Differences in Affective Temperaments in Anxiety Disorders: Comparison of Panic Disorder and Obsessive Compulsive Disorder

Anksiyete Bozukluklarında Afektif Mizaç Farklılıkları; Panik Bozukluğu ve Obsesif Kompulsif Bozuklukta Karşılaştırılması

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ABSTRACT

Introduction: In this study, probable differences in affective temperament among anxiety disorders were investigated via a comparison of panic disorder (PD) and obsessive-compulsive disorder (OCD).

Method: 44 patients with OCD and 42 patients with PD, who were admitted to Bakırköy Prof. Dr. Mazhar Osman Research and Training Hospital for Psychiatry, Neurology and Neurosurgery outpatient clinics with complaints of OCD and PD and were diagnosed according to DSM IV criteria, were consecutively included in the study after informed consent was taken. A sociodemographic form, the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID I), Hamilton Depression Rating Scale (HAM-D), Beck Anxiety Inventory, Panic and Agoraphobia Scale, Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) and the temperament evaluation of the Memphis, Pisa, Paris, and San Diego Autoquestionnaire (TEMPS-A) were given to the patients. PD and OCD patients were compared in terms of affective temperament characteristics.

Results: Mean age, educational status and gender distribution of OCD and PD patients were similar ($p>0.05$). Dominant depressive temperament was more prominent in OCD group than in PD group ($p=0.021$). Hyperthymic temperament scores were higher in PD group than in OCD group ($p=0.002$). Dominant hyperthymic temperament was not encountered in either group.

Conclusion: Dominant depressive temperament was more prominent in OCD group whereas hyperthymic temperament scores were higher in PD group. These findings should be evaluated in studies with larger sample sizes. (*Archives of Neuropsychiatry* 2013; 50: 337-343)

Key words: Panic disorder, obsessive-compulsive disorder, temperament

Conflict of interest: The authors reported no conflict of interest related to this article.

ÖZET

Giriş: Bu çalışmada panik bozukluğu (PB) ve obsesif kompulsif bozukluk (OKB) karşılaştırılması üzerinden anksiyete bozuklukları arasında olası afektif mizaç farklılıkları araştırılmıştır.

Yöntem: Mayıs - Aralık 2006 tarihleri arasında Bakırköy Prof. Dr. Mazhar Osman Ruh Sağlığı ve Sinir Hastalıkları Eğitim Araştırma Hastanesi ayaktan tedavi ünitesinde 44 OKB ve 42 PB hastası ardışık olarak çalışmaya alındı. Hastalara sosyodemografik form, DSM-IV tanı ölçütlerine göre Yapılandırılmış Klinik Görüşme (SCID I), Hamilton Depresyon Ölçeği (HAM-D), Beck Anksiyete Ölçeği, Panik Agorafobi Ölçeği, Yale Brown OKB Ölçeği (Y-BOCS), TEMPS-A mizaç değerlendirme ölçeği uygulandı. PB ve OKB hastaları afektif mizaç özellikleri açısından karşılaştırıldı.

Bulgular: OKB ve PB tanısı bulunan hastaların yaş ortalamaları, cinsiyetleri ve eğitim durumları benzer bulunmuştur. OKB'de baskın depresif mizaç oranı PB hastalarından anlamlı olarak fazla idi. Hipertimik mizaç puanları PB hastalarında OKB hastalarına göre anlamlı derecede daha yüksekti. Herhangi bir grupta baskın hipertimik mizaca rastlanmadı.

Sonuç: OKB grubunda baskın depresif mizaç oranı daha belirgin iken, hipertimik mizaç puanları panik bozukluğu grubunda daha yüksekti. Bu sonuçlar daha geniş örneklemli çalışmalarda araştırılmalıdır. (*Nöropsikiyatri Arşivi* 2013; 50: 337-343)

Anahtar kelimeler: Panik bozukluğu, obsesif kompulsif bozukluk, mizaç

Çıkar çatışması: Yazarlar bu makale ile ilgili olarak herhangi bir çıkar çatışması bildirmemişlerdir.

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Introduction

Affective temperament types are accepted as behavioral phenotypes in the premorbid course of mood disorders (1). Affective temperaments include depressive, hypertymic, cyclothymic, irritable and anxious temperaments. It is thought that these temperaments are among the basic components which determine the process of mood disorders (2,3). Currently, it is predicted that affective temperament is on the one end of the spectrum of bipolar disorder (4).

Co-diagnosis of mood disorder and affective temperament are among the important factors which have an impact on the disease process in anxiety disorders. Affective temperament may be effective by leading to predisposition to bipolar disorder or by accompanying clinical characteristics including impulsivity (5,6,7).

Determining affective temperament in anxiety disorders may be important in selection of therapy to be administered or in the follow-up of the patient. Some affective temperament types should make physicians think about possible co-diagnosis of bipolar disorder and in terms of selection of therapy (8).

Since obsessive compulsive disorder (OCD) and bipolar disorder are more frequently observed in association compared to other anxiety disorders, studies related with affective temperament properties and especially cyclothymic temperament properties in patients with OCD draw attention (9,10). In a study which was conducted by D'ambrosio et al. with OCD patients who had no co-diagnosis of bipolar disorder, hypertymic temperament was found with a rate of 13.8%, cyclothymic temperament was found with a rate of 19.2%, depressive temperament was found with a rate of 16.8% and irritable temperament was found with a rate of 4.8% (10). A limited number of studies have evaluated affective temperament in panic disorder (PD). In the study performed by Akiskal et al., bipolar disorder type II was associated with hypertymic temperament and cyclothymic temperament (11). In a thesis study performed in our country, the dominant temperament was found to be anxious temperament in 8 of 54 PD patients, depressive temperament in 6, cyclothymic temperament in 3 and irritable temperament in 3 and hypertymic temperament was not found (12).

Determining possible affective temperament differences between anxiety disorders may give an idea about the relation of anxiety disorders with bipolar disorder. OCD and PD are the most commonly studied anxiety disorders in studies of affective temperament. In the light of this information, the objective of the study was to investigate possible differences of affective temperament.

Method

A total of 86 consecutive patients (44 OCD patients and 42 PD patients) who presented to Bakırköy Prof. Dr. Mazhar Osman Research and Training Hospital for Psychiatry, Neurology and Neurosurgery Ambulatory Therapy Unit with complaints of OCD or PD between May 2006 and December 2006, who were diagnosed with OCD or PD according to DSM IV criteria and who gave consent to participate in the study were included in the study. Before the patients were included in the study they were given information about the study and informed consent was obtained. Approval

was obtained from the ethics committee of Bakırköy Research and Training Hospital for Psychiatry, Neurology and Neurosurgery.

Inclusion criteria: Patients with a co-diagnosis of other anxiety disorders in the last 6 months excluding simple phobia, patients with mental retardation, patients who had no education, dementia and delirium patients, patients with physical disease, patients who were in depressive, hypomanic or manic attack at the time of the study and patients with psychotic disorder were not included in the study in order to ensure differentiation of patient groups based on the valid diagnosis.

Method: The sociodemographic data form which was developed by the investigators based on the sociodemographic data form in the SCID-I (Structured Clinical Interview for DSM-IV) guide was used in our study. The diagnoses of OCD and PD were confirmed using the DSM-IV-compatible Psychiatric Interview Form and other anxiety disorders excluding simple phobia were excluded. Hamilton Depression Scale and Beck Anxiety Scale were applied to evaluate the levels of depression and anxiety. The severity of OCD symptoms was evaluated using the Yale - Brown Obsessive, Compulsive Disorder Scale (Y-BOCS). The severity of panic disorder was evaluated using the Panic Agoraphobia Scale. The TEMPS - A Affective Temperament Scale was applied to evaluate affective temperament. Patients with previous mood episode were not excluded from the study. Patients who experience a hypomanic/manic shift while using antidepressive drug and who have not been diagnosed with bipolar disorder so far are not accepted as bipolar according to widely used diagnostic classification systems, but an increasing number of investigators define these patients as bipolar (13,14,15,16). In this study, patients with a history of hypomanic shift related with use of antidepressant were also classified as bipolar disorder (13,14,15,16). In our study, patients who presented in 4-12 weeks after drug therapy among the ones with hypomanic responses to antidepressant drugs were accepted to have a pharmacological origin (17).

None of the patients who were proposed to participate in the study refused participation. The two groups who were composed of OCD and PD patients were compared in terms of affective temperament properties. The data obtained were evaluated statistically.

SCID-I Clinical Version: This version was established by the American Psychiatry Association by reviewing the test adapted to DSM III-R diagnostic criteria according to DSM IV diagnostic criteria in 1997. It is used as a standard interview in clinical studies to confirm the diagnosis. Its Turkish adaptation and reliability study was performed (18).

Hamilton Depression Rating Scale (HAMD): This is a scale which is used to measure the severity of depression in patients. It is not diagnostic. It is used to monitor the course of depression. Its validity and reliability study for our country was performed (19).

Panic Agoraphobia Scale (PAS): This scale was developed by Bandelow (20). It involves clinical observer and patient self-report forms. It is applied to patients with agoraphobia or panic disorder without agoraphobia. Its Turkish adaptation was performed by Tural et al. (21).

Beck Anxiety Scale: This is a self-report scale which is used to grade the patient's anxiety. Its Turkish reliability and validity study was performed by Ulusoy et al. (22).

Yale-Brown Obsessive Compulsive Disorder Scale (Y-BOCS): Y-BOCS which was developed by Goodman et al. in 1986 is a 74-question symptom checklist which provides a detailed symptom screening for OCD and two parts which measure the severity of OCD without considering symptom type, number or content (23). Its reliability and validity study was performed by Karamustafaloğlu et al. in 1993 (24).

TEMPS-A (Temperament Evaluation of Memphis, Pisa, Paris, San Diego Autoquestionnaire) Temperament Scale: This scale was arranged to evaluate dominant affective temperament. The original scales include 109 items for men and 110 items for women. Its Turkish version is composed of 99 items to determine depressive, hypertymic, irritable, cyclothymic and anxious temperaments. If the score obtained from each subtype is above the cut-off score calculated for that subtype, it is assumed that the person predominantly carries that temperament. If the cut-off values of multiple subtypes are exceeded, presence of multiple dominant temperaments is mentioned. Test-re-test reliability study for the Turkish translation was performed (25).

Statistical Analysis

SPSS 14.0 version was used for statistical calculations. Qualitative data were expressed as mean (or median) and standard deviation. Mann Whitney U test was used for variables which did not show a normal distribution and for ordinal variables and chi-square test was used for categorical variables. A p value of <0.05 was considered significant in two ways.

Results

Sociodemographic and Clinical Properties of OCD and PD patients: 31 of the patients diagnosed with OCD (n=44) were female

and 13 were male. Their ages ranged between 20 and 60 years (mean=35.7±10.7). 29 of the patients diagnosed with PD (n=42) were female and 13 were male. There was no significant gender difference between OCD and PD patients (p=0.88). The ages of pD patients ranged between 24 and 63 years (mean=40.5±9.9). OCD patients were composed of younger patients compared to the PD group (p=0.03). Other sociodemographic properties of the patients were similar. The sociodemographic properties of the patients are summarized in (Table 1).

Although the severity of depression in the OCD group appeared to be higher compared to PD patients, no statistically significant difference was found between the two groups. The median value of the severity of anxiety was higher in PD patients, but the difference was not statistically significant. The comparison of the scores obtained by OCD and PD patients in Hamilton Depression and Beck Anxiety scales is summarized in (Table 2).

While the rate of usage of antidepressant alone was higher in PD patients, combined use of especially antidepressant, antipsychotic and anxiolytic was observed with a higher rate in OCD patients. The rate of patients receiving multiple therapies in the OCD group was statistically higher. Current therapies of the patients are summarized in (Table 3).

The hospitalization number in OCD patients was statistically significantly higher compared to PD patients ($\chi^2=11.57$; p=0.007). Comparison of hospitalization numbers between OCD and PD patients is shown in (Table 4).

In the OCD group, one of the patients had bipolar disorder type 1 (2.3%), 7 had bipolar disorder type 2 (15.9%), 2 had bipolar disorder not otherwise specified (4.5%) according to DSM IV diagnostic criteria and 7 separate patients had a history of hypomania triggered

Table 1. Sociodemographic properties of OCD and PD patient

	OCD (n)	%	PD (n)	%	χ^2	df	p
Gender							
Male	13	29.5	13	31	0.02	1	0.88
Female	31	70.5	29	69			
Education level							
Literate	2	4.5	0	0			
Primary school	22	50.0	25	59.5	2.96	3	0.39
High school	13	29.5	13	31			
University	7	15.9	4	9.5			
Occupation							
Unemployed	6	13.6	1	2.4			
Housewife	21	47.7	25	53.5			
Labourer	3	6.8	1	2.4			
Officer	5	11.4	5	11.9	11.16	7	0.13
Craftsman	1	2.3	3	7.1			
Self-employment	2	4.5	5	11.9			
Retired	2	4.5	2	4.8			
Student	4	9.1	0	0			
Marital status							
Single	14	31.8	5	11.9			
Married	28	63.6	35	83.3	4.99	2	0.08
Widowed	2	4.5	2	4.8			

OCD: obsessive compulsive disorder, PD: panic disorder

	OCD (n)	%	PD (n)	%	x2	df	p
Hospitalization number							
None	17	38.6	31	73.8			
1 - 3	25	56.8	9	21.4	11.57	2	0.007*
4 - 6	2	4.5	2	4.8			

OCD: obsessive compulsive disorder, PD: panic disorder, *Statistically significant

Table 5. Comparison of the median temperament scores of the patients according to TEMPS-A

Temperament scores	OCD median (min - max)	PD median (min - max)	z	p
Depressive	11.5 (3-18)	8 (2-16)	2.56	0.10
Cyclothymic	12 (1-18)	10.5 (3-18)	0.80	0.42
Hypertymic	6 (0-17)	9.5 (1-16)	3.15	0.002*
Irritable	6 (0-15)	7 (0 -14)	0.35	0.72
Anxious	13 (1-23)	13.5 (1-22)	0.53	0.59
Min-max: minimum-maximum values *Statistically significant				

Table 6. Evaluation of dominant temperaments of the patients according to TEMPS-A

Temperament	OCD (n)	%	PB (n)	%	Total	%	χ ²	df	p
Presence of any dominant temperament	23	52.3	17	40.5	40	46.5	1.20	1	0.27
Depressive	15	34.1	5	11.9	20	23.3	5.9	1	0.021*
Anxious	10	22.7	13	31	23	26.7	0.7	1	0.40
Depressive and anxious	5	11.4	4	9.5	9	10.5			
Cyclothymic	4	9.1	2	4.8	6	7.0			
Depressive and cyclothymic	2	4.6	0	0	2	2.3			
Irritable	1	2.3	1	2.4	2	2.3			
Hypertymic	0	0	0	0	0	0			
OCD: obsessive compulsive disorder, PD: panic disorder *Statistically significant									

with a rate of 19.2%, depressive temperament was found with a rate of 16.8% and irritable temperament was found with a rate of 4.8% (10). Another study showed that cyclothymic and depressive temperaments were in the foreground in resistant OCD patients (27). Since the OCD group in our study was composed of patients with a higher rate of usage of multiple drugs compared to PD patients, the results should be evaluated considering this condition. However, it may be thought that OCD patients may have a more severe disease course, because they have dominant depressive temperament with a higher rate (27).

The rate of usage of multiple drugs and total number of hospitalizations were significantly higher in OCD patients compared to PD patients. This difference may suggest that the OCD group was composed of patients who were resistant to drug treatment. In OCD patients, dominant depressive temperament may negatively affect the treatment outcome or lead to use of multiple drugs when accompanying bipolar disorder (27). The levels of anxiety and depression during working in these two groups are similar. This similarity might have partially decreased the bias in assessment of the results related with affective temperament.

In our sample, a co-diagnosis of bipolar disorder was found with a rate of 14.2% in the PD group and 38.6% in the OCD group. Dominant depressive temperament might be related with more common bipolar disorder in OCD compared to PD. Further studies comparing dominant affective temperament characteristics in PD and OCD patients with a co-diagnosis of bipolar disorder may elucidate this subject.

The rates of dominant depressive temperament (11.9%) and dominant anxious temperament (31%) we found in PD were similar to the study performed by Savino et al in 1993 and the thesis study performed by Ergil in 2006 (12,28). Another reason that dominant depressive temperament is observed more commonly in OCD patients may be the co-diagnosis of major depression. The rate of a co-diagnosis of major depression in our OCD patients was 56.8%. In previous studies, depressive temperament was reported with a higher rate in depression patients (29). However, it was predicted that dominant depressive temperament in OCD might not be related with the co-diagnosis of major depression, since the rates of a co-diagnosis of major depression were similar between OCD and PD patients in our study.

In contrast to the previous studies, we could not find dominant hypertymic temperament in our PD and OCD patients. In the study of Savino conducted with 140 PD patients, hypertymic temperament was found with a rate of 29.7% in women and with a rate of 47.9% in men (28). In a thesis study performed in our country, among 54 PD patients, dominant anxious temperament was found in 8, dominant depressive temperament was found in 6, dominant cyclothymic temperament was found in 3 and dominant irritable temperament was found in 3 patients and hypertymic temperament could not be found in any patient similar to our study (12). This difference may be related with use of a self-report scale or gender distribution. The similarities of our results with the other studies performed in our country may be related with cultural affective temperament differences. High hypertymic temperament scores in OCD and PD patients were not reflected in the results as dominant

temperament. The same is also true for cyclothymic temperament scores. Nevertheless, the fact that dominant hypertymic temperament was not found in any of the 86 patients with anxiety disorder, although this temperament was found in the first orders in the studies performed outside Turkey may be important. This can be tested in further studies.

One of the most prominent results of our study was the fact that hypertymic temperament characteristics were more prominent in PD compared to OCD ($p=0.002$). The literature investigating this subject is considerably limited. Akiskal et al. associated PD, bipolar disorder type II, hypertymic temperament and cyclothymic temperament in the study they performed in 2006 (11). In the study performed by Savino in 140 PD patients, a high rate of hypertymic temperament was found (29.7% in women; %47.9% in men) (28). This finding suggested that hypertymic temperament characteristics are more prominent in PD patients compared to OCD patients. It was found that hypertymic temperament was negatively related with suicide risk and hopelessness. Higher number of hospitalizations and higher number of depressive periods in the OCD group compared to the PD group in our sample might be related with the low hypertymic temperament scores (30,31).

The facts that the study did not consider the history of a co-diagnosis of bipolar disorder and major depression, that our hospital was the final step hospital and addressed patients who were relatively more resistant to treatment might have affected the results. Since only patients with OCD and PD among anxiety disorders were included in the study, these results should not be generalized such as to include other anxiety disorders. Although individuals were reminded to consider their whole life while filling in the TEMPS-A Affective Temperament Scale questionnaire, difficulties may be experienced in evaluating premorbid personality traits. The low number of our patients, use of multiple drugs by the patients in our OCD group and a high number of total hospitalizations may be reported as the limitations of our study.

Conclusively, affective temperament differences were found between PD and OCD. Dominant depressive temperament was found with a significantly higher rate in OCD compared to PD. Hypertymic temperament scores were significantly higher in PD patients compared to OCD patients. Dominant depressive temperament in OCD and hypertymic temperament in PD may be important in terms of response to treatment. Absence of dominant hypertymic temperament in both disease groups may be an important finding and should be tested in further studies.

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