Uyum Kendini Değerlendirme Ölçeği Türkçe Formunun Geçerlik Ve Güvenirliliği *Türk Psikiyatri Derg* 2008; 19: 292-299.
32. Beck AT, Ward CN, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. *Arch Gen Psychiatry* 1961; 4: 561-571.
33. Hisli N. Beck Depresyon Envanteri'nin geçerliği üzerine bir çalışma. *Psikoloji Dergisi* 1998; 6: 118-126.
34. Beck AT, Epstein N, Brown G, Steer RA. An inventory for measuring clinical anxiety: psychometric properties. *J Consult Clin Psychol* 1988; 56: 893-897.
35. Ulusoy M, Şahin NH, Erkmen H. Turkish Version of The Beck Anxiety Inventory: Psychometric properties. *J Cognitive Psychother Int Quarterly* 1998; 12: 28-35.
36. Rosenberg M. *Society and the Adolescent Self-Image*. Princeton, New Jersey: Princeton University Press 1965; 12-32.
37. Cuhadaroğlu F. *Adolesanlarda benlik saygısı. Uzmanlık tezi. Hacettepe Üniversitesi Tıp Fakültesi, Ankara, Turkey, 1986.*
38. Hinkle DE, Wiersma W, Jurs SG. *Applied Statistics for the Behavioral Sciences*. *J Edu Sci* 1998; 15: 84-87.
39. Meissner WW. *Classic Psychoanalysis. Theories of Personality and Psychopathology*. In: Kaplan & Sadock's *Comprehensive Textbook of Psychiatry*. 8th edn Lippincott Williams & Wilkins, Philadelphia USA, 2005; 722-723.
40. Spinhoven P, Kooiman CG. Defense style in depressed and anxious psychiatric outpatients: an explorative study. *J Nerv Ment Dis* 1997; 185: 87-94.
41. Seemüller F, Riedel M, Dargel S, Djaja N, Schennach-Wolff R, et al. Bipolar depression. Spectrum of clinical pictures and differentiation from unipolar depression. *Der Nervenarzt* 2010; 81: 531-538.
42. Dorz S, Borgherini G, Conforti D. Depression in inpatients: bipolar vs. unipolar. *Psychol Rep* 2003; 92: 1031-1039.