Smyrna Tıp Dergisi ***Araştırma Makalesi***

The Effect of Type D Personality on Sexual Functional Disorders in Males
Erkeklerde Seksüel Fonksiyon Bozuklukları Üzerine Tip D Kişiliğin Etkisi

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Summary
Objective: The aim of this study was to investigate the effect of Type D personality on sexual dysfunction in men.
Material and method: One hundred forty-four patients were included in the study. Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Type D Scale (DS14) and International Erectile Function Index (IIEF) scales were applied to all participants.
Results: The International Index of Erectile Functions sub-Index scores, including erectile function, orgasmic function, sexual desire, sexual intercourse and general satisfaction, were lower in persons with type D personality characteristics ($p<0.001$, $p<0.001$, $p=0.001$, $p=0.03$, $p=0.01$). BDI and BAI scores were significantly higher ($p <0.001$, $p <0.001$). There was a positive correlation between DS14 scores and BDI ($r=0.61$, $p<0.001$) and BAI ($r=0.58$, $p<0.001$) scores, and negatively correlated with IIEF scores such as ED, OF, SD, OS. ($r=-0.32$, $p<0.001$, $r=-0.29$, $p<0.001$, $r=-0.32$, $p<0.001$, $r=0.34$, $p<0.001$).
Conclusion: As a result; people with D type personality traits are also followed up with depression, anxiety, and sexual dysfunctions.
Key words: Anxiety, depression, sexual dysfunction, type d personality

Özet
Amaç: Bu çalışmada amacımız, Tip D kişiliğinin erkeklerde cinsel işlev bozukluğu üzerine etkisini araştırmaktır.
Gereç ve Yöntem: Çalışmaya 144 hasta dahil edildi. Tüm katılımcılara Beck Depresyon Envanteri (BDI), Beck Anksiyete Envanteri (BAI), Tip D Ölçeği (DS14) ve Uluslararası Erektil Fonksiyon İndeksi (IIEF) ölçekleri uygulandı.
Bulgular: Erektil fonksiyon, orgasmik fonksiyon, cinsel istek, cinsel ilişki ve genel tatmin dahil olmak üzere Uluslararası Erektil Fonksiyonlar alt İndeks puanları, D tipi kişilik özelliğine sahip kişilerde daha düşüktü ($p<0.001$, $p<0,001$, $p=0.001$, $p=0.03$, $p=0.01$). BDI ve BAI skorları ise anlamlı derecede yüksekti ($p<0.001$, $p<0.001$). DS14 skor puanları ile BDI ($r=0.61$, $p<0.001$) ve BAI ($r=0.58$, $p<0.001$) skorları arasında pozitif korelasyon, ED, OF, SD, OS gibi IIEF alt skorları ile negatif korelasyon izlendi. ($r=-0.32$, $p<0.001$,$r=-0.29$, $p<0.001$, $r=-0.32$, $p<0.001$, $r=0.34$, $p<0.001$).
Sonuç: D tipi kişilik özelliği olan kişilerde depresyon, anksiyete görülme sıklığı yanında cinsel fonksiyon bozuklukları da izlenmektedir.
Anahtar kelimeler: Anksiyete, depresyon, seksüel işlev bozukluğu, d tipi kişilik

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Introduction

Sexual dysfunction; is a situation that can be quite destructive but can not be expressed because of social, cultural, religious and social influence. There is a two-way relationship between sexual dysfunctions and psychiatric disorders. Primary occurring sexual dysfunction in people with time to depression, anxiety disorder, various personality disorders, while it may lead to a deterioration of mental disorders or

interpersonal relationships can also lead to sexual dysfunction in these situations people (1,2). In a study carried out; erectile dysfunction and accompanying psychological distress may trigger the development of depressive illness, and depression may actually cause erectile dysfunction (3).

Interpersonal communication plays a major role in sexual dysfunctions. It is stated that communication deficits and hindrances play a role in the emergence and maintenance of unrelated sexual dysfunction and can affect the outcome of the treatment (4,5,6). It has been reported that the problems that occur in sexual life become negative or the problems that occur in communication styles are negatively affected the sexual life, leading to the progress and continuity of the problem (7).

Type D personality; to experience negative emotions inclination (NA), and these feelings avoiding social interaction (SI) it is characterized by inhibited. Type D people tend to be angry, do not look at the gloomy side of life, feel tense and unhappy. They become irritated more easily, possibly experience less positive emotions. At the same time, they share less negative feelings with other people. Type D individuals tend to be less able to connect with other people and to feel uncomfortable in the environment where they are strangers (8).

When people with sexual dysfunction are evaluated, it should be taken into account that it is a multidisciplinary and interactive process involving the psychological and personality characteristics of sexuality. In this study, it was aimed to predict how type D personality might be related to sexual dysfunction.

Material and Method

Four hundred and fifty male patients who applied to Family Medicine polyclinic in University Hospital from August to December 2016 were admitted. One hundred forty-four patients were included in the study. Exclusion criteria are obesity (body mass index ≥25 kg/m²), smoking and alcohol use, organic or psychological chronic illness (neurological diseases, diabetes, hypertension, heart disease..etc) and urologic operation.

All participants were instructed to complete Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Type D Scale (DS14) and International Index of Erectile Function.

Written informed consent was obtained from all participants with respect to the ethical principles of the Declaration of Helsinki. The University of Süleyman Demirel ethics committee approved the study.

Self-Reported Measurements

The International Index of Erectile Function (IIEF)

IIEF is a psychometrically valid and reliable questionnaire used for the evaluation of male sexual function (9). Items on the IIEF are measured on a 5-point Likert-type scale, were assigned to five separate domains of sexual function: (1) erectile function, (2) orgasmic function, (3) sexual desire, (4) intercourse satisfaction, and (5) overall satisfaction. Domain scores on the IIEF are calculated by summing the scores for individual items in each domain, so that the erectile function domain has possible scores ranging from 1 to 30. The erectile function domain classifies the patients into five categories depending on the degree of severity of ED. Between 17 and 21 points, as having mild/moderate ED, between 11 and 16, with moderate ED, and from 1 to 10 points, with severe ED. Orgasmic function domain scores from 0 to 10, sexual desire scores and overall satisfaction from 2 to 10, intercourse satisfaction scores from 0 to 15. IIEF score is divided into sections and ranging from 1 to 75 points (10).

Type D Scale (DS14)

The DS14 questionnaire includes 14 items and two subscales as SI and NA. Likert scale ranging from 0 to 4. The NA and SI scales are then scored as continuous variables (range 0–28). A cutoff of 10 on both scales is used to classify subjects as Type D (NA≥10 and SI≥10) (8).

Beck Depression Inventory (BDI)

The 21-items multiple-choice survey (scale: 0–3) was used to measure the severity of

depression. The total values of BDI range between 0 and 63 points (11).

Beck Anxiety Inventory (BAI)
The 21 items that somatically, emotionally and cognitively reflect anxiety symptoms. Items multiple-choice survey (scale: 0–3) was used to measure the severity of anxiety. The total values of BAI range from 0 to 63 points, and higher values mean higher levels of anxiety symptoms (12).

Statistics
The normality of distribution of all continuous variables was evaluated using the Kolmogorov-Smirnov test. Chi-square test was performed to compare the categorical variables. Mann-Whitney U test and Independent t test were performed for group comparisons of nonparametric and parametric data, respectively. Taking the IIEF score as a continuous variable, we calculated a Spearman's rank correlation coefficient to assess the correlations with the other continuous variables. All statistical analyses were performed with the SPSS software (version 17 SPSS Inc; Chicago, IL, USA). Statistically significant at p value <0.05 was considered.

Results

One hundred fourty four (144) persons were included in this study. On an average, persons were aged 31,41±5,85 (min:20, max:43) years of age. Mean DS14 scores were (NA) 9.95±7.41, (SI) 10.61±5.67 and 33.3% (n=48) of the persons were classified as having Type D personality. The sociodemographic characteristics of persons are shown in Table 1.

Table 1. *Sosyodemographic and clinical characteristics of persons*

	Type D (n=48)	**Non Dtype (n=96)**	**P value**
Age	30.10±0.60	34.04± 0.70	<0.001*
Height	175.64± 0.51	176.29± 0.60	0.44
Weight,	75.01± 0.65	74.91 ± 0.90	0.94
BMI (kg/m²)	24.29± 0.16	24.08 ± 0.21	0.44
Job			0.25
civil servant,	20 (%20.8)	16 (%33.3)	
worker,	40 (%41.7)	16 (%33.3)	
self-employed	36 (%37.5)	16 (%33.3)	
Level of Education			0.02*
primary school,	24(%25.0)	12(%25)	
high school,	44(%45.8)	12(%25)	
university	28(%29.2)	24(%50)	
Age of puberty (year)	14.54± 0.17	14.45±0.23	0.78
Year of marriage (year)	4.25± 0.41	4.83±0.61	0.42
BDI	8.64±6.56	3.58±4.13	<0.001*
BAI	9.12±8.14	3.20±3.84	<0.001*
IIEF			
ED	22.02±6.52	27.2 ±3.05	<0.001*
OF	7.85±2.52	9.25±0.93	<0.001*
SD	7.33±1.67	8.20±1.16	0.001*
IS	9.91±3.84	11.70±1.96	0.03*
OS	8.25±1.64	9.12±1.02	0.01*

BMI:Body mass index, BDI: beck depression inventory; BAI: beck anxiety inventory; NA: negative affectivity; SI: social inhibition; The International Index of Erectile Function (IIEF) ED:erectile function, OF: orgasmic function, SD: sexual desire, IS: intercourse satisfaction, OS: overall satisfaction. Presented as mean±standard deviation. statistically significant*

Height, weight, body mass index of did not significantly differ between the Type Ds and non Type Ds (p=0.44, p=0.94 and p=0.44, respectively). While there was no significant relationship between their profession, the education level of people with type d was significantly higher (p=0.25, p=0.02).

The scores of BDI and BAI were significantly higher and the scores of The International Index of Erectile Functionscores including erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction were lower in Type Ds than in nonType Ds (p<0.001, p<0.001, p<0.001, p<0,001, p=0.001, p=0.03, p=0.01, respectively Table 1).

The scores of NA subscale of the DS14 were positively correlated with the scores of the BDI (r=0.61, p<0.001) and BAI (r=0.58, p<0.001) and negatively correlated with the IIEF score including ED, OF, SD, OS. (r=-0.32, p<0.001, r=-0.29, p<0.001, r=-0.32, p<0.001, r=0.34, p<0.001 respectively, Table 2).

Table 2. *Correlations between the scores of NA, SI and BDI, BAD, IIEF scores in persons*

	NA		**SI**	
	r	**p**	**r**	**p**
BDI	0.61	<0.001*	0.54	<0.001*
BAI	0.58	<0.001*	0.43	<0.001*
ED	-0.32	<0.001**	-0.43	<0.001**
OF	-0.29	<0.001**	-0.30	<0.001**
SD	-0.32	<0.001**	-0.30	<0.001**
IS	-0.16	0.04	-0.12	0.14
OS	-0.34	<0.001**	-0.25	0.002**

r: pearson and spearman's correlation coefficient; BDI: beck depression inventory; BAI: beck anxiety inventory; NA: negative affectivity; SI: social inhibition, ED:erectile function, OF: orgasmic function, SD: sexual desire, IS: intercourse satisfaction, OS: overall satisfaction. positively correlate,**negatively correlate*

The SI subscale scores of DS14 were positively correlated with the scores of the BDI (r=0.54, p<0.001) and BAI (r=0.43, p<0.001) and negatively correlated with the IIEF score including ED, OF, SD, OS. (r=-0.43, p<0.001, r=-0.30, p<0.001, r=-0.30, p<0.001, r=-0.25, p=0.002 respectively Table 2).

There was negative correlation between depression scores and ED, OF, SD, IS, OS scores (r=-0.29, p<0.0001, r=-0.24, p=0.04, r=-0.39, p<0.0001, r=-0.28, p=<0.0001, r=-0.46, p<0.0001).

There was negative correlation between anxiety scores and ED, OF, SD, IS, OS scores (r=-0.28,p=0.01,r=-0.27,p=0.01,r=-0.22,p=0.006,r=-0.28,p=<0.0001,r=-0.46, p<0.0001).

Discussion

In this study, the investigation of the psychological effects of sexual dysfunction could show the relationship between type D personality. Our patient population is predisposed to anxiety, depression, anxiety, unhappiness, dysphoria, irritability and hostility (NA) and, stressful, unsecured and agreeableness had worse sexual function (SI). BDI, and BAI negatively correlated with domain scores on the IIEF. A large multicenter study could help determine potential relationships for the general population.

Sexual dysfunctions are caused by painful sexual intercourse problems in men, erectile dysfunction, premature ejaculation, lack of sexual desire, sexual dysfunction, and other

ejaculatory disorders (13). Sexual dysfunctions are a number of reasons, including organic, psychogenic and mixed. Organic causes of sexuel dysfunctions include diabetes mellitus, hypertension, hyperlipidemia, metabolic syndrome, cardiovascular diseases, epilepsy, multiple sclerosis, Parkinson's disease, hyperprolactinemia, hypo-hyperthyroidism, hypogonadism, epilepsy, chronic-malign diseases, drug use, alcohol-substance use. In this study; we didn't ınclude persons wıth this disease. Psychogenic causes are performance anxiety, negative cognitive beliefs, personality disorders (obsessive, narcissistic, dependent, etc.), depression, anxiety disorders and are psychotic disorders (14).

Sexual function is expected to be negatively affected in psychiatric disorders. Sexual dysfunctions are seen in psychiatric disorders, especially in the prevalence of depression and anxiety. For example, in a study, sexual dysfunction and anxiety 51.1% of the patients were diagnosed as having comorbidity (15). In a survey depressed by a direct neurobiological effect hardening and sexual desire disorder as well as indirectly social and interpersonal on the sexual area by causing deterioration in relations (16). Studies have reported that 36-78% of depressed patients who do not use medication have sexual dysfunction, as well as 25-75% of patients with loss of libido in concordance with the severity of depression. In other studies on bipolar patients, there is a low desire for sexual interest (17,18). In another study, significant deterioration was found in patients with mood disorders according to the control group in the three stages of the sexual response cycle (desire, arousal and orgasm). The incidence of lifelong impairment of sexual desire disorder in mood disorders was found to be significantly high (19).

In our study, negative correlation was found between depression, anxiety and ED, OF, SD, IS, OS, and sexual dysfunction was observed in patients.

The Type D personality has draw attention to cardiovascular diseases, parkinson's disease, ankylosing spondylitis, tinnitus and multiple sclerosis (20,21,22,23,24,25). As we know, according to the D-type comparison of clinical characteristics and sexual dysfunction in men and non-type D personality has not been studied before. For this reason, the purpose of this study was to examine the relationship between type D personality and sexual dysfunction.

In this study, investigating the psychological aspects of sexual dysfunction, was able to demonstrate relationships between d type personality. The scores of The International Index of Erectile Function scores including erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction were lower in Type Ds than in nonType Ds.

There are some limitations to consider when interpreting the results of our work. This work explores a small sample size. When choosing patients from a single center, our results could not be generalized for society. Survey studies incur an inherent response bias, which is a potential limitation of these data. In spide of these limitations, in this study is remarkable with regard to that it suggests the importance of having Type D personality in sexual dysfunction.

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