

Defense mechanisms and symptom severity in panic disorder

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Abstract. *Background and aim of the work:* Whether the use of maladaptive defense style is a trait or a state phenomenon in panic disorder (PD) is still an open question. The aim of the study was to verify whether PD patients used a different defense style than healthy subjects, after controlling for the effect of symptoms severity. *Methods:* Therefore, 61 PD patients and 64 healthy controls participated in the study. All subjects were evaluated with SCID-IV, SCL-90, Ham-A, Ham-D and the Defence Style Questionnaire-40 items (DSQ-40). *Results:* PD patients showed higher Ham-A, Ham-D and SCL-90 scores than controls and they used more neurotic and immature defences. The differences in defense style disappeared after controlling for the effect of symptom severity, whereas the differences in symptom severity persisted after controlling for the effect of defense style. *Conclusions:* This finding suggests that the use of less mature defenses in PD was explained by the severity of anxious symptoms, whereas the contrary was not true. Therefore, the use of less mature defense style might be supposed to be a state phenomenon in PD. (www.actabiomedica.it)

Key words: Defense mechanisms, panic disorder, neurotic defense, mature defense, immature defense

Introduction

In the vulnerability of Panic Disorder (PD) has been supposed to be involved a particular difficulty acknowledging negative affects and managing anger, which subjects find threatening to important ties to significant people in their lives (1).

Defense mechanisms, defined as “psychological mechanism that mediates between an individual’s wishes, needs, affects and impulses on the one hand, and both internalized prohibitions and external reality on the other” (2), are postulated to have a significant role in the control of anxiety and other intense affect states in the effort to protect needed relationships. Therefore, a dysfunctional use of defense mechanisms might be involved in the vulnerability to PD.

The results of studies that investigated defense mechanisms in patients affected by PD are inconclusive: an use of maladaptive defenses were found in PD patients but also in other mental disorders (Obsessive Compulsive Disorder, Major Depression, Social Phobia) (3). More over, the use of immature and neurotic mechanisms is not stable since defense style change toward a use of more mature mechanisms when symptoms improved.

Until today, the relationship between defense style and symptom severity and the relationship between change in defense style and change in symptoms over the course of treatment hasn’t been completely clarified (4).

Therefore the question whether defenses are a state or a trait phenomenon is still open.

A possible strategy to answer this question was suggested by Hoffart (5); he stated that a personality difference between diagnostic group will persist after symptom severity has been controlled for, to conclude that personality features are a trait vulnerability to a mental disorder.

Similarly, if defense mechanisms are a trait phenomenon in PD, the differences in defense styles between PD patients and healthy controls (C) should persist after excluding the effect of symptom severity.

Therefore, the aim of this study was to compare in PD patients and in C the defense mechanisms, controlling the effect of symptom severity.

Materials and Methods

Sample. Subjects, included in the study after giving their informed consent, were recruited from all out-patients who consecutively sought treatment for a Panic Disorder (PD) at the Centre for Mood and Anxiety Disorder of the Psychiatric Clinic of the University of Parma-Italy since January 2001. PD was the first mental disorder diagnosed in all patients.

Patients with severe suicidal risks, schizophrenia or other psychotic disorders, organic mental disorders, substance abuse or dependence, history of neurological or medical illnesses (i.e. cardiovascular, hematological, liver, respiratory, endocrinological diseases) were excluded from the study.

Age and sex matched healthy subjects served as controls.

Assessment. During the first visit, all subjects received the Structured Clinical Interview for DSM-IV Disorders (6) for diagnosing mental disorders, the Symptoms Checklist-90 (7) to measure the severity of phobic anxiety, the Hamilton Rating Scale for Anxiety (8) (Ham-A) for the evaluation of global severity of PD symptoms, the Hamilton Rating Scale for Depression (9) (Ham-D) to assess depressive symptoms, the Defence Style Questionnaire-40 items (DSQ-40) (10) for the evaluation of defense style and a semi-structured interview ad hoc performed to collect clinical and anamnestic informations.

The DSQ-40 (10) (11) is a 40-question self re-

port questionnaire. The DSQ-40 can provide scores for the 20 individual defenses as well as for the three styles (mature, neurotic, and immature). The individual defense scores are calculated by the average of the two items for each given defense mechanism, and the style scores are calculated by the average of the scores of the defenses under each style. Each item is evaluated on a scale from 1 to 9, where 1 indicates "completely disagree" and 9 indicates "fully agree."

Statistical analysis. Comparisons between-groups were made with the χ^2 test for categorical variables and with Student's t test (two tailed) or one-way analysis of variance (ANOVA) with Bonferroni post-hoc analysis for numerical variables.

The analysis of covariance (ANCOVA) was used to evaluate whether difference on defence styles between PD patients and controls persisted after excluding the effect of symptoms severity. Therefore, in the analysis the DSQ-40 (mature, neurotic and immature) scores entered individually as dependent variable, Ham-A, Ham-D and SCL-90 phobic avoidance scores entered as covariates and the diagnostic groups entered as independent variable. Moreover, the ANCOVA analysis was used to evaluate the whether difference on symptom severity (dependent variables) between PD patients and controls (independent variable) persisted after excluding the effect of defence styles (covariates).

All data analyses were performed using the statistical software package SSPS 14.0.

Results

Sample. The study completers were 43 women (70.5%) and 18 men (29.5%), whereas the healthy controls consisted of 45 women (70.3%) and 19 men (29.7%). The socio-demographic characteristics of patients and controls were shown in table 1.

Assessment.

Axis I Comorbidity. Agoraphobia was found in 47 patients (77%); at least another anxiety disorder were diagnosed in 22 (36.0%)(social phobia in 13, generalized anxiety disorder in 11, obsessive-compulsive dis-

Table 1. Socio-demographics and clinical features in patients with Panic Disorder and in healthy controls

	Panic Disorder n. 61		Controls n. 64		
<i>Female gender</i>	43	70.5%	45	70.3%	$\chi^2=0.01$; $df=1$; $p=0.98$
<i>Age years</i>	35.7 \pm 10.9		34.6 \pm 11.0		$t=0.55$; $df=1,123$; $p=0.58$
<i>Education years</i>	10.3 \pm 4.1		9.8 \pm 4.7		$t=0.75$; $df=1,123$; $p=0.78$
<i>Marital Status</i>					$\chi^2=0.05$; $df=3$; $p=0.96$
Never married	24	39.3%	25	39.0%	-
Married	30	49.1%	32	50.0%	-
Separated/Divorced	6	9.8%	6	9.3%	-
Widowed	1	1.6%	1	1.5%	-
<i>Occupation</i>					$\chi^2=0.1$; $df=3$; $p=0.78$
Unemployed	2	3.2%	3	4.6%	-
Student	10	16.3%	8	12.5%	-
Housewife	7	11.4%	8	12.5%	-
Employed	42	68.8%	45	70.3%	-
<i>Symptom severity</i>					
Ham-A	17.2 \pm 8.7		3.8 \pm 2.7		$t=11.6$; $df=1,123$; $p<0.001$
Ham-D	14.2 \pm 7.4		3.5 \pm 2.3		$t=10.9$; $df=1,123$; $p<0.001$
SCL-90 pa	1.62 \pm 1.3		0.14 \pm 0.1		$t= 9.0$; $df=1,123$; $p<0.001$
<i>Defense Mechanisms</i>					
Mature	4.5 \pm 1.3		4.7 \pm 1.2		$t=0.97$; $df=1,123$; $p=0.31$
Neurotic	4.1 \pm 1.5		3.4 \pm 1.2		$t=2.6$; $df=1,123$; $p=0.01$
Immature	4.1 \pm 1.2		3.1 \pm 0.8		$t=5.0$; $df=1,123$; $p<0.001$

order in.8). Major depression was diagnosed in 23 patients (37.7%).

Symptoms severity. PD patients showed higher Ham-A, Ham-D and SCL-90 scores than controls (table 1).

After controlling for the effect of defense style, the differences in anxious (ANCOVA: $F=87.4$; $df=1,125$; $p<0.001$) phobic (ANCOVA: $F=51.1$; $df=1,125$; $p<0.001$) and depressive (ANCOVA: $F=76.0$; $df=1,125$; $p<0.001$) symptoms remained between PD patients and healthy subjects

Defence Style. PD patients used more neurotic and immature defences than controls, whereas the two groups did not show any difference in the use of mature defences (table 1).

After controlling for the effect of symptom severity, the differences in neurotic and immature defenses between PD patients and healthy subjects disappeared (ANCOVA: neurotic defenses $F=0.73$; $df=1,125$; $p=0.39$; immature defenses $F=0.05$; $df=1,125$; $p=0.82$).

Discussion

In this study, the defence styles of PD patients and healthy controls were compared controlling for the effect of symptom severity.

In our study, PD patients used more immature and neurotic defenses than controls, confirming the results of previous studies (12).

However, when the effect of symptom severity was controlled, the differences in defense style between PD patients and controls disappeared, suggesting that the use of less mature defenses in PD was explained by the presence of anxious symptoms. The opposite was not true: in fact the differences in symptom severity between PD patients and controls persisted after excluding the effect of defense mechanisms, suggesting that the presence of anxious symptoms in PD patients was not explained by the use of less mature defenses.

As Hoffart (5) suggested, to conclude that personality features are a trait vulnerability for a disorder, the difference between diagnostic group will persist

after symptom severity has been controlled for. Therefore, our findings do not support the hypothesis that the use of a immature and neurotic defenses is a trait phenomenon in PD, whereas they might suggest that use of less mature defense style represents a state phenomenon. According to this hypothesis, when subjects fall ill, their capacity to use mature adaptive defenses may diminish, and, as they regress, their least adaptive defense emerge. When anxious, phobic and depressive symptoms recovered also the defensive style returns to a greater maturity.

Moreover, an other hypothesis might explain our data. The DSQ-40 does not measure defenses per se, which are intrapsychic phenomenon that may be out of a subject's awareness, but their conscious derivatives (behaviours) (4). Therefore, it's plausible that an overlap might exist between some behavioural derivatives of defenses and some behaviours induced by anxious symptoms. Then, some DSQ-40 items might also measure "anxious" behaviours, rather than only those "belonging" to defense mechanisms: i.e., the DSQ-40 items "Doctors never really understand what is wrong with me" and "No matter how much I complain, I never get a satisfactory response", exploring some aspects of the immature defenses, could also measure the common experience of PD patients when they seek medical assistance. It's well known that PD patients are high users of medical setting (13)(14) and in this setting they may receive the correct diagnosis and treatment only after many consultations. Therefore, the feeling of being not understand or not receiving a satisfactory response by the doctors is common in PD patients.

In this view, the relationship between maladaptive defenses and PD may represent an artefact of the measure used in the assessment of behaviour derivatives of defenses. Therefore, it's possible that PD patients might score high on some DSQ-40 items only because they are anxious. This hypothesis may partially explain the positive correlation between anxiety and immature defenses observed in previous studies (12, 15-17).

Some methodological aspects limit the generalization of our results.

First, given the small sample size of our PD patients, firm conclusions should be drawn from our re-

sults with precaution and the present data need to be verified by using larger samples.

Second, this is a cross-sectional study and thus our data needed to be confirmed by longitudinal studies investigating defense style before the onset or after a stable remission of PD.

Third, our sample is more representative of patients treated in psychiatric setting and therefore our data need to be confirm in patients seeking assistance to primary care.

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