



Temperament and Character Differences in Patients with Premature Ejaculation

Prematür Ejakülasyon Hastalarında Mizaç ve Karakter Farklılıkları

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ABSTRACT

Introduction: The debate on the etiology of premature ejaculation is still ongoing although there was huge amount of biological and psychological theories. We aimed to investigate the personality structure of patients with premature ejaculation via temperament and character inventory.

Methods: Forty patients with premature ejaculation and a matched number of healthy people were included. Participants were asked to fill out a questionnaire booklet with separate sections for general demographic information and the temperament and character inventory.

Results: Total novelty seeking scores and subscale 1 (exploration-excitability) scores in premature ejaculation patients were significantly higher than in control groups ($p<0.05$). Total harm avoidance scores and harm avoidance subscale 2 (fear of uncertainty) scores in premature ejaculation patients was found significantly lower than in control group ($p<0.05$). Beck depression score was significantly higher in patients with premature ejaculation than in control groups.

Discussion: Men with premature ejaculation are more impulsive (excitant), more tempered, more excitable and less prone to harmful behavior. Current findings tend to reinforce premature ejaculation based upon combination of neurobiological and psychological reasons. (*Archives of Neuropsychiatry 2012; 49: 332-336*)

Key words: Premature ejaculation, temperament, character

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

ÖZET

Giriş: Prematür ejakülasyon'un etiyolojisi ile ilgili çok miktarda biyolojik ve psikolojik teorilerin olmasına karşın tartışmalar hala sürmektedir. Mizaç ve karakter envanteri ile prematür ejakülasyonlu hastaların kişilik yapısını araştırmayı amaçladık.

Yöntem: Kırk prematür ejakülasyonlu hasta, 40 sağlıklı kontrol grubuyla eşleştirildi. Çalışmaya katılanlardan mizaç ve karakter envanteri ve genel demografik bilgi formunu doldurması istendi.

Bulgular: Toplam yenilik arayışı ve alt ölçeği keşfetme ve heyecan duyma prematür ejakülasyonlu hastalarda kontrol grubuna göre anlamlı olarak yüksekti ($p<0,05$). Toplam zarardan kaçınma ve alt ölçeği belirsizlik korkusu prematür ejakülasyonlu hastalarda kontrol grubuna göre anlamlı olarak düşük bulundu ($p<0,05$). Beck depresyon skorun da prematür ejakülasyonlu hastalar kontrol grubundan anlamlı olarak yüksekti.

Sonuç: Prematür ejakülasyonlu kişiler daha dürtüsel (heyecanlı), daha öfkeli, daha heyecanlı ve zararlı davranışlara daha az yatkındır. Mevcut bulgular prematür ejakülasyonun nörobiyolojik ve psikolojik kökenli olduğunu destekleme eğilimindedir. (*Nöropsikiyatri Arşivi 2012; 49: 332-336*)

Anahtar kelimeler: Prematür ejakülasyon, mizaç, karakter

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Introduction

Premature ejaculation (PE) is the inability to control ejaculation for a "sufficient" length of time during vaginal penetration (1). The diagnostic and statistical manual of mental disorders (DSM-IV-TR) (2) has defined PE as "persistent or recurrent ejaculation with minimal sexual stimulation before, on, or shortly after penetration

and before the person wishes it". The lack of a globally accepted definition causes difficulties in determining the prevalence, which has been cited as being anywhere from 4% to 66% and most authorities accept that around 25%-40% of all men suffer from this condition at some point in their life (3,4). The debate on the etiology of PE is still ongoing although there was huge amount of biological and psychological theories about the etiology of PE.

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Possible psychogenic and organic risk factors for PE include anxiety, early sexual experience, frequency (infrequency) of sexual intercourse, ejaculatory control techniques and psychodynamic theories, serotonin hyperactivity, penile hypersensitivity, prostate inflammation, hyperthyroidism, and erectile dysfunction (5,6). No single theory seems to provide an adequate explanation for premature ejaculation. Therefore, nature of relationship between personality and premature ejaculation may be important and help improve our understanding of the illness. We are aware of only one study (7) that has assessed personality in patients with PE. It has supposed that alexithymia may be predisposing factor for PE. Therefore, we aimed to investigate the personality structure of patients with PE via a new psychobiological inventory, the temperament and character inventory (TCI), developed by Cloninger et al. (8). Theoretical model of Cloninger based on psychobiological model of personality, assume that personality can be dissected into temperament and character and interaction between temperament and character traits.

Methods

Participants

Forty eligible patients with primary PE, who met the criteria according to the DSM-IV-TR, participated in the study. Intravaginal ejaculatory latency time (IELT) was measured by either the male or female partner using a stopwatch. The exclusion criteria were as follows: having any Axis I psychiatric disorder, a past a of sexual disorders other than PE, medical conditions such as endocrine diseases (i.e. diabetes mellitus, hypothyroidism or hyperthyroidism), using any drug which may influence ejaculation and erection (i.e. off-label use of specific serotonin reuptake inhibitors, anti/dopaminergic agents, phosphodiesterase type 5 inhibitors), hypogonadism (plasma testosterone level <250 ng/dL), pelvic surgery or trauma and prostate disease. 40 healthy men (mean age: 32,65 ± 5,5) without sexual disorders according to DSM-IV were included in the control group. All individuals in the sample were married and had active sexual life with their partner. The local ethics committee approved the study, and the research was performed in accordance with the Helsinki declaration criteria.

Measurements

After obtaining written informed consent, the following scales in addition to the scio-demographic data form were given to the participants:

Temperament and Character Inventory

The Temperament and Character Inventory (TCI) is a set of 240 questions answered as true or false, self-reporting, measuring 4 dimensions of temperament and 3 dimensions of character. The temperament dimensions measure

individual differences in emotional responses to associatively conditioned stimuli. These four temperaments are: harm avoidance (HA) (i.e. anxious vs. risk-taking), novelty seeking (NS) (consideration about impulsivity vs. rigidity), and reward dependence (give information about approval seeking vs. remaining aloof) and persistence (i.e. overachieving vs. underachieving). The character dimensions assess individual differences in higher cognitive processes that modulate emotional conflicts to satisfy a person's goals and values. The character dimensions quantify the 3 branches of mental self-government: self-directedness (executive functions as being responsible, purposeful and resourceful), cooperativeness (legislative functions, i.e. tolerance, forgiveness and helpfulness) and self-transcendence (judicial functions, such as being intuitive, judicious and aware). Individual differences in TCI, character dimensions measure the presence and severity of personality traits, whereas the temperament dimensions indicate membership in the anxious cluster if high in harm avoidance, the impulsive cluster if high in novelty seeking, and the aloof cluster if low in reward dependence (9).

Beck Depression Inventory (BDI)

The BDI (10) is a self-report inventory for adolescent and adults that assesses the presence and severity of depressive symptoms experienced during the past two weeks. This inventory includes 21 items. The questions are answered on a 4-point scale ranging between 0 and 3. The BDI cut-offs are: <10 - absence or minimal depression, 10-18 - mild to moderate depression, 19-29 - moderate to severe depression, and 30-63 - severe depression. It is a self-reported questionnaire that is widely used to assess the incidence and severity of depressive symptoms in the community.

Beck Anxiety Inventory (BAI)

The BAI (11) is a 21-item self-report questionnaire that lists symptoms of anxiety. The respondent is asked to rate how much each symptom has bothered him/her in the past week. The items are rated on a four-point scale, ranging from (0) "not at all" to (3) "severely". The BAI cut-offs are: <7 - minimal anxiety, 8-15 - mild anxiety, 16-25 - moderate anxiety, and 26-63 - severe anxiety.

Statistical Analysis

Statistical analysis was performed using the statistical package for social sciences software (version 16, SPSS, Chicago, IL, USA). The chi-square test was used as a nonparametric test to compare the nominal values. The parametric Student's t-test and the paired t-test were used to compare the numeric values. Pearson's correlation coefficient was used to determine the relationship between the data. Two-tailed hypothesis tests were used for statistical analysis. Statistical significance was set at a p value of less than 0.05. The data gained from the study were presented as means ± standard deviations.

Results

A total of 80 individuals (40 PE, 40 controls) participated in the study. There was no significant difference in mean age between PE (36.45±11.9) and control groups (32.65±5.5). The difference in education levels between the groups was not significant. The intravaginal ejaculatory latency time (IELT) was 95±25 seconds in patients with PE and 430±30 seconds in healthy controls.

Beck depression score was significantly higher in patient with PE than in control groups while there was no significant difference in Beck anxiety score between the groups (Table 1).

Total NS scores and subscale 1 (exploration-excitability) scores in PE patients were significantly higher than in controls ($p<0.05$). Total HA scores and subscale 2 (fear of uncertainty) scores in PE patients was found significantly lower than that in controls ($p<0.05$). There were no significant differences in total reward dependence or subscales of reward dependence and total persistence scores between patients with PE and control groups (Table 2). There were no significant differences according to character dimensions: cooperativeness, self directedness and self transcendence total and subscale scores between PE patients and control groups (Table 3).

Table 1. Comparison of the anxiety and depression scores in the PE and control group

	PE (n=40)	Control (n=40)	p
Beck anxiety scores	10.05±8.2	7.83±6.8	0.196
Beck depression scores	12.85±10.9	6.60±6.06	0.002*

* $p<0.05$, ** student t-testi

Table 2. Comparison of the temperament dimensions in the PE and control group

Temperament dimensions	PE (n=40)	Control (n=40)	p
Exploration-excitability	5.40±1.49	4.35±1.62	0.041*
Impulsiveness	6.05±1.67	5.77±1.92	0.498
Extravagance	4.45±1.39	4.02±1.56	0.203
Disorderliness	6.27±1.75	6.02±1.42	0.486
Total Novelty Seeking	22.17±3.62	20.17±4.43	0.033*
Worry and pessimism	4.80±1.82	5.57±2.08	0.081
Fear of uncertainty	2.70±1.32	3.37±1.53	0.038
Shyness	4.00±1.33	4.40±1.39	0.194
Fatigability	4.87±1.88	5.47±1.98	0.170
Total Harm Avoidance	16.37±4.81	18.82±5.63	0.040*
Sentimentality	2.55±1.51	2.55±1.51	1.000
Attachment	4.00±1.73	3.87±1.45	0.728
Dependence	3.97±1.32	3.75±1.17	0.424
Total Reward Dependence	10.52±2.77	10.17±2.57	0.561
Persistence	2.27±1.60	2.50±1.58	0.529

* $p<0.05$, **student t-testi

Discussion

The main finding of the present study was that, among temperament dimension, the NS scores were higher and harm avoidance scores were lower in the PE group, whereas among character dimensions were not found to be significantly different between PE and control groups. NS is a tendency to respond with intense excitement to a novel stimuli or cues for potential rewards or potential relief of punishment. Individuals with high NS scores are characterized as quick tempered, excitable, exploratory, curious, and impulsive. Thus, in the light of literature findings about NS, we considered that patients with PE who had significantly high NS scores were more prone to be impulsive and become excitable while the cues or stimuli from intimacy is present. Individual with lower HA scores are described as sociable, open to risk-taking and prone to harmful behavior (12). In addition, HA reflects the efficiency of behavioral inhibition system (12). Thus, patients with PE might have inefficient break systems and tendency to act impulsively (more excitant) in the presence of sexual stimulus.

Although there are multiple psychological explanations as to how men develop PE, the contribution of personality structure to psychopathology of PE has scarcely been explored. To our knowledge, there is only one study; Michetti et al. (7) reported significantly higher alexithymia levels in patient with PE and a positive correlation between alexithymia levels and PE severity. Alexithymia is defined by difficulty in emotional function and interpersonal relationship. Some

Table 3. Comparison of the character dimensions in the PE and control group

Character dimensions	PE (n=40)	Control (n=40)	p
Responsibility	4.35±1.62	3.30±1.87	0.091
Purposefulness	1.85±1.29	2.10±1.41	0.411
Resourcefulness	1.82±1.23	1.47±1.13	0.191
Self-acceptance	4.92±2.20	5.20±2.19	0.578
Enlightened 2nd nature	4.15±1.73	3.55±1.63	0.115
Total Self-Directedness	17.10±4.92	15.62±5.43	0.208
Social acceptance	2.52±1.92	1.90±1.29	0.092
Empathy	2.35±1.27	2.25±1.21	0.720
Helpfulness	3.35±1.35	2.97±1.07	0.173
Compassion	2.75±1.99	3.00±2.36	0.611
Integrated conscience	2.70±1.24	2.57±1.23	0.654
Total Cooperativeness	13.67±4.98	12.70±4.71	0.372
Self-forgetfulness	4.80±2.61	5.10±2.30	0.588
Transpersonal identification	3.32±2.10	2.97±1.91	0.439
Spiritual acceptance	4.92±1.92	4.50±2.05	0.342
Total Self-Transcendence	13.05±5.20	12.57±4.52	0.664

*Student t-testi

studies investigating relationship between Cloninger's psychobiological model of personality and alexithymia found that HA was positively correlated with alexithymia and NS was unrelated to alexithymia (13,14). Although results of these studies are somewhat inconsistent, our findings support the hypothesis that personality trait may influence the development of PE. Previous studies showed that HA is higher during a depressive episode and lower with recovery (15). In this study, patients with PE had significantly higher depression scores than healthy controls although they had lower harm avoidance scores. These contradictory results in our study may be due to different reasons. First, high depression scores in patients with PE may be due to secondary to fail to satisfy expected intense excitement in the presence of the cues or stimuli from sexual intimacy. Second, lower HA may be a specific marker for PE.

Some studies on psychopharmacology of human as well as animal sexual behavior focused on the role of serotonergic and dopaminergic activity and a possible genetic factor in the etiopathogenesis of PE. The association between serotonin transporter gene-linked polymorphic region and premature ejaculation had been reported (16,17,18). Santtila et al. (19) showed that dopaminergic activity is involved in ejaculation. Some serotonin re-uptake inhibitors, fluoxetine (20), sertraline (21) appear to be effective in the treatment of PE. In a study by Cloninger and colleagues (12), temperament dimensions were hypothesized to be genetic and each dimension was considered to be related to central neurotransmitter; NS for dopaminergic activity, HA for serotonergic activity. These findings were supported by molecular genetic studies of human personality trait. (22,23,24). Pearson and Hansenne et al. (25,26) found an association between serotonergic activity and HA in a group of non-patient subjects. Thus, our findings of high NS and low HA scores in patients with PE might add some new evidence on the involvement of neurotransmitter systems (dopaminergic and serotonergic, respectively) in PE. However, there is no clear consensus on the relationship between temperament dimension and neurotransmitter systems. Some studies have failed to find support for the proposed relation between temperament dimension and neurotransmitter systems (27,28,29).

Several studies have demonstrated a strong association between PE and anxiety (30,31), however, Strassberg et al. (30) showed that there was no significant difference between PE and non-PE subjects in terms of anxiety. We have not found a relationship between PE and anxiety. This difference may in part be explained by the smaller sample of PE patients in the study and differences in the methodology used (self-ratings versus clinical interview).

In this study, we reached the conclusion that men with PE are more impulsive, more tempered, more excitable and prone to harmful behavior. The findings in patients with PE supported the roles of dopamine and serotonin in the etiology of PE. Thus,

in conclusion, current findings tend to reinforce the theory that PE is related with a combination of neurobiological and psychological factors.

Our results should be interpreted with caution because the study was carried out with a relatively small sample; further studies, which further explore the personality structure of individuals with PE, are needed to be conducted on larger samples.

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