Associations Between Personality Disorder Characteristics, Psychological Symptoms, and Sexual Functioning in Young Women

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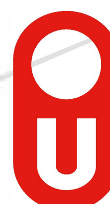

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ORIGINAL RESEARCH

FEMALE SEXUAL FUNCTION

Associations Between Personality Disorder Characteristics, Psychological Symptoms, and Sexual Functioning in Young Women

Andrea Grauvogl, PhD,[1] Britt Pelzer, MSc,[2] Veerle Radder, MSc,[2] and Jacques van Lankveld, PhD[1]

ABSTRACT

Background: Recently, the etiology of sexual dysfunctions in women has been approached from different angles. In clinical practice and in previous studies, it has been observed that women with sexual problems experience anxiety problems and express more rigid and perfectionistic personality traits than women without these problems.

Aim: To investigate whether personality disorder characteristics according to the *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision* (DSM-IV-TR) and psychological symptoms are associated with sexual problems in women.

Methods: 188 women 18 to 25 years old participated in this cross-sectional study. Questionnaires measuring sexual functioning (Female Sexual Function Index), personality disorder characteristics (Assessment of DSM-IV-TR Personality Disorders Questionnaire), and psychological symptoms (Brief Symptom Inventory and Center for Epidemiological Studies Depression Scale) were used.

Outcome: The main outcome measure used was sexual functioning assessed by self-report.

Results: Results, using analysis of variance, indicated that women with sexual problems report significantly more cluster A (specifically schizoid) and C (specifically avoidant and obsessive-compulsive) personality disorder characteristics than women without sexual problems. Furthermore, using multiple regression analyses, higher cluster A (specifically schizoid) and lower cluster B (specifically borderline and antisocial) personality disorder characteristics indicated lower levels of sexual functioning. Psychological symptoms partly mediated the effect of cluster A personality disorder characteristics on sexual functioning.

Clinical Implications: The results of this study indicate that clinical practice should extend its scope by focusing more on improving adaptive personality characteristics, such as extraversion and individualism seen in cluster B personality characteristics, and decreasing the perfectionistic, introvert, and self-doubting characteristics seen in cluster C personality characteristics.

Strengths and Limitations: Because of the correlational design and use of self-report measures, causal relations cannot be established between personality disorder characteristics and sexual functioning.

Conclusion: Overall, the results indicate that personality disorder characteristics can play an important associative role in the development and maintenance of sexual functioning problems in women. **Grauvogl A, Pelzer B, Radder V, van Lankveld J. Associations Between Personality Disorder Characteristics, Psychological Symptoms, and Sexual Functioning in Young Women. J Sex Med 2018;15:192–200.**

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Key Words: Personality Disorder Characteristics; Psychological Symptoms; Sexual Functioning; Young Women

INTRODUCTION

Adolescence and young adulthood are prominent periods in which sexuality plays an important role. Most people go through this phase unscathed; however, some experience problems in their sexual health[1] or even develop a sexual dysfunction.[2] Sexual dysfunctions are characterized by a persistent or recurrent abnormal reaction to sexual and erotic stimuli. They cause clinically significant disturbances in a person's ability to experience sexual encounters as pleasurable. According to the

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[1]Faculty of Psychology and Educational Sciences, Open University of the Netherlands, Heerlen, the Netherlands;

[2]Department of Clinical Psychological Science, Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, the Netherlands

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Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, sexual dysfunctions can be categorized as sexual interest and arousal disorders (eg, erectile dysfunction), orgasmic disorders (eg, premature ejaculation), and genito-pelvic pain/penetration disorders (eg, dyspareunia and vaginismus).[3] Sexual dysfunctions are common. In a population study in the Netherlands, approximately 27% of women and 19% of men 15 to 70 years old were found to experience at least 1 sexual dysfunction. In comparison, the lifetime prevalence of any anxiety disorder was 20% in women and 10% in men, and major depressive episode occurred in 23% of women and 13% of men.[4] Among adolescents and young adults 15 to 24 years old, 43% of women and 27% of men experienced at least 1 sexual dysfunction.[5] Although sexual dysfunctions can be serious problems, only 33% of women and only a remarkable 4% of men actually seek and receive help for these problems.[6] Sexual dysfunctions can have significant consequences for a person's sexual and general well-being.[7,8] They are associated with lower levels of sexual satisfaction, increased levels of personal distress, and interpersonal difficulties.[9] Men with erectile dysfunction report considerable psychological distress and negative social consequences[10]; women with sexual dysfunctions report lack of physical and emotional satisfaction and unhappiness.[11,12]

Sexual dysfunctions are not caused by a single factor but are the result of the interplay among biological, psychological, and social factors.[13] Diabetes, multiple sclerosis, and cancer are associated with sexual dysfunctions.[14] Furthermore, cognitive interference as a consequence of distraction, irrational sexual beliefs, and negative expectations of sexual performance[15,16] and relational and communication problems[17] are associated with sexual dysfunctions. For example, women with dyspareunia experience intercourse as painful and (the anticipatory thought of) a new sexual encounter evokes fear. The fear of pain is presumed to decrease genital sexual arousal and increase pelvic floor muscle tension.[18] The combination of vaginal dryness and pelvic floor muscle tension causes friction between the penis and the vagina, resulting in tissue damage and eventually pain.[19]

Individuals with sexual problems display higher levels of psychological distress than their sexually well-functioning counterparts. Sexual dysfunctions also have high rates of co-occurrence with depressive and anxiety disorders.[20] Risk of self-harm and symptoms of depression have been associated with higher odds of sexual dysfunction.[21] More specifically, women with low sexual desire experience major and/or intermittent depression almost twice as often as controls. A pronounced lack of self-esteem and feelings of guilt are reported by these women.[22] Furthermore, sexually dysfunctional individuals show higher levels of anxiety than sexually healthy individuals,[23,24] and several studies have found an association between dyspareunia and anxiety.[25,26]

Recently, research has focused, again, on the relation between sexual dysfunctions and personality.[27] Eysenck[28] was the first scholar to theorize that personality could account for the large variability of sexual behavior. He demonstrated that higher levels of neuroticism were present in men experiencing sexual difficulties compared with sexually healthy men. Recently, these findings were replicated by Quinto Gomes and Nobre.[27] Personality characteristics also have been associated with sexual risk-taking behavior. People with higher levels of extraversion and lower levels of conscientiousness, 2 of the well-known factors in the Big-Five model of personality,[28,29] were found to have more sexual partners and to practice more unsafe sex.[30,31] Leeners et al[32] reported a significant association between higher levels of dispositional nervousness and dyspareunia.

These results of these studies suggest that Big-Five personality traits, especially higher levels of neuroticism, are associated with the presence of sexual dysfunctions. High levels of maladaptive personality traits are found in individuals who are diagnosed with personality disorders.[33] However, instruments based on the Big-Five theory of personality, such as the NEO-Personality Inventory—Revised (NEO-PI-R), are unevenly distributed to identify these maladaptive dimensions; this inventory includes more items that correspond to adaptive personality traits.[34] For example, 90% of conscientiousness items are keyed in the adaptive rather than the maladaptive functioning direction.[35] To measure personality traits in the maladaptive segment, clinicians use instruments that can measure personality disorders. Personality disorders, according to the *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision* (DSM-IV-TR), are organized in 3 clusters.[36] Individuals with predominantly cluster A personality disorder characteristics are likely to show higher levels of odd and eccentric behavior and have little or no interest in sexual experiences with other people. Individuals with predominantly cluster B personality disorder characteristics show higher levels of dramatic, emotional, and impulsive behavior and tend to express impulsive and inappropriate sexual behavior. Individuals with cluster C personality disorder characteristics show higher levels of anxiety, are more constrained in sexual behavior, and could have difficulties in sexual functioning.[37]

To our knowledge, the association among personality disorder characteristics, psychological symptoms, and sexual functioning has not jointly been studied. Furthermore, previous research addressing the association between personality and sexual functioning has focused on NEO-PI-R personality trait data and mainly included men and older adults.[27] Therefore, this study explored the associations of personality disorder characteristics, psychological symptoms, and sexual functioning in young women. Furthermore, this study examined how these variables could discriminate women with from those without sexual problems. It was expected that women with sexual problems would display more cluster A, B, and especially cluster C personality disorder characteristics than non-symptomatic women.[37] Women with sexual problems also were expected to present higher levels of psychological symptoms than women without these problems. Because personality disorder characteristics are assumed to be trait and more enduring characteristics and psychological symptoms rather state and more acute

characteristics, it also was expected that psychological symptoms would mediate the relation between personality disorder characteristics and sexual problems.

METHODS

Participants

The sample consisted of 188 women 18 to 25 years old who visited a public health service location and replied through social media or message boards at Maastricht University (Maastricht, the Netherlands) from 2012 through 2016. The inclusion criteria for this study were the aforementioned age range and being able to write and read the Dutch language. Participants were excluded when reporting therapy for a DSM-IV-TR disorder.

Measurement Instruments

Assessment of DSM-IV-TR Personality Disorders Questionnaire

The Assessment of DSM-IV-TR Personality Disorders Questionnaire (ADP-IV)[38] is a 94-item self-report instrument for measuring personality disorder characteristics that could hinder daily functioning of individuals. Each item is answered in 2 steps. (i) The participant is asked to which extent a statement is typical for her on a 7-point Likert scale. (ii) When applicable, the participant reports the experienced level of personal distress associated with it on a 3-point scale.[39] The ADP-IV provides a reliable representation of the DSM-IV-TR criteria for the 12 personality disorders. The participants are diagnosed with a personality disorder if the total score of the items for that specific disorder positively exceeds the corresponding threshold.[40] For this study, continuous scores were used. A higher score indicates more dysfunctional personality traits. Previous research has shown good internal consistency and validity.[39,40] The reliability in this study was good to excellent (Cronbach $\alpha = 0.84$ for cluster A, 0.90 for cluster B, 0.86 for cluster C).

Female Sexual Function Index

The Female Sexual Function Index (FSFI)[41] is a 19-item self-report instrument using a 5-point Likert scale to measure sexual functioning, more specifically sexual desire, arousal, lubrication, orgasm, sexual satisfaction, and pain during sexual intercourse. Higher scores indicate healthy sexual functioning. A total score of 26.55 was found to be an optimal cutoff score for distinguishing women with from those without a sexual dysfunction.[42] Previous research has found a high internal consistency of the 6 subscales and good test-retest reliability.[43] Furthermore, the FSFI has shown high discriminant validity.[41] The reliability in this study was excellent (Cronbach $\alpha = 0.95$).

Center for Epidemiological Studies Depression Scale

The Center for Epidemiological Studies Depression Scale[44] is a 20-item self-report instrument using a 4-point Likert scale to measure current depressive symptomatology. A higher score indicates greater symptoms of depression.[44] Previous research has shown high internal consistency (Cronbach $\alpha = 0.79-0.92$) and moderate test-retest reliability (range $= 0.45-0.70$). However, shorter intervals between administrations have shown higher test-retest reliability.[45] The reliability in this study was excellent (Cronbach $\alpha = 0.93$).

Brief Symptom Inventory

The Brief Symptom Inventory (BSI)[46] is a 53-item self-report questionnaire using a 5-point Likert scale to measure psychological symptoms in adolescents and adults. It covers 9 different symptom dimensions: somatization, obsession and compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. A higher score on the BSI indicates more severe general psychological symptoms of distress. The test-retest reliability ($r = 0.90$) and internal consistency ($\alpha = 0.79$) are high.[47] The reliability in this study was excellent (Cronbach $\alpha = 0.96$).

Procedure

The study was approved by the ethics committee of Maastricht University. Participants who were interested in participating in the study received an information letter and an informed consent form. They were asked to sign the form and return it within 2 weeks. Next, a link that directed the participant to a secured web-based platform where the questionnaires could be filled in was sent. After completion of the questionnaires, participants were thanked for their participation. Those who indicated interest in the results were sent debriefing information.

Statistical Analysis

This study used a correlational between-subjects design to measure the relation between personality clusters, sexual functioning, and psychological symptoms. Data were analyzed using SPSS 22.0 (IBM Corp, Armonk, NY, USA). For the correlational, regression, and mediation analyses, the dependent variable was sexual functioning and the independent variables were personality disorder clusters A, B, and C and psychological symptoms. For analysis of variance, the dependent variables were personality disorder clusters A, B, and C and psychological symptoms, and sexual functioning was used as a grouping factor. Assumptions were checked (skewness and kurtosis) to confirm a normal distribution of the used variables. Furthermore, descriptive statistics were used to provide a general overview of the data and research population. Next, Pearson correlation analyses were performed to examine the relation between sexual functioning, personality disorder clusters A, B, and C, and psychological symptoms. Analysis of variance was used to identify possible differences between women with and those without sexual problems and personality disorder clusters A, B, and C and psychological symptoms. The FSFI cutoff score was used to assign participants to the groups with (total score ≤ 26.55) and

Table 1. Correlation among sexual functioning, cluster A, B, and C personality disorder characteristics, and psychological symptoms in women (N = 188)

	FSFI total	FSFI desire	FSFI arousal	FSFI lubrication	FSFI orgasm	FSFI satisfaction	FSFI pain
FSFI total	1						
FSFI desire	0.649†	1					
FSFI arousal	0.920†	0.632†	1				
FSFI lubrication	0.876†	0.483†	0.821†	1			
FSFI orgasm	0.643†	0.295†	0.523†	0.466†	1		
FSFI satisfaction	0.844†	0.528†	0.772†	0.705†	0.401†	1	
FSFI pain	0.742†	0.321†	0.589†	0.583†	0.252†	0.610†	1
Cluster A	−0.162*	−0.054	−0.157*	−0.070	−0.120	−0.230†	−0.134
Paranoid	−0.049	0.049	−0.064	0.027	−0.045	−0.147*	−0.050
Schizoid	−0.387†	−0.319†	−0.347†	−0.283†	−0.252†	−0.382†	−0.267†
Schizotypal	−0.065	0.063	−0.061	−0.005	−0.080	−0.134	−0.071
Cluster B	−0.022	0.090	−0.017	0.026	−0.068	−0.119	−0.005
Cluster C	−0.075	−0.073	−0.074	0.030	−0.057	−0.149*	−0.061
BSI	0.019	0.128	0.002	0.055	−0.008	−0.053	−0.011
CES-D	0.008	0.085	−0.010	0.007	0.042	−0.066	−0.011

BSI = Brief Symptom Inventory; CES-D = Center for Epidemiological Studies Depression Scale; FSFI = Female Sexual Function Index.
*Difference is significant at the 0.05 level (2-tailed).
†Difference is significant at the 0.01 level (2-tailed).

without (total score ≥ 26.55) sexual problems.[42] Multivariate regression analyses were used to identify whether personality disorder clusters A, B, and C and psychological symptoms were (statistical) predictors for the level of sexual functioning. A mediation analysis[48] was used to identify a possible mediation by psychological well-being of the association between sexual functioning and personality disorder clusters A, B, and C.

RESULTS

188 women participated in this study. The mean age of the total group was 21.70 years (SD = 2.58). 62 women were single (33.0%), 5 had a child (2.7%), and 87 (46.3%) had finished postsecondary education.

Pearson correlation was used to examine the relations between sexual functioning, personality disorder clusters A, B, and C, and psychological well-being (Table 1). A significant and negative relation was found between sexual functioning and cluster A personality disorders (r = −0.162, $P = .03$), which indicates that the presence of more cluster A personality disorder characteristics is associated with lower sexual functioning. More specifically, this relation was identified only between schizoid personality disorder characteristics and sexual functioning (r = −0.387, $P < .00$).

When differentiating between different aspects of sexual functioning (Table 1), a negative and significant relation was found between cluster A personality disorder characteristics and sexual arousal (r = −0.157, $P = .03$) and sexual satisfaction (r = −0.230, $P < .00$), indicating that the presence of more cluster A personality disorder characteristics was associated with lower levels of sexual arousal and satisfaction. The schizoid personality disorder characteristics most prominently accounted for this association of cluster A personality disorder characteristics with sexual arousal (r = −0.2.83, $P < .00$) and sexual satisfaction (r = −0.382, $P < .00$; Table 1).

Analysis of variance, with personality disorder characteristics and psychological symptoms as dependent variables and sexual problems as the independent variable, showed a significant difference between women with and those without sexual problems with respect to their levels of cluster A ($F_{1,\ 186} = 4.372$, $P = .038$) and C ($F_{1,\ 186} = 4.752$, $P = .031$) personality disorder characteristics (Table 2). Women with sexual problems displayed more cluster A and C personality disorder characteristics than women without sexual problems. At the level of individual personality disorders in follow-up univariate comparisons, significant differences were found for schizoid personality disorder characteristics ($F_{1,\ 186} = 13.64$, $P < .00$), avoidant personality disorder characteristics ($F_{1,\ 186} = 4.578$, $P = .034$), and obsessive-compulsive personality disorder characteristics ($F_{1,\ 186} = 6.593$, $P = .011$).

For different types of sexual problems, women with sexual desire problems expressed more psychological ($F_{1,\ 186} = 5.133$, $P = .025$) and depressive ($F_{1,\ 186} = 4.626$, $P = .033$) symptoms and fewer cluster B personality disorder characteristics ($F_{1,\ 186} = 4.023$, $P = .046$) than women without these problems. Furthermore, women with sexual arousal and satisfaction problems expressed more cluster A ($F_{1,\ 186} = 8.183$, $P = .005$; $F_{1,\ 186} = 14.47$, $P < .00$) and C ($F_{1,\ 186} = 5.385$, $P = .021$; $F_{1,\ 186} = 8.318$, $P = .004$) personality disorder characteristics than women without these problems (Table 3).

In subsequent multivariate regression analyses (Table 4), the combined predictive value of personality disorder characteristics

Table 2. Mean values for cluster A, B, and C personality disorder characteristics and psychological symptoms in women with and without sexual problems (N = 188)

	Patient (n = 131)*	Control (n = 57)	F	*P*
Cluster A, mean (SD)	53.90 (20.65)	47.44 (16.44)	4.372	.038†
Paranoid	18.88 (9.20)	17.01 (7.26)	1.832	.140
Schizoid	18.84 (6.55)	15.25 (5.08)	13.64	.000‡
Schizotypal	20.49 (8.96)	19.21 (7.96)	0.862	.354
Cluster B, mean (SD)	74.91 (26.7)	73.37 (27.45)	0.130	.719
Antisocial	13.21 (5.21)	13.84 (5.75)	0.541	.463
Borderline	22.41 (9.30)	22.12 (9.85)	0.039	.843
Theatrical	16.94 (7.21)	16.81 (7.21)	0.015	.903
Narcissistic	18.45 (7.20)	16.68 (7.08)	2.413	.122
Cluster C, mean (SD)	61.62 (21.15)	54.63 (17.81)	4.752	.031†
Avoidant	18.90 (7.33)	16.19 (7.56)	4.578	.034†
Dependent	18.86 (7.33)	17.72 (7.85)	0.924	.338
Obsessive and compulsive	23.85 (8.16)	20.71 (6.49)	6.593	.011†
BSI, mean (SD)	6.38 (5.53)	6.23 (5.48)	0.030	.863
CES-D, mean (SD)	12.46 (10.30)	11.91 (9.90)	0.144	.736

BSI = Brief Symptom Inventory; CES-D = Center for Epidemiological Studies Depression Scale.
*Female Sexual Dysfunction Index score ≤ 26.55.
†Difference is significant at the 0.05 level (2-tailed).
‡Difference is significant at the 0.01 level (2-tailed).

and psychological symptoms was tested. In these analyses, sexual functioning was the dependent variable and personality disorder characteristics and psychological symptoms were the independent variables. In the 1st step, all predictor variables were entered. Next, non-significant variables were deleted and the analysis was repeated with the variables that were left (trimmed model). The analyses yielded a significant model accounting for 5.6% of the variance in sexual functioning ($F_{2,\ 185} = 6.53$, $P = .002$; adjusted $R^2 = 0.056$). Cluster A ($\beta = -0.0.45$, $P < .00$) and B ($\beta = -0.0.35$, $P < .00$) personality characteristics were associated with levels of sexual functioning. Lower levels of cluster A and higher levels of cluster B personality disorder characteristics were associated with higher levels of sexual functioning. More specifically, schizoid ($\beta = -0.0.77$, $P < .00$) personality disorder characteristics within cluster A and antisocial ($\beta = 0.18$, $P = .05$) and borderline ($\beta = 0.18$, $P = .05$) personality disorder characteristics within cluster B accounted for this association.

Regression analysis was used to test the hypothesis that psychological symptoms mediate the association between personality disorder characteristics and sexual functioning. Results indicated that cluster A personality disorder characteristics were significantly associated with psychological symptoms ($\beta = 0.18$, standard error [SE] = 0.02, $P < .05$) and that psychological symptoms were significantly associated with sexual functioning ($\beta = 0.31$, SE = 0.14, $P < .05$). These results support the mediation hypothesis. Cluster A personality disorder characteristics remained significantly associated with sexual functioning after controlling for psychological symptoms ($\beta = -0.124$, SE = 0.04, $P < .05$), which is consistent with partial mediation. Approximately 5% of the variance in sexual functioning was accounted for by the independent variables ($R^2 = 0.05$). The indirect effect was tested using a bootstrap estimation approach with 1,000 samples. These results indicated that the indirect coefficient was significant ($\beta = 0.054$, SE = 0.027, 95% CI = 0.0029−0.1091). The presence of cluster A personality disorder characteristics was associated with approximately 0.05-point lower sexual functioning scores, in which this relation is mediated by the presence of psychological symptoms.

DISCUSSION

The aim of this study was to examine the association among personality disorder characteristics, psychological symptoms, and sexual functioning in women 18 to 25 years old. It was expected that women with lower levels of sexual functioning would display more personality disorder characteristics and psychological symptoms than women with higher levels of sexual functioning. In addition, psychological symptoms were expected to mediate between personality disorder characteristics and sexual functioning.

Women with sexual problems were found to report more cluster A and C personality characteristics than women without sexual problems. More specifically, this difference was found for schizoid, avoidant, and obsessive-compulsive personality disorder characteristics. In addition, cluster A and B personality disorder characteristics were associated with sexual functioning. Lower levels of cluster A (schizoid) and higher levels of cluster B (antisocial and borderline) personality disorder characteristics came with higher levels of sexual functioning. Psychological

Table 3. Mean values for cluster A, B, and C personality disorder characteristics and psychological symptoms in women with and without specific sexual problems (N = 188)

	Cluster A	Cluster B	Cluster C	BSI	CES-D
Sexual desire, mean (SD)					
Patient* (n = 122)	51.87 (20.05)	71.74 (25.84)	59.86 (20.75)	5.68 (5.21)	11.13 (9.77)
Control (n = 66)	52.08 (19.04)	79.74 (28.10)	58.83 (19.88)	7.56 (5.86)	14.44 (10.58)
F	0.005	4.023	0.108	5.133	4.626
P	.945	.046†	.743	.025†	.033†
Sexual arousal, mean (SD)					
Patient (n = 104)	55.56 (19.37)	76.38 (26.18)	62.56 (20.47)	6.69 (5.60)	12.66 (10.29)
Control (n = 84)	47.46 (19.18)	72.04 (27.66)	55.70 (19.78)	5.90 (5.38)	11.83 (10.04)
F	8.183	1.219	5.385	0.959	0.309
P	.005‡	.271	.021†	.329	.579
Lubrication, mean (SD)					
Patient (n = 98)	53.58 (19.01)	74.67 (25.71)	60.30 (19.96)	6.38 (5.37)	12.87 (10.18)
Control (n = 90)	50.16 (20.29)	74.19 (28.21)	58.63 (20.95)	6.30 (5.68)	11.67 (10.17)
F	1.429	0.015	0.310	0.009	0.654
P	.233	.902	.578	.924	.420
Orgasm, mean (SD)					
Patient (n = 100)	54.54 (20.89)	76.97 (29.67)	61.52 (21.07)	6.56 (5.87)	12.11 (10.41)
Control (n = 88)	48.99 (17.81)	71.57 (23.11)	57.20 (19.48)	6.09 (5.08)	12.50 (9.93)
F	3.790	1.901	2.107	0.345	0.069
P	.053	.170	.148	.558	.794
Satisfaction, mean (SD)					
Patient (n = 97)	57.04 (19.97)	78.12 (25.80)	63.58 (19.64)	6.81 (5.90)	13.26 (10.99)
Control (n = 91)	46.50 (17.86)	70.51 (27.56)	55.15 (20.41)	5.83 (5.02)	11.26 (9.14)
F	14.465	3.821	8.318	1.499	1.815
P	.000‡	.052	.004‡	.222	.180

BSI = Brief Symptom Inventory; CES-D = Center for Epidemiological Studies Depression Scale.
*Based on Female Sexual Function Index cutoff score.
†Difference is significant at the 0.05 level (2-tailed).
‡Difference is significant at the 0.01 level (2-tailed).

symptoms partly mediated the association between cluster A personality disorder characteristics and sexual functioning.

The results concerning higher levels of cluster A and C and lower levels of cluster B personality characteristics in women with sexual problems require further discussion. Cluster A personality disorder characteristics are, in addition to the characteristics mentioned in the Introduction, characterized by deficits in intimacy, confidence, and attachment.[49] Furthermore, individuals with a higher levels of cluster A personality disorder characteristics attach little or no value to relationships with other people.[50] According to Hutsebau,[37] individuals with higher cluster A personality disorder characteristics have difficulties in starting relationships or connecting with other individuals. Difficulties in sexual contact, especially sexual satisfaction, as indicated by the results of this study, could be expected as fitting in this pattern.

Cluster B personality disorder characteristics, in addition to the characteristics mentioned in the Introduction, entail instability, which can be divided into 4 life domains: emotion regulation, establishing relationships, self-image, and impulse control.[37] This instability is expressed in dramatic, emotional, and unpredictable behavior. Previous research indicates that the presence of cluster B personality disorder characteristics is associated with impulsive sexual behavior,[51] sexual acting out,[52] and inappropriate and obsessive sexual behavior that could lead to a higher frequency of sexual behavior.[49] Research on the association between cluster B personality disorder characteristics and sexual functioning has mostly addressed impulsive and sexual risk taking behavior in men. However, higher level of sexual desire, as found in this study, also can be seen in women with higher levels of cluster B personality characteristics. The results suggest that there is a thin line between the beneficial and maladaptive effects of cluster B personality disorder characteristics. The beneficial effect could be caused by the ability to experience intense feelings in interpersonal relationships, as formulated in criterion 2 of the *DSM-IV-TR* borderline personality disorder characteristics, or the pursuit of one's own pleasure, as found in antisocial personality disorder.[36]

The most prominent characteristics of cluster C personality disorder are fearfulness and avoidance. More specifically, the fear to encounter negative reactions of others[37] and the desire to avoid feelings of failure in social environments create an urge to keep control over the situation.[53] These core concepts also might

Table 4. Personality disorder characteristics and psychological symptoms as indicators of sexual functioning; results of multiple regression analyses (N = 188)

Predictors	B	SE	β	t	P
Cluster A	−0.20	0.05	−0.45	−3.60	.00†
Paranoid	0.10	0.11	0.11	0.99	.33
Schizoid	−0.77	0.11	−0.58	−7.26	.00†
Schizotypal	0.10	0.13	0.10	0.72	.47
Cluster B	0.11	0.04	0.35	2.80	.01†
Antisocial	0.28	0.14	0.18	1.98	.05*
Borderline	0.16	0.08	0.18	2.00	.05*
Theatrical	0.05	0.15	0.04	0.33	.75
Narcissistic	−0.10	0.11	−0.09	−0.97	.33
Cluster C	−0.00	0.05	0.00	−0.00	.99
Avoidant	−0.07	0.10	−0.07	−0.74	.46
Dependent	−0.02	0.15	−0.02	−0.15	.88
Obsessive and compulsive	0.02	0.10	0.01	0.16	.88
BSI	0.21	0.15	0.14	1.46	.15
CES-D	−0.00	0.11	−0.01	−0.04	.97

BSI = Brief Symptom Inventory; CES-D = Center for Epidemiological Studies Depression Scale; SE = standard error.
*Difference is significant at the 0.05 level (2-tailed).
†Difference is significant at the 0.01 level (2-tailed).

be transferred to feelings of sexual failure and the inclination to avoid or try to control the situation, resulting in overall sexual problems, more specifically, in sexual arousal and sexual satisfaction problems. Overall, the results of this study correspond with those of previous studies addressing the relation between sexual functioning and Big-Five personality characteristics. These studies found that extraverted individuals, one of the characteristics more present in cluster B personality disorders, report higher levels of sexual desire and are more receptive to sexual encounters compared with those with more neurotic cluster A and especially cluster C personality disorders.[27,54]

For psychological symptoms, and more specifically depression, the results of this study, although not significantly, are in line with previous research.[23–26] However, for specific sexual problems, the results varied (eg, significantly lower levels of psychological symptoms and depressive symptoms in women with sexual desire problems). The mediation analysis also indicated that women with lower levels of psychological symptoms reported lower levels of sexual functioning.

Although the results of this study could contribute to a better understanding of the relation among personality disorder characteristics, psychological symptoms, and sexual functioning, some limitations need to be addressed. Because of the correlational design, no inferences can be made about causal relations between personality disorder characteristics and sexual functioning. The use of self-report measures might bias the results. The instrument used to indicate the level of personality disorder characteristics is normally used to screen for personality disorders. Because of the observed low levels of these personality disorder characteristics in the present sample, the results must be interpreted with caution. However, because of the aforementioned shortcomings of the NEO-PI-R, the authors believe the present results provide a broader insight into the role of the personality concept in relation to sexual functioning. Moreover, the categorization of sexually dysfunctional women was based on FSFI scores and not on a formal diagnosis from a health professional.

The findings in this study, if replicated in future research, suggest that clinical assessment in professional sexual health care should include the measurement of personality disorder characteristics of women who present sexual problems. Clinical practice, using the techniques of Masters and Johnson,[55] mainly focuses on lessening specific sexual problems and increasing partner communication. These techniques especially target dysfunctional thoughts and behavioral patterns. The results of this study suggest that clinical practice might extend its scope by focusing more on improvement of maladaptive personality disorder characteristics that could serve as enduring vulnerability factors for the development and recurrence of sexual dysfunction, such as extraversion and individualism seen in cluster B personality disorder characteristics and decreasing the perfectionistic, introvert, and self-doubting characteristics seen in cluster C personality disorder characteristics.

Corresponding Author: Andrea Grauvogl, PhD, Faculty of Psychology and Educational Sciences, Open University of the Netherlands, PO Box 2960, 6401 DL Heerlen, the Netherlands. E-mail: Andrea.Grauvogl@ou.nl

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STATEMENT OF AUTHORSHIP

Category 1

(a) Conception and Design
Andrea Grauvogl; Jacques van Lankveld
(b) Acquisition of Data
Andrea Grauvogl; Britt Pelzer; Veerle Radder; Jacques van Lankveld
(c) Analysis and Interpretation of Data
Andrea Grauvogl; Britt Pelzer; Veerle Radder; Jacques van Lankveld

Category 2

(a) Drafting the Article
Andrea Grauvogl; Britt Pelzer; Veerle Radder; Jacques van Lankveld
(b) Revising It for Intellectual Content
Andrea Grauvogl; Britt Pelzer; Veerle Radder; Jacques van Lankveld

Category 3

(a) Final Approval of the Completed Article
Andrea Grauvogl; Britt Pelzer; Veerle Radder; Jacques van Lankveld

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