Defense Mechanisms in Adjustment Disorder

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ABSTRACT

Objective: Adjustment disorders are a disgnosis that is used commonly and they can be the most described by psychodynamic concepts and treated with psychotherapeutic methods. This study aims to evaluate the defense mechanisms among young man soldiers with diagnosed adjustment disorder during the first six months in compulsory military services as an etiological factor of this disorder.

Method: Seventy-one man soldiers with adjustment disorder and 69 healthy controls with unlived adaptation problems during the beginning six months participated in the study. DSM-IV criteria was used to confirm the adjutment disorder diagnosis. Brief Symptom Inventory [BSI] was used to assess symptoms and severity, and the Defensive Style Questionnaire [DSQ-40] was used to evaluate the defense mechanisms.

Findings: Adjustment disorder patients used less mature and more immature defenses as compared with controls, but neurotic defenses were similarly on both groups. Global symptom index of BSI was related to mature and immature mechanisms, respectively negatively and positively, but not associated with neurotic mechanisms. İmmature mechanisms also are positively related to positive symptoms total and positive symptoms distress index on BSI.

Discussion and conclusion: The findings may be speculated to indicate that the using more immature and less mature may predispose to this disorder under stress.

Keywords: Adjustment disorder, defense mechanism, Brief Symptom Inventory [BSI], Defensive Style Questionnaire [DSQ-40].

ÖZET

Uyum Bozukluğunda Savunma Düzenekleri

Amaç: Uyum bozukluğu yaygın olarak kullanılan bir tanıdır. Çoğunlukla psikodinamik kavramlarla açıklanmakta ve psikoterapötik yöntemlerle tedavi edilmektedir. Bu çalışmada, zorunlu askerlik görevinin ilk altı ayında uyum bozukluğu tanısı konulan genç erişkin erkek askerlerde etiyolojik bir etken olarak savunma düzeneklerinin değerlendirilmesi amaçlandı.

Yöntem: Uyum bozukluğu tanısı konulan 71 erkek askerle askerlik yaşamının ilk altı ayı içerisinde uyum sorunu yaşamamış 69 asker çalışmaya alındı. Uyum bozukluğu tanısı DSM-IV tanı ölçütlerine göre kondu. Hastalığın semptomlarını ve şiddetini derecelendirmek için Kısa Semptom Envanteri [KSE], savunma düzeneklerini değerlendirmek için Savunma Biçimleri Testi [SBT-40] uygulandı.

Bulgular: Uyum bozukluğu hastalarının kontrollerden daha az olgun, daha çok immatür savunma düzenekleri kullandıkları bulundu. Nevrotik savunmalar iki grup arasında benzerdi. KSE'nin global semptom endeksinin olgun savunmalarla negatif, immatür savunmalarla pozitif olarak ilişkili, nevrotik savunmalarla ise ilişkisiz olduğu saptandı. Ayrıca, immatür savunmaların pozitif semptom sayısı ve pozitif semptom şiddet indeksi ile pozitif olarak ilişkili olduğu bulundu.

Tartışma ve sonuç: İmmatür savunmaların sık, olgun savunmaların ise görece az kullanılması stres altında uyum bozukluğu gelişmesine yatkınlık oluşturabilir.

Anahtar kelimeler: uyum bozukluğu, savunma düzenekleri, Kısa Semptom Envanteri [KSE], Savunma Biçimleri Testi [SBT-40]

INTRODUCTION

The adjustment disorder [AD] is a diagnosis that is seldom the subject of research, but is nonetheless widely used in clinical practice. Its prevalence is varied from 7 to 35 percent (Greenberg et al 1995, Okamura et al 2000). AD remains one of the few conditions that are linked to a stressor. The fact that the relationship between stress and psychiatric disorder is both complex and uncertain has caused many to question the theoretical basis of adjustment disorders. The notion that adjustment problems follow from stressful events has been a mainstay of psychodynamic thinking, and often forms the basis of psychotherapeutic treatment (Newcorn et al 2000). In psychodynamic theory, the central theoretical construct come into existence the defense mechanisms since their description by Freud (Spinhoven and Koiman 1997).

The defense concept refers to the ways people deceive and divert themselves to make their outer and especially their inner reality seem more tolerable. They are believed to function at an unconscious level to maintain homeostasis by preventing painful ideas, emotions, and drives from forcing their way into consciousness. In addition, a specific connection between particular defense mechanisms and symptoms possibly exists. Defenses can be presented as a hierarchy of defense styles, from mature to neurotic to immature defense styles (Holi et al 1999).

In some studies, it was showed that particular defenses are related certain symptoms and disorders. Depressed men patients more often use projection than nondepressed populations (Margo et al. 1993). Generally, compared with healthy controls, patients with anxiety disorders show lower scores on mature defenses and higher scores on neurotic and immature defenses (Andrews et al. 1989, Bond and Vaillant 1986, Pollock and Andrews 1989, Spinhoven and Koiman 1997, Kipper et al 2004). The patients with panic disorder (with or without agoraphobia) predominantly use displacement, somatization, and reaction formation, the patients with social phobia use less humor and more devaluation and displacement, and the patients with obsessive compulsive disorder use less humor and more undoing, acting out, and projection (Pollock and Andrews 1989). In addition, soldiers of non-adaptive group use immature defense mechanisms and soldiers of group adaptive use mature defense mechanisms during the adaptation period to the military service in the first three months (Dedic 2000).

Defense mechanisms also affect the severity of psychophatology. In adolescent girls with eating disorders or depression, the immature defense style correlates positively and the mature defense style negatively with the scores on the severity of depression (Smith et al 1992). Immature defenses are associated with the symptom severity as well as the comorbidity with depression in patients with panic disorder (Kipper et al 2004). Moreover, patients with panic disorder who achieved full remission differ after treatment on the lower use of neurotic and immature defenses from those who did not achieve remission (Kipper et al 2005).

As can be seen, defense mechanisms, a main characteristic of psychodynamic theory, are associated with symptoms, type of disorders and severity of those. Adjustment disorders although are rarely researched, it is a disgnosis that is used commonly, can be the most descriebed by psychodynamic concepts and treated with psychotherapeutic methods. Regarding this context, in this study, a part of the large study that investigate recent life events, construct of symptoms and defense mechanisms in patients with adjustment disorder depending on military environment, we aimed that the defense mechanisms among young man soldiers with diagnosed adjustment disorder during the beginning-six months in compulsory military services are determined as an etiological factor of this disorder. We believed that certain defenses are associated with this disorder and its severity.

METHODS

SUBJECTS

The participants whose primary stressors were occupational and relational for both groups during their lives during the beginning-six months in compulsory military services enrolled from patients consecutively referred to the Department of Psychiatry, Gulhane Military Medical School [Turkey] were 71 soldiers [age range: 20-25 years] who met the Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (DSM-IV), criteria of adjustment disorder as diagnosed by two experienced psychiatrist. The suspicious patients were hospitalized for testing the diagnosis at least stopping symptomatology. Another 69 healthy soldiers (age range: 20-25 years) who didn't live adaptation problems during the initial six-months were recruited as an age-matched control group. Exclusion criteria were a previous diagnosis of schizophrenia or other psychotic disorder or a current becoming suspicious of major axis I disorder, organic brain syndrome, mental retardation, and general medical conditions.

Stressor

The military services constitute a unique community with its hierarchic and disciplinary structure, tiresome training applications and separate nature. Recruited soldiers are moved away from the social and physical environment to which they are accustomed and start to live in unfamiliar new environment with rigidly defined rules. This new environment, with its hierarchical structure and discipline-based order, calls for adaptation to a life style much different from the civilian environment. It is also an environment in which personal, cultural and social differences are not taken into account, and intensive physical effort is required (Tekbaş et al 2003). Consequently, military life is a quite different from civilian as a stressor and thus, relatively a homogeneous environment in the research of the adjustment disorders.

Military service, in Turkey, is a legal necessity for every male who has completed his 20th year in life, unless he has a valid justification for postponement. Exemptions are also granted to those who severe, irreversible medical-psychiatric conditions, which constitute the only reason for permanent exemption from service. The length of conscription is determined by law according to the educational attainment of obligees. Those with lower levels of educational attainment have to serve15 months as enlisted personnel.

Materials

All patients gave their informed consent after the procedure had been fully explained. The protocol was reviewed and approved by the local Ethics Committee. AD diagnosis were assessed by the Structured Clinical Interview for DSM-IV [SCID-I]. Each individual completed the Defense Style Qquestionnaire [DSQ], the Brief Symptom Inventory [BSI] and the Questionnaire which included sociodemographic information.

Defensive Style Questionnaire [DSQ]: Defense mechanisms were evaluated by the Defensive Style Questionnaire [DSQ], a 40-question self-report questionnaire (Andrews et al 1993, Bond et al 1983). The DSQ evaluates 20 defenses divided into 3 groups of factors: mature, immature, and neurotic. Four defenses are related to the mature factor [sublimation, humor, anticipation, and suppression]; four are related to the neurotic factor [undoing, pseudoaltruism, idealization, and reaction formation]; and 12 are related to the immature factor [projection, passive-aggression, acting out, isolation, devaluation, fantasy, denial, displacement, dissociation, splitting, rationalization, and somatization]. The DSQ-40 can provide 20 individual scores of the defenses and the 3 factor scores [mature, neurotic, and immature]. The individual defense scores are calculated by the average of the two items for each determined defense mechanism, and the factor scores are calculated by the average of the scores of the defenses that belong to each factor. Each item is evaluated on a scale from 1 to 9, where "1" indicates "completely disagree" and "9" indicates "fully agree." The Turkish version of the DSQ has already been validated (Yılmaz et al 2007).

Brief Symptom Inventory [BSI]: The Brief Symptom Inventory, developed by Derogatis and Lazarus (1994), is a 53-item multidimensional screening scale. BSI is the short form of a 90-item symptom checklist known as SCL-90. It measures current psychological symptom status and is oriented toward a psychiatric diagnosis. BSI yields scores on 9 syndrome constructs [somatization, obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism] and provides 3 different total scores that indicate psychological distress [global severity index, positive symptom total, positive symptom distress index]. Participants are asked to rate each item in the BSI on a scale of 0 to 4. The completion of the form lasts approximately 5 to 10 minutes. The Turkish adaptation of the scale was conducted by Şahin et al (2002).

Statistical Anaylsis

The statistical analysis was performed in the SPSS statistical program, version 10.0 for Windows. Normal distrubution analysis was performed by using Kolomogorov-Smirnov, Lilliefors Significance Correction test. Because of showing non-parametric test characteristics, the Mann-Whitney U test has been used to compare age, educational level, duration in military services and defense mechanism averages among patients and controls. Pearson's Chi-squared [X2] test has been used to compare the marital status between the two groups. A "p" value less than 0.05 was considered statistically significant.

FINDINGS

Seventy-one patients with adjustment disorder and 69 healthy controls participated in this study. Age, education level and marital status did not differ significantly between the patients sample and the controls. The mean duration in the compulsory military service of the patients was 4.6 months. Results comparing sample characteristics are shown in Table 1.

Table 1. Demographic measures regarding soldiers with adjustment disorder and healthy controls

Characteristics	Patients (n=71)	Controls (n=69)	Statistics [c,d]
Age (years)	21.2±1.6[a]	21.5±1.7	Z=1.073, p=.283
Educational level (years)	9.3±2.2	9.9±3.1	Z=1.197, p=.231
Duration of task (months)	4.6±1.7	8.8±2.5	Z=10.386, p=.000[b]
Marital status			
Single	61 (85.9%)	56 (81.2%)	X2=.577, p=.448
Married	10 (14.1%)	13 (18.8%)	

[a] Mean ± SD; b p<.01; [c] Mann Whitney U test; [d] Pearson's Chi-squared test

Table 2. Global symptom levels of soldiers with adjustment disorder and healthy controls

BSI Global indexes	Patients (n=71)	Controls (n=69)	Z	p
Global severity index	2.3±0.9a	0.7±0.5	8.479	.000b
Positive symptom total	41.1±11.6	21.9±10.6	7.788	.000
Positive symptom distress index	2.9±0.9	1.6±0.6	7.974	.000

a Mean ± SD; b p<.01; BSI: Brief Symptom Inventory

Compared to healthy controls, patients with adjustment disorder were reported significantly higher BSI scores for global severity index, positive symptom total and positive symptom distress index [Table 2].

The comparison between the defense mechanisms used by patients and controls is shown in Table 3. Although patients and controls did not differ as to the use of the neurotic defense styles, patients reported significantly more use of the immature and less use of the mature defense styles as a whole. They did so in the use of two mature defense mechanisms, suppression and anticipation. In the same way, they reported significantly higher scores nine immature defense mechanisms [projection, passive aggression, acting out, isolation, autistic fantasy, displacement, splitting, rationalization, somatization], but three ones [devaluation, denial, dissociation].

Table 4 shows Pearson's cerrelations between major DSQ defense styles and global indexes [GSI, PST and PSDI] on the BSI in patients. As can be seen, global symptom index is related to mature and immature mechanisms, respectively negatively and positively, but not associated with neurotic mechanisms. Immature mechanisms are also related to PST and PSDI, positively.

DISCUSSION

In the present study, defense mechanisms were investigated by means of the DSQ in seventy-one patients with adjustment disorder depending on compulsory military services. Although patients with adjustment disorder significantly more immature defenses and less mature defenses than healthy controls, neurotics' defense mechanisms were similarly on both groups. Global symptom index is related to mature and immature mechanisms, respectively negatively and positively. Immature mechanisms are also related to positive semptoms total and positive semptoms distress index, positively.

Due to differences in patient population, measures for psychopathology and defense, and study design, it is difficult to compare the present results with those of previous studies. Nevertheless, some similarities in the pattern of results are worth mentioning. Like our results, Dedic and Krstic (1997) also shown that the problems of maladapted behaviour in soldiers at the mili-

Table 3. Defense mechanisms used by soldiers with adjustment disorder and healthy controls

Defense mechanisms	Patients (n=71)	Controls (n=69)	Z	p
Mature				
Sublimation	3.8±2.2c	4.4±2.4	1372	.170
Humor	3.9±2.3	3.8±1.9	.235	.815
Anticipation	4.7±2.4	6.2±2.1	3.383	**.001**[a]
Suppression	3.8±2.3	5.5±2.1	4.264	**.000**[a]
Mature total	4.1±1.5	5.0±1.4	3.366	**.001**[a]
Neurotic				
Undoing	5.0±2.4	4.8±2.0	.117	.907
Pseudo-altruism	5.8±2.1	5.8±1.8	.468	.640
Idealization	4.3±2.5	4.2±2.0	.203	.839
Reaction formation	4.5±2.3	4.3±2.1	.549	.583
Neurotic total	4.9±1.5	4.8±1.4	.459	.646
Immature				
Projection	5.9±2.6	3.4±1.9	5.510	**.000**[a]
Passive aggression	2.1±1.2	0.4±0.4	7.924	**.000**[a]
Acting out	6.4±2.4	4.0±1.9	5.428	**.000**[a]
Isolation	5.2±2.3	4.8±1.4	2.424	**.000**[a]
Devaluation	4.5±2.0	4.1±2.0	1.108	.268
Autistic fantasy	4.5±2.3	3.6±1.5	2.523	**.012**[b]
Denial	4.1±2.6	3.9±2.3	.624	.533
Displacement	4.3±2.2	2.6±1.6	4.857	**.000**[a]
Dissociation	3.7±2.1	3.3±1.7	1.051	.293
Splitting	5.5±2.2	4.0±1.7	3.754	**.000**[a]
Rationalization	4.0±2.1	3.3±1.6	2.143	**.032**[b]
Somatization	5.6±2.5	3.9±2.1	4.037	**.000**[a]
Immature total	4.6±1.1	3.4±0.9	6.406	**.000**[a]

[a] p<.01; [b] p<.05; [c]Mean ± SD;

tary service are dominantly associated with emotionally immature. In addition, in the study of Dedic (2000), non-adaptive soldiers, during the adaptation period to the military service in the first three months, seem also more inclined to use the immature defense styles, but adaptive soldiers are also characterized by a stronger inclination to mature defense styles. However, there is different in the subtypes of the mature defenses. Our some results, low scores of anticipation and suppresssion, aren't in accordance with the Dedic's (humor and the sublimation). It may be interpreted that this distinct arises from different samples of studies and perhabs cultural different. While ours comprises clinic population, his sample consist non-clinics.

In addition, our results are in accordance with those of studies of patients with suicide attempters (Corruble et al 2004) and personality disorders (Mulder et al 1999) who score high on immature styles. Suicidal behaviors are the most commonly used method in patients with adjustment disorders (Kryzhanovskaya and Canterbury 2001). Personality disorders also are at high risk of adjustment disorder (Fiedler et al 2004).

Table 4. Pearson correlations between major defense mechanisms and BSI global indexes in patients (n=71)

Defense mechanisms	Global symptom index	Positive symptom total	Positive symptom distress
	-.337[a]	-.263[b]	-.193[c]
Mature			
	.004	.027	.106[d]
	-.197	-.249[b]	.058
Neurotic			
	.099	.036	.632
	.488[a]	.458[a]	.263[b]
Immature			
	.000	.000	.027

[a] p<.01; [b] p<.05; [c] r value; [d] p value; BSI: Brief Symptom Inventory

We found that patients with adjustment disorder use similarly the neurotic defenses as healthy controls. In contrast to our study, patients with panic disorder (Andrews et al 1989, Bloch et al 1993, Kipper et a. 2004), agoraphobia, obsessive compulsive disorder (Pollock and Andrews 1989), anxiety and depressive disorder (Spinhoven and Kooiman 1997) usually are characterized by a stronger inclination to use the neurotic defense styles. In addition, although the mature and immature defenses in depressed patients are positively changed with treatment (Akkerman et al 1992, Akkerman et al 1999) and these changes in these defense styles can occur within days after the initiation of standard treatment (Kneepkens and Oakley 1996), the neurotic defenses are the relative stability. This result is consistent with the criteria of adjustment disorder diagnose. According to DSM-IV, the disturbance must not fulfill the criteria for another major psychiatric disorder or bereavement [not considered a mental disorder, although it may be a focus of clinical attention] for adjustment disorder. Besides, the symptomatology must remit within 6 months following the cessation of the stressor. Rapid changes occurred in the mature and immature defense styles after the initiation of treatment point out the end of the symptomatology following the stopping of the stressor. It also is possible that under stress, people tend to regress and use immature defenses that they would not otherwise use (Holi et al 1999). Furthermore, the mature and immature defenses may not be such stable character traits as described in psychoanalytic literature.

These results are in accordance with the results of previous studies (Smith et al 1992, Spinhoven and Kooiman 1997) who found that the immature and the mature defense styles are, respectively positively and negatively, associated with the severity of psychopathology. Although the cross-sectional design of the present study does not permit statements about the causality of relationships, these correlational results may suggest that defense style is state dependent. It is a general psychoanalytic notion that patients tend to regress when ill (Spinhoven and Kooiman 1997).

The patients with adjustment disorder don't use more three immature defense styles [devaluation, denial and dissociation] to the contrary the other immature defense mechanisms than controls. This ressult may be arised from the structure of the DSQ. The literature validated only the three main factors of the DSQ and not each specific defense mechanism (Yılmaz et al 2007). They suggested that mature, neurotic and immature defense styles as whole are used.

As limitations in present study, the use of a questionnaire that depends on the patients' own report, which can be limited by his motivation at the moment of the evaluation and his self-knowledge, must be pointed out. Also, the DSQ is an indirect measure of defenses, which are unconscious intrapsychic processes. Nevertheless, these limitations can be found both in patients and in controls. In addition, as the design was cross-sectional and the sample was not enough large, it was not adequate to clarify causal relationships between the defenses and symptoms. Moreover, the major problem was diffucult to diagnose this disorder. The diagnosis is necessary that the symptomatology must remit within six months following the cessation of the stressor. Because of this condition, studies sho-

uld be planned as longitudinal. To be able to cope with this problem, we tried hospitalizing the patients with suspicious diagnose for taking a way stressor at short duration too, and all patients are diagnosed by two experienced military psychiatrist. This matter also is all researchs in this field and the most reason of incapable of the investigations.

CONCLUSSION

Although this is a cross-sectional study, and it is diffucult to draw causal inferences about whether defense mechanisms constitute a vulnerability factor for the development of adjustment disorders, these findings may be speculated to indicate that the use of particular defenses, more immature and less mature, may predispose to this disorder under stress. Attention, understanding, and intervention in the patients' inner psychological structure could help in the management of tis disorder, and could offer important help in assisting the patient to adjust to the stressor. New studies are necessary in this field to evaluate the changing on the defense styles the following the ending of the stressors. Besides, in different age, sex and large samples must be studied.

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