Assessment of Defense Styles and Mechanisms in Iranian Patients Suffering from Obsessive Compulsive or Panic Disorders versus Normal Controls using Persian Version of Defense Style Questionnaire-40

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Objective: The aim of this study was to compare defense styles and mechanisms in adult patients suffering from obsessive-compulsive disorder (OCD), and panic disorder (PD) with normal subjects in Iran .
Methods: Defensive patterns of 22 patients with OCD, 28 patients with PD and those of 116 normal individuals (as a control group) were assessed using the Farsi version of Defense Style Questionnaire-40 (DSQ-40). The content validity of this questionnaire was done prior to the initiation of the present study.
Results: Both groups of patients with OCD or PD used more immature and less mature styles compared to the control group. No significant difference was observed in the use of neurotic style between the two groups .
Conclusion: It is suggested that immature defenses may have an important role in the pathogenesis of OCD and PD.

Keywords: *Defense mechanism, Obsessive-compulsive disorder, Panic disorder*

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One of the most important duties of ego is to provide individual's psychological homeostasis; that is why defense mechanisms are among the most important functions of ego (1). Andrews et al. noted the definition of defense mechanisms by Anna Freud as "the ways and means by which the ego wards off unpleasure and anxiety, and exercises control over impulsive behavior, affects and instinctive urges" (2).
According to DSM-IV Adaptive Functioning Scale, defense mechanisms are defined as "automatic psychological processes that protect the individual against anxiety and from the awareness of internal or external dangers or stressors" (3).
The relationship between defense mechanisms and psychopathology is an issue of interest in many clinical studies (4). In order to conduct these studies, there is a crucial need for a reliable self-rating scale that is able to measure defense mechanisms (5). Bond et al. developed the first questionnaire, named Defense Style Questionnaire (DSQ) for this purpose (6).This questionnaire was designed to assess 24 sets of defense mechanisms. The first 67-item questionnaire was revised by Bond himself, and an 88-item version was then proposed in 1986 (7). Andrews adapted this questionnaire with DSM III (5), and because it was rather long, a shorter version was finally suggested (2). The shorter version consists of 40 items which rates twenty defense mechanisms, mentioned in DSM III, as well as three defense styles or factors consisting of mature, neurotic and immature styles (2). Two

statements are advocated to each defense, and each statement is evaluated on a scale from 1 to 9. One indicates complete agreement and 9 indicates complete disagreement. This version is now considered as the most frequently used self-report scale for assessment of defense mechanisms (8).

After development, DSQ was translated to several languages (9, 10, 11, 12) and made it possible to study defense mechanisms in different psychiatric disorders. Some of these works were reported by Bond in a review article (13). Defense mechanisms have been studied in patients with anxiety disorders, particularly, in those with OCD or PD (14, 15, 16, 17). The present study evaluated the defense styles and defense mechanisms in Iranian patients with OCD and PD compared with normal subjects. The secondary aim of this trial was to assess changes in the patterns of defenses that could be dependent on different cultures. For this purpose, DSQ-40 was translated to Persian, and then its content validity was assessed. Finally, the questionnaires were given to the participants to rate their defense mechanisms.

Materials and Method

Participants

This study was designed to assess three groups of subjects (normal subjects, patients with OCD and PD) by the Persian DSQ-40. The normal subjects included those individuals who did not have any psychiatric disorders, and did not take any psychotropic medications at the time of the study. Patients with OCD or PD were outpatients diagnosed according to DSM IV criteria (3) ,and were visited at the private offices of three academic psychiatrists. The study patients were evaluated before receiving any treatment for OCD or PD. All subjects signed a written informed consent to participate in the study.

Instruments

The original version of DSQ-40 (2) was back translated to Farsi. Then, to check the content validity, three psychoanalysts were given the copies of the Persian version. They were asked to correlate the items to each defense. In order to obtain the experts' opinion about the test, a form was designed which consisted all items as well as the corresponding defense mechanisms. The extent of each expert's agreement with the item used to detect the defense mechanism was scored from 1 to 5: one represented the expert's complete disagreement, and 5 showed complete agreement. After the experts stated their opinion about the Farsi version, they were provided with the original version of DSQ-40 to comment on using the same method. This showed whether or not there was any conflict in their opinion about the Farsi version and the original version. The final Farsi version was applied to all participants eventually. Data on internal consistency and reliability of the Farsi version of DSQ-40 was also studied. Data on the internal consistency, validity and reliability of the test are demonstrated in table 1.

Statistical Analysis

Statistical analysis was performed using SPSS version 16.0 for windows. Reliability analysis was accomplished by Cronbach's alpha method. For internal consistency, item-defense correlation and item-factor correlation were calculated.

Independent sample t test was used to compare defense styles and mechanisms of patients with normal subjects; the significance level was defined as $p < 0.05$.

Results

Control group included 116 individuals, 63 males and 53 females, whose ages ranged from 15 to 67 years (mean=28 years). They were from different socio-cultural backgrounds with different levels of education. The 28 patients with PD (6 males and 22 females) were between 20 to 43 years of age (mean=33 years) ,and the 22 subjects with OCD (10 males and 12 females) were between 18 to 56 (mean=36 years).

The experts who had been asked to correlate each item with its corresponding defense mechanism all rated 4 or 5 for each item of the Persian DSQ-40 as well as the original version of DSQ-40. Mean of the raters' agreement for each item was more than 4, which indicated their agreement about items that represent attributed defense mechanisms satisfactorily. Additionally, no conflicts were observed in the experts' opinions about the two versions. Cronbach's alpha for all items was calculated as 0.716; alphas calculated separately for each item were close to each other which showed deleting specific items did not significantly improve the reliability of the test .

The comparison between the defense styles in OCD and PD with normal controls noted a significant lower usage of the mature style in each group of patients when compared with the normal subjects. No significant difference was observed in the usage of the neurotic style among the groups of participants. Both groups of patients with OCD and PD used the immature style significantly more than the normal controls.

When defense mechanisms were studied separately and with respect to mature defenses, normal controls used sublimation and humor significantly more than patients with OCD; this group also used humor and anticipation significantly more than patients with PD. Among neurotic defenses, both groups of patients only used idealization significantly more compared to normal controls. Among the immature defenses, both groups of patients had greater significant usage of projection, acting out, devaluation, autistic fantasy, splitting and rationalization than normal group. Additionally, only patients with PD used passive aggression and somatization more significantly than the normal controls. Data on the comparison of defense styles and defense mechanisms between patients and non-patients are shown in table 2.

Table 1: **Performance of the Persian version of DSQ-40**

Defense mechanisms	Item	Item-Defense Correlation	Item-Factor correlation	Face Validity (rater agreement)	Mean	SD	Cronbach's Alpha if item deleted
Mature Factor							
Sublimation	3	0.863	0.584	4.3	5.4	2.6	0.718
	38	0.614	0.435	4.0	7.4	1.7	0.712
Humor	5	0.827	0.645	4.3	5.1	2.5	0.717
	26	0.815	0.628	4.7	5.0	2.5	0.720
Anticipation	30	0.673	0.598	4.7	6.5	1.7	0.715
	35	0.762	0.220	5.0	6.1	2.0	0.715
Suppression	2	0.809	0.641	4.7	4.4	2.6	0.715
	25	0.777	0.504	5.0	5.7	2.4	0.711
Neurotic Factor							
Undoing	32	0.808	0.560	4.7	6.0	2.5	0.709
	40	0.774	0.583	4.0	6.5	2.3	0.710
Pseudo-altruism	1	0.761	0.642	4.7	6.9	1.9	0.715
	39	0.849	0.513	4.7	6.0	2.3	0.715
Idealization	21	0.814	0.229	5.0	5.4	2.8	0.705
	24	0.794	0.189	5.0	5.0	2.6	0.697
Reaction formation	7	0.837	0.528	4.0	3.1	2.5	0.716
	28	0.773	0.498	4.7	6.3	2.1	0.713
Immature Factor							
Projection	6	0.855	0.468	4.7	4.1	2.4	0.707
	29	0.891	0.485	4.7	4.3	2.7	0.712
Passive aggression	23	0.835	0.550	4.7	4.0	2.7	0.714
	36	0.830	0.450	4.0	4.6	2.6	0.714
Acting out	11	0.896	0.578	4.7	5.5	2.7	0.704
	20	0.901	0.601	5.0	4.9	2.7	0.705
Isolation	34	0.869	0.091	4.7	4.4	2.6	0.718
	37	0.839	0.222	4.7	4.3	2.4	0.712
Devaluation	10	0.785	0.502	4.7	3.2	2.5	0.716
	13	0.764	0.323	4.0	3.7	2.4	0.712
Autistic fantasy	14	0.887	0.472	4.3	4.2	2.6	0.715
	17	0.864	0.430	4.7	3.7	2.4	0.715
Denial	8	0.747	-0.097	5.0	3.7	2.5	0.722
	18	0.736	0.391	5.0	3.6	2.5	0.711
Displacement	31	0.717	0.396	4.7	4.0	2.4	0.711
	33	0.772	0.111	4.7	4.5	2.6	0.723
Dissociation	9	0.868	0.484	5.0	3.6	2.6	0.706
	15	0.779	0.235	4.0	5.7	2.1	0.708
Splitting	19	0.709	0.467	4.7	3.8	2.6	0.707
	22	0.771	0.560	4.7	5.1	2.9	0.700
Rationalization	4	0.710	-0.063	4.7	6.7	2.1	0.722
	16	0.784	0.008	4.3	5.8	2.4	0.716
Somatization	12	0.843	0.366	5.0	5.1	2.6	0.713
	27	0.811	0.405	5.0	6.0	2.3	0.708

Table 2: Defense Mechanisms Used by Study Subjects

Defense Mechanisms	p	OCD(M± SD)	Controls(M± SD)	Panic(means± SD)	p
Sublimation	0.015*	5.6±1.4	6.6±1.6	6.4±1.5	0.522
Humor	0.003*	4.0±1.9	5.4±2.1	4.0±1.4	0.001*
Anticipation	0.162	6.0±1.2	6.5±1.4	5.9±1.1	0.027*
Suppression	0.120	4.5±2.2	5.3±1.9	4.6±2.2	0.112
Mature Style	0.002*	20.3±5.2	23.9±4.6	20.9±4.7	0.003*
Undoing	0.678	6.3±1.6	6.1±2.0	6.7±1.7	0.186
Pseudo-altruism	0.115	6.0±1.9	6.6±1.6	6.2±1.7	0.284
Idealization	0.005*	6.0±1.8	4.6±2.2	6.7±1.2	0.000*
Reaction formation	0.877	4.9±2.1	4.8±1.8	4.4±2.0	0.344
Neurotic Style	0.361	23.2±5.6	22.2±4.9	24.1±5.2	0.064
Projection	0.001*	5.3±1.6	3.7±2.1	5.1±2.8	0.004*
Passive aggression	0.058	4.8±2.5	3.9±2.0	5.6±2.4	0.000*
Acting out	0.003*	6.4±2.3	4.7±2.3	6.0±2.5	0.012*
Isolation	0.359	4.0±1.9	4.5±2.3	4.0±1.8	0.296
Devaluation	0.026*	4.0±1.7	3.1±1.7	4.3±2.4	0.004*
Autistic fantasy	0.001*	5.1±2.5	3.4±1.9	5.1±2.3	0.000*
Denial	0.636	3.9±2.3	3.6±1.9	3.6±1.5	0.834
Displacement	0.994	4.3±2.2	4.3±1.8	4.1±1.9	0.666
Dissociation	0.620	4.8±2.0	4.5±1.9	1.7±2.1	0.688
Splitting	0.031*	5.2±1.4	4.2±2.1	5.1±1.8	0.045*
Rationalization	0.001*	5.3±2.1	6.6±1.5	5.9±1.6	0.027*
Somatization	0.101	6.0±1.7	5.2±2.1	6.2±1.7	0.022*
Immature Style	0.004*	59.1±10.7	52.0±10.3	59.7±10.7	0.001*

*P<0.05

Discussion

The result of this study is consistent with the results of Kipper's research with regard to the field of immature defenses in patients with PD (16); more usage of immature style was noted in patients with PD in both studies. Except for displacement in Kipper's study and rationalization in our study, other 7 immature defenses used more by patients with PD were similar in both studies. Another study by Kipper et al. showed a relatively similar results in the case of immature defenses in patients with PD (17). Therefore, it seems that the pathogenesis of PD is related to the immature defenses to a considerable extent; for instance, the linkage between somatization and somatic symptoms in PD is obvious. De Masi noted a nameless dread that stems from patient's imagination in the psychodynamic of panic attacks (18). The dread that results from one's imagination.

something to do with the immature defense of fantasy. Other significantly used immature defenses can also be tracked in pathogenesis of PD when studying this disorder pathologically and pychodynamically.

There are fewer studies about the relationship between defense mechanisms and obsessive-compulsive disorder compared to PD. However, similar to our study, Andrews et al. (5) observed significantly more usage of immature style in OCD patients. In another study performed by Pollock and Andrews (14) it was found that two immature defenses, acting out and projection, were used more by OCD patients compared to normal controls. In our study it was found that in addition to these two immature defenses, devaluation, autistic fantasy, splitting and rationalization are also used more by patients with OCD.

The question comes as why our study did not note any difference in neurotic style between patients and control subjects, whereas this difference was reported in similar studies (16,19). To answer this question, it seems that we should shift our attention from patients to normal controls. For example, when comparing the mean scores of neurotic defenses of the control groups in our study and the Kipper's study (16), it is observed that undoing and pseudo-altruism have considerably higher mean scores in the Iranian control group (6.1 and 6.6, respectively) than in the Brazilian control group (3.2 and 4.6, respectively). Additionally, it should be noted that idealization was used more significantly by both groups of patients in the present study. The higher scores in the Iranian sample of normal controls may show that these defenses are more accepted in the Iranian community; this fact makes it difficult to differentiate pathology from non-pathology according to the neurotic defenses in this population.

Usage of mature defenses by an individual is in a close correlation with ego maturity (6). By accepting this fact, it is concluded that the more an individual uses the mature style (compared to other styles) against different stressors, the less probability exists for him/her to be caught up in a psychopathological state. Spinhoven and Kooiman reported that patients with anxiety disorders used mature style less than normal controls (19). The same result was reported by Andrews et al. about patients suffering from OCD and social phobia (5). In this study, also normal controls used mature style significantly more than the two groups of patients. Different results are noted in different studies with regard to mature defenses (14, 16). In our study, less usage of sublimation by OCD patients, less usage of anticipation by panic patients, and less usage of humor by both groups of patients were noted when compared to the control group.

The differences in these studies may be due to different patterns and defenses accepted by different communities. Therefore, it may be necessary to accomplish studies that are able to extract these community-dependent patterns in different populations. In general, it seems that among all clusters of defense mechanisms, immature defenses play an important role in the pathogenesis of PD and OCD. Those studies describing the relationship between the pathology of these disorders and the related defenses will be of great importance in this area.

Conclusion

The statistical analysis in this study showed acceptable validity, reliability and internal consistency for the Persian version of DSQ-40. In addition, this study demonstrated more usage of immature style and less usage of mature style by both groups of patients with OCD and PD when compared with the normal controls. No significant difference was found in the usage of neurotic style among the three groups. Our study reported some different results from those of similar studies. However, in general, our data seems to be considerably consistent with that of similar studies conducted on different populations; this may help to a more improved perception of the process of pathogenesis of OCD and PD.

Further studies are needed to clarify the relationship between defensive patterns and vulnerability to anxiety disorders, particularly OCD and PD.

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