

The Relationship of Self-Esteem, Impulsivity and Temperament in Bipolar Patients: Is it Differentially Related to Gender?

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ABSTRACT

The relationship of self-esteem, impulsivity and temperament in bipolar patients: is it differentially related to gender?

Objective: The aim of this study was to investigate the relation between self-esteem, impulsivity and temperament, and to investigate whether it is differentially related to gender.

Methods: One hundred consecutive cases who referred to our outpatient clinic for routine control and gave informed consent and who were diagnosed with Bipolar Disorder according to DSM-IV and were in remission period for at least eight week were evaluated. Impulsivity was evaluated with the Barrat Impulsivity Scale, self-esteem was evaluated with the Rosenberg self-esteem scale and affective temperament was evaluated with the Temperament Evaluation of the Memphis, Pisa, Paris, and San Diego Autoquestionnaire.

Results: A moderate inverse relation was found between impulsivity and self-esteem. This relation was stronger in women than men. Impulsivity was found to be moderately related with depressive and anxious temperaments and strongly related with cyclothymic and irritable temperaments. There was no relation between impulsivity and hyperthymic temperament. A moderate level relation was found between self-esteem and hyperthymic temperament. This relation was stronger in men than women.

Conclusion: Self-esteem, impulsivity and temperament are differentially related to gender in bipolar patients.

Key words: Bipolar disorder, impulsivity, self-esteem, temperament



ÖZET

İki uçlu olgularda dürtüsellik, benlik saygısı ve mizaç ilişkisi: Cinsiyete göre farklılaşır mı?

Amaç: Bu çalışmanın amacı, iki uçlu bozuklukta (İUB) benlik saygısı, dürtüsellik ve mizaç arasındaki ilişkiyi araştırmak, cinsiyete göre farklılaşp farklılaşmadığını incelemektir.

Yöntem: Bu amaçla, polikliniğimize olağan kontrolleri için başvuran ve bilgilendirilmiş onam veren, DSM-IV'e göre İUB-I tanılı ve en az sekiz haftadır iyilik dönemindeki 100 olgu ardışık olarak değerlendirilmiştir. Dürtüsellik Barrat Impulsivity Scale ile, benlik saygısı Rosenberg Benlik Saygısı Ölçeği ile, afektif mizaç TEMPS-A (the Temperament Evaluation of the Memphis, Pisa, Paris, and San Diego Autoquestionnaire) ile değerlendirilmiştir.

Bulgular: İUB tanılı olgularda dürtüsellik ve benlik saygısı arasında ters ve orta derecede bir ilişki saptanmıştır. Bu ilişki kadın olgularda daha güçlü bir ilişkidir. Dürtüsellik ile depresif ve anksiyöz mizaç arasında orta derecede, siklotimik ve iritabl mizaç arasında güçlü bir ilişki saptanmıştır. Dürtüsellik ile hipertimik mizaç arasında ilişki bulunmamıştır. Benlik saygısı ile hipertimik mizaç arasında orta derecede bir ilişki saptanmıştır. Bu ilişki erkek olgularda daha güçlü bir ilişkidir.

Sonuç: Benlik saygısı, dürtüsellik ve mizaç arasındaki ilişki, iki uçlu olgularda, cinsiyete göre farklılaşmaktadır.

Anahtar kelimeler: İki uçlu bozukluk, dürtüsellik, benlik saygısı, mizaç

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INTRODUCTION

Although in previous literature self-esteem was considered as an independent and relatively consistent entity, recent publications present data that this consistency may not be valid and may be influenced by many clinical variables. In cases with bipolar disorder (BD), self-esteem level is low also in remission period in

addition to depressive period (1). This was related to non adaptive coping mechanisms (2). In addition, negative schemes which influence self-esteem adversely, such as being abandoned, inadequacy, susceptibility to being harmed and seeking approval are more marked in these cases (3).

The data on the relation between self-esteem and impulsivity are usually derived from studies investigating

cases of suicide and borderline personality disorder (4,5). It has been demonstrated that self-esteem is predictive of risky behavior (6). It was stated that impulsivity plays a mediating role in the above relation. Impulsivity is a phenomenon which continues in bipolar cases in remission periods as in low self-esteem (7). The relation between self-esteem and impulsivity has not been investigated systematically so far.

Temperament is defined as the attitudes and behavior of individual based on structural, genetic and biological foundations (8). It has been known ever since Hippocrates that humans have different temperaments. Self-esteem and impulsivity may be combined in different manners in different temperament types.

The aim of the present study was to investigate whether there is a relation between self-esteem and impulsivity in bipolar disorder and whether this relation is experienced differently between genders. Secondary aim was to investigate the relation of impulsivity and self-esteem with subtypes of temperament according to gender.

METHOD

Sample

One hundred consecutive cases who referred to our clinic for routine control and gave informed consent and diagnosed with BD according to DSM-IV and who were in remission period for at least eight week formed the sample.

Measures

Structured Clinical Interview Scale for DSM-IV Axis-I Diagnoses (SCID-I): It is a structured clinical interview scale developed by First et al. (9) in 1997. Its adaptation to Turkish and reliability and validity study was carried out by Ozkurkcuoglu et al. (10).

Rosenberg Self-Esteem Scale: It was developed by Morris Rosenberg (11) in 1965 and has overall 63 items and 12 subscales. Subscale of self-esteem has 10 items and is a four degree Likert type scale. It was adapted into Turkish by Cuhadaroglu (12).

Barratt Impulsivity Scale 11th Version (BIS-11):

It was developed by Barratt (13) in order to measure impulsivity. It includes 30 items filled by the patients and reliability and validity study in Turkish was conducted by Gulec et al. (14).

Temperament Evaluation of the Memphis, Pisa, Paris, and San Diego Autoquestionnaire (TEMPS-A):

It was developed by Akiskal et al. (15) and its reliability and validity study in Turkish was carried out by Vahip et al. (16).

Hamilton Depression Rating scale (HDRS):

This scale is used to measure the level of depression and changes in severity (17) and its validity and reliability study in Turkish was conducted by Akdemir et al. (18).

Young Mania Rating Scale (YMRS): It was used to determine the severity of manic symptoms and to confirm remission in remission period. This scale filled by the interviewer was developed by Young et al. (19). Its reliability and validity study in Turkish was carried out by Karadag et al. (20).

Procedure

Necessary approval for the planning of the study was obtained from Erenkoy Mental and Neurological Diseases Training and Research Hospital Academic Research Council.

Diagnostic interviews were carried out using SCID-I and for criteria of remission we set at scores of HDRS <8 and YMRS <5. Impulsivity was evaluated with the Barratt Impulsivity Scale, self-esteem with the Rosenberg Self-esteem Scale, temperament with the TEMPS-A scale.

Statistical Analysis

In the comparison of numerical values t test was used, and comparison of categorical data was made with Chi-square and Fisher Exact tests. In correlation analysis, Pearson correlation test was used. Linear regression analysis was carried out in order to enhance statistical power. All tests were two ended and p value of <0.05 was considered as significant.

RESULTS

Sample

There were 52 female, 48 male cases with BD (overall 100). Their mean age was 38.4±10.6, mean age of onset of disease 23.5±5.8, the frequency of depressive episodes (the number of periods/duration of disease-year) 0.34±0.1, the frequency of manic periods 0.26±0.19, and the number of hospitalization 0.7±0.2. First episode type was mania in 47% of cases and family history of mood disorder was present in 35% of the cases.

Depressive temperament scores were found to be higher in females than males, but the difference was not statistically significant. Impulsivity scores were similar in both gender (Table 1).

The Relation Between Self-esteem and Impulsivity in BD

A moderate inverse relation was found between self-esteem and impulsivity in cases diagnosed with BD ($r=-0.43$, $p<0.001$). This relation is stronger in females ($r=-0.54$, $p<0.001$ and $r=-0.33$, $p=0.022$).

The Relation Between Temperamental Subtypes and Self-esteem and Impulsivity in BD

There was an inverse relation between self-esteem and depressive, cyclothymic, irritable and anxious temperaments respectively ($r=-0.57$, $p<0.001$; $r=-0.47$, $p<0.001$; $r=-0.45$, $p<0.001$; $r=-0.60$, $p<0.001$). This inverse relation was more robust in depressive and anxious temperaments. When evaluated separately according to gender, inverse relation between self-esteem and cyclothymic temperament ($r=-0.65$, $p<0.001$ and $r=-0.27$, $p=0.027$) and irritable temperament ($r=-0.56$, $p<0.001$ and $r=-0.37$, $p=0.009$) was found to be more marked in female cases (Table 2 and 3).

A moderate relation was found between self-esteem and hyperthymic temperament ($r=0.46$, $p=0.018$). This relation was more robust in male cases ($r=0.58$, $p<0.001$ and $r=0.31$, $p=0.027$) (Table 2 and 3).

In regression analysis, the positive impact of hyperthymic temperament on self-esteem is marked ($p<0.001$, $\beta=5.511$). No effect of other temperamental types on self-esteem was found. When this relation was evaluated separately for sexes, a negative impact of

Table 1: The comparison of self-esteem, impulsivity and temperament between genders

	Female	Male	t	p
Depressive temperament	8.51±3.72	7.18±4.03	1.78	0.08
Cyclothymic temperament	10.34±5.51	9.52±5.73	0.70	0.49
Hyperthymic temperament	9.42±4.23	9.41±4.32	-0.02	0.99
Irritable temperament	4.56±4.44	5.83±4.12	-1.33	0.19
Anxious temperament	10.09±6.25	8.63±6.87	1.07	0.29
Impulsivity	32.14±11.12	31.44±12.32	0.23	0.82
Self-esteem	18.13±4.91	19.72±4.85	-1.70	0.09

t: Student T test

Table 2: The relation between self-esteem, impulsivity and temperament in female cases

	DT (r, p)	ST (r, p)	HT (r, p)	IT (r, p)	AT (r, p)
Impulsivity	0.46, <0.01	0.62, <0.01	0.05, 0.71	0.61, <0.01	0.47, <0.01
Self-esteem	-0.61, <0.01	-0.65, <0.01	0.31, 0.03	-0.56, <0.01	-0.60, <0.01

DT: Depressive temperament, CT: Cyclothymic temperament HT: Hyperthymic temperament, IT: Irritable temperament, AT: Anxious temperament, r: Pearson correlation analysis

Table 3: The relation between self-esteem, impulsivity and temperament in male cases

	DT (r, p)	ST (r, p)	HT (r, p)	IT (r, p)	AT (r, p)
Impulsivity	0.29, 0.04	0.47, <0.01	0.06, 0.68	0.47, <0.01	0.45, <0.01
Self-esteem	-0.49, <0.01	-0.27, 0.03	0.58, <0.001	-0.37, 0.01	-0.59, <0.01

DT: Depressive temperament, CT: Cyclothymic temperament HT: Hyperthymic temperament, IT: Irritable temperament, AT: Anxious temperament, r: Pearson correlation analysis

irritable temperament on self-esteem was found only in female cases ($p=0.046$, $\beta=-1.884$).

A moderate relation was found between impulsivity and depressive and anxious temperament ($r=0.37$, $p<0.001$; $r=0.46$, $p<0.001$), and a strong relation was found between impulsivity and cyclothymic and irritable temperament ($r=0.54$, $p<0.001$; $r=0.53$, $p<0.001$). When this relation was evaluated separately for sexes, it was found that the relation between impulsivity and depressive temperament is stronger in female cases ($r=0.46$, $p<0.001$ and $r=0.29$, $p=0.044$), (Table 2 and 3). Impulsivity was not found to be related to hyperthymic temperament (Table 2 and 3).

According to lineal regression analysis, cyclothymic and irritable temperament has negative impact on impulsivity ($p=0.010$, $\beta=2.615$ and $p=0.015$, $\beta=2.474$). No effect of the temperament types was present on impulsivity.

DISCUSSION

In the literature, it is reported that impulsivity in BD cases is higher than that in healthy individuals both in disease and remission periods (21). It is suggested that there is an inverse relation between impulsivity and self-esteem in disorders that impulsivity accompanies disorders such as attention deficit and hyperactivity disorder, eating disorders, and substance abuse disorders (22). Various studies have obtained different results on the relation between impulsivity and self-esteem in borderline personality disorder (5). In the present study, a moderate inverse relation was found between impulsivity and self-esteem in BD cases in remission period, accounting for the presence of impulsivity both in remission and depressive episodes in bipolar cases. Actually, it was reported that the scores obtained from BD cases in remission period in self-esteem scales are lower than those obtained by healthy individuals (23).

At this point, investigators speculated that temperament may be a mediator variable and in the evaluation they made with Temperament and Character Inventory, only cooperation sub dimension of character was found to be associated with self-esteem, and no

relation was found between dimensions of temperament and self-esteem (24). However, in the present study, an inverse relation was demonstrated between self-esteem and depressive, cyclothymic, irritable and anxious temperaments in cases diagnosed with BD. The only direct relation was found between self-esteem and hyperthymic temperament. When impulsivity was evaluated, a moderate relation was found between impulsivity and depressive and anxious temperaments and strong relation between impulsivity and cyclothymic and irritable temperaments. Contrary to expectations, impulsivity was not found to be associated with hyperthymic temperament. These findings suggest that impulsivity is associated with irritability and subjective feeling of anxiety rather than euphoric mood and increased self confidence in individuals diagnosed with BD.

In the present study, inverse relation between self-esteem and impulsivity in cases diagnosed with BD was found to be more marked in female cases. Consistent with this finding a stronger relation was found between depressive temperament and impulsivity in female cases. Self-esteem is included in the definition of depressive temperament (25). While impulsivity scores are comparable in both sexes, self-esteem scores are higher in male cases, but the difference is not statistically significant. Self-esteem is also found to be higher in males than in females among healthy individuals (26). Social cognition and associated self perception may explain higher levels of self-esteem in males (27). In fact, a profound sociocultural and sociopolitical difference is present between two genders in terms of temperament characteristics, bonding patterns, value judgements, help seeking behavior, and expression of affects (28). It was reported that the relation between self-esteem and depression is more pronounced in female gender (29). However, the relation between self-esteem and hyperthymia is stronger in male cases than in female cases. For impulsivity, the situation is different. Impulsivity is perceived as a more negative characteristic among females than males. Indeed, according to our findings, the effect of irritable temperament on self-esteem is what differentiates female cases from male cases.

While in healthy individuals impulsivity scores are higher in males, in a study carried out with convicts, impulsivity was found to be higher among females (30). In a study conducted on cases diagnosed with borderline personality disorder, impulsivity scores were found to be higher in female cases and protective effect of close relations and mood on impulsivity was shown merely in male cases (31). Burton and Fletcher (32) tried to explain this discrepancy by the differences in neurotransmitter systems we believe that differences in cognitive schemas and coping mechanisms will be reflected to differences between genders. Indeed, in bipolar cases, defense mechanisms such as active reaction and passive avoidance seen in healthy individuals show differences between genders (33). Male cases are different from healthy individuals in terms of passive avoidance while there is no such difference in female cases (34). In addition brain imaging of impulsivity is different between sexes (35). Likewise, neuroendocrinological indicators of impulsivity also differentiate between genders (36).

When all of the above findings are evaluated together, it can be thought that females may give more impulsive responses than males when the self-esteem is reduced. In other words, in situations in

which self-esteem is decreased, there is more substantial increase in impulsivity in females than in males. The predominance of female cases among suicide cases supports this interpretation, but it should also be kept in mind that there is a reciprocal relation between self-esteem and impulsivity. Actually, impulsivity, at least in our society, is a characteristic that is tolerated less in females compared to males. According to our findings, the effect of irritable temperament on self-esteem is what differentiates male and female cases.

An important limitation of the present study is that the measures of concepts on which clinical agreement is reached such as impulsivity, self-esteem and temperament were based on self reports of individuals. We tried to overcome this problem of reliability by using instructions during implementation.

In conclusion, self-esteem is predictive of risky behavior. Whether this predictive capacity varies between sexes is an issue that should be addressed by future studies. At this point, it can be suggested that protecting and increasing the self-esteem of individuals will have permanent beneficial effects on the management of risky behaviors both in clinical practice and social life.

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