The Relationship Between Borderline Personality Symptomatology and Healthcare Utilization Among Women in an HMO Setting

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Abstract

This study was designed to explore the relationship between borderline personality symptomatology and healthcare utilization among women in a health maintenance organization. Subjects were 150 women between the ages of 17 and 49 years who completed two self-report measures of borderline personality symptomatology: (1) the borderline personality scale of the Personality Diagnostic Questionnaire-Revised; and (2) the Self-Harm Inventory. Pearson correlations were used to examine the effects of borderline personality symptomatology with respect to five objective measures of healthcare utilization. A small but significant correlation between borderline personality symptomatology and most measures of healthcare utilization was observed. In comparing group means for levels of healthcare utilization, borderline subjects demonstrated greater means for all measures of healthcare utilization than did nonborderline subjects. Borderline personality symptomatology contributes to healthcare utilization, but not to a substantial degree.

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The relationship between personality disorders and healthcare utilization has not been well studied. Of the various personality disorders, borderline personality is of particular interest, because it is characterized by self-regulatory disturbances (eg, alcohol and drug abuse/dependence; eating disorders, including obesity; promiscuity; and difficulty regulating spending) and by long-standing self-destructive behaviors (eg, suicide attempts, self-mutilation, high-risk hobbies and behaviors, and sadomasochistic relationships).[1,2] This characterization would seem to predict for greater utilization of healthcare resources—an association suggested by two previously published studies.

In the first study, Hueston et al[3] reported a significant correlation between borderline personality symptomatology and several measures of healthcare utilization in a primary care setting. However, the study had several limitations, including a low response rate (46%), small sample size (N = 93), overinclusive measures of personality symptomatology (70% of subjects were diagnosed with personality pathology), unstructured testing conditions (subjects completed study measures off site), and use of subject recall of healthcare utilization (only a subsample underwent validation through investigators' review of medical records).

In the second study,[4] we reported a significant correlation between borderline personality symptomatology and healthcare utilization among 194 women in a health maintenance organization (HMO). However, we used fewer healthcare utilization measures in that study than in the current study. The current study was designed to examine, in further detail, the relationship between borderline personality symptomatology and healthcare utilization in women in a primary care HMO.

··· SUBJECTS AND METHODS ···

Subjects

Subjects were 150 women who presented consecutively for routine gynecologic care to a female family physician in an HMO. They ranged in age from 17 to 49 years (mean + SD = 33.7 ± 9 years). Of the participants in the study, 85.3% were white. The remaining study population was native American (6.7%), African American (2.7%), Asian American (1.3%), Hispanic (1.3%), and other (2.7%). Most participants were currently married (64.7%), while the remainder were single (26.7%), divorced (7.3%), or widowed (1.3%).

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All participants had completed high school. A significant minority had a bachelor's degree (20.7%); 6.7% had a master's degree. The response rate was 97.4%.

Procedure

After receiving an explanation of the study, participants were given a research booklet, which they completed on site. The booklet contained a demographic questionnaire, the borderline personality scale of the Personality Diagnostic Questionnaire-Revised (PDQ-R),[5] and the Self-Harm Inventory (SHI).[6]

The borderline personality scale of the PDQ-R is an 18-item, self-report inventory that screens subjects for borderline personality symptomatology according to the criteria described in the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSM-III-R).*[7] A score of five or higher suggests borderline personality.[5] The PDQ-R has been reported to be a useful screening tool in both clinical samples[8,9] and nonclinical samples.[10]

The SHI is a 22-item, yes/no self-report measure that explores subjects' self-destructive behaviors. Each item is preceded by the statement, "Have you ever intentionally, or on purpose..."; among the behaviors described by the items are "cut yourself, burned yourself, attempted suicide," and "engaged in sexually abusive relationships." The scoring of the SHI is the summation of the total number of yes (or endorsed) responses. All endorsed responses represent pathological behavior (ie, the inventory contains no nonpathologic items). Scores on the SHI have been shown to correlate highly with borderline personality disorder[6] as measured by both the Diagnostic Interview for Borderlines[11] (r = .76) and the borderline personality scale of the Personality Diagnostic Questionnaire-Revised (r = .67). A score of five on the SHI represents an overall diagnostic accuracy of 83.7% when the diagnosis is compared with that from the Diagnostic Interview for Borderlines.[11]

Twelve months after the research booklets had been completed, the subjects' medical records were reviewed for the following measures of healthcare utilization: (1) telephone contacts to the facility; (2) visits to a physician; (3) ongoing prescriptions (ie, prescriptions that had been provided continuously during the 12-month period); (4) acute prescriptions (ie, prescriptions that were initiated during that period); and (5) referrals to specialist physicians (ie, non–primary care physicians). The reviewers who examined the medical records were reviewed blind to the results of the subjects' psychological tests.

··· RESULTS ···

Scores on the PDQ-R ranged from 0 to 8 and those on the SHI ranged from 0 to 14 (mean ± SD = 3.10 ± 2.29 and 2.76 ± 3.42, respectively). For the sample as a whole, the number of telephone contacts ranged from 0 to 22 (mean ± SD = 2.83 ± 3.52); physician visits, from 1 to 15 (mean ± SD = 3.72 ± 2.85); ongoing prescriptions, from 0 to 9 (mean ± SD = 0.88 ± 1.05); acute prescriptions, from 0 to 15 (mean ± SD = 3.15 ± 2.99); and outside referrals, from 0 to 13 (mean ± SD = 0.56 ± 1.74).

Pearson correlations between scores on borderline personality measures and healthcare utilization are presented in Table 1. Note that 8 of 10 correlation coefficients were statistically significant.

On the basis of the established cut-off score on the PDQ-R, 42 (28%) women had scores suggestive of borderline personality. Thirty-six (24%) were so categorized according to the SHI. Between-group comparisons (ie, borderline versus nonborderline) of the mean levels for each measure of healthcare utilization are shown in Table 2.

··· DISCUSSION ···

In this study, borderline personality symptomatology correlated with increased utilization of most measures of healthcare resources in this primary care HMO setting. Indeed, in comparing the mean levels of healthcare utilization of borderline and nonborderline subjects, a consistent trend on several measures

Table 1. Pearson Correlations Between Scores on Borderline Personality Measures and Healthcare Utilization (N = 150)

	Healthcare Utilization Measure				
Predictor	Telephone Contacts	Physician Visits	Ongoing Prescriptions	Acute Prescriptions	Specialist Referrals
PDQ-R Scores	.20†	.27†	.22†	.22†	.16*
SHI Scores	.18*	.10	.25†	.08	.23†

PDQ-R = Personality Diagnostic Questionnaire-Revised[5]; SHI = Self-Harm Inventory[6]
*P < 0 05, two-tailed
†P < 0 01,two-tailed

indicated that women with borderline personality symptomatology demonstrated greater healthcare resource utilization. These findings correspond with the conclusions of the two previous studies examining the relationship between borderline personality symptomatology and healthcare utilization. It is important to note that the Pearson correlations, although significant, are small. This finding suggests that borderline personality symptomatology reliably results in greater utilization of healthcare services, but not to a substantial degree.

Table 2. Differences in Healthcare Utilization Measures Between Women with and without Borderline Personality Symptomatology

	Personality Symptomatology Status			
Measure	Not Borderline (Mean ± SD)	Borderline (Mean ± SD)	F (1,148)	$P <$
Diagnosis Based on PDQ-R				
Telephone contacts	2.49 ± 2.73	3.71 ± 4.95	3.71	0.06
Physician visits	3.43 ± 2.60	4.48 ± 3.31	4.21	0.05*
Ongoing prescriptions	0.72 ± 0.76	1.29 ± 1.50	9.21	0.003*
Acute prescriptions	2.91 ± 2.65	3.76 ± 3.67	2.50	0.12
Specialist referrals	0.40 ± 1.19	0.98 ± 2.66	3.33	0.07
Diagnosis Based on SHI				
Telephone contacts	2.49 ± 3.25	3.92 ± 4.16	4.58	0.04*
Physician visits	3.62 ± 2.69	4.03 ± 3.32	0.55	0.46
Ongoing prescriptions	0.75 ± 0.77	1.31 ± 1.58	8.18	0.005*
Acute prescriptions	3.11 ± 2.80	3.25 ± 3.56	0.06	0.82
Specialist referrals	0.37 ± 1.14	1.17 ± 2.87	5.90	0.02*

SD = standard deviation; PDQ-R = Personality Diagnostic Questionnaire-Revised[5]; SHI = Self-Harm Inventory[6]
*Significant group difference

Of the two measures for borderline personality symptomatology used in this study, the SHI appears to be a somewhat more conservative measure. However, both measures seem to be prone to overinclusiveness, unless one accepts that one fourth of women in outpatient medical practice have borderline personality symptomatology. We suggest that these measures are adequate as screening tools, yet may tap into other dimensions of psychological dysfunction, and therefore should be used in conjunction with clinical diagnosis. To reflect this perspective, we carefully have avoided the term, "disorder," instead using the term, "symptomatology."

For primary care clinicians who are treating patients within a managed care delivery system, our finding that borderline personality symptomatology increases healthcare utilization has particular significance in regard to cost containment. We believe that cost containment can be improved by identifying individuals with borderline personality and then maintaining a highly structured and conservative management approach. This approach entails structuring appointments; clarifying the treatment plan and its boundaries at the initial appointment and at each subsequent appointment; and conservatively utilizing referrals, diagnostic procedures, and medication regimens. Our explicit approach to the diagnosis of borderline personality and its management in the primary care setting is described elsewhere.[1,2]

Because of the demographic characteristics of our sample, we advise the use of some caution in considering whether it is possible to generalize these data to other primary care settings. Recall that individuals with borderline personality are characterized by their chaotic, self-defeating behaviors, which may include the sabotage of relationships as well as failing to fulfill educational goals. This study group contained a high percentage of married subjects, who also were relatively well educated, suggesting that the group functioned at a fairly high level. In contrast, lower-functioning populations might manifest even more meaningful increases in healthcare utilization.

The strengths of this study include the use of two measures of borderline personality symptomatology; investigator review of medical records, rather than subject report; the use of multiple measures of healthcare utilization; and a reasonable period of medical record review (ie, 12 months). The potential limitations include the use of self-reported measures for personality symptomatology; data collection during the 12 months *after* subjects' self-assessments; and the inclusion of women only. Data collection post–self-assessment was necessary because many subjects had recently joined the HMO and therefore had no prior medical records. However, participation in this type of assessment might have affected subsequent medical utilization. It is also possible that the healthcare utilization patterns of men differ from those of women.

From a managed care perspective, factors that affect healthcare utilization are extremely important in terms of maximization of available resources. The results of this study indicate that borderline personal-

ity symptomatology, even when present in higher-functioning individuals, *does* result in a meaningful increase in various aspects of healthcare utilization, but not to a substantial degree. Although many psychiatric disorders predict for greater healthcare utilization, not all disorders do so, nor do they do so to a substantial degree. Additional research must be undertaken to examine the healthcare utilization of lower-functioning individuals with borderline personality, as well as that of individuals with other types of personality disorders.

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