Healthcare Utilization Among Women with Eating Disordered Behavior

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Abstract

This study was designed to explore the relationship between self-reported eating disordered behavior (wihout formally established eating disorder diagnoses) and healthcare utilization among women in a primary care setting. Through a self-report questionnaire, 150 participants between the ages of 17 and 49 were asked if they had ever vomited, starved themselves, or abused laxatives in a manner that was intentional and self-harming (ie, eating disordered behavior identified as pathologic by the participant). Participants who reported a history of disordered eating (*n* = 17) exhibited higher scores on two of five measures of healthcare utilization (mean number of telephone contacts and mean number of specialist referrals) compared with participants without eating disorders (*n* = 133). These data suggest that eating disordered behavior may be a predictor of increased healthcare utilization among women in primary care settings.

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Few studies have examined healthcare utilization in primary care settings by individuals with emotional problems. Economic analyses of mental healthcare costs have focused on the rising cost of mental healthcare[1] and the higher cost of inpatient versus outpatient psychiatric care (16 times greater).[2] In addition, several investigators have studied mental healthcare costs according to diagnostic grouping (eg, affective disorders[3-5] and alcohol abuse or dependence[6]). The costs of treating obesity and attributable conditions have also been examined by several investigators.[7-11]

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Empirical cost analyses of eating disorders (defined according to the Diagnostic and Statistical Manual of Mental Disorders, 4th edition [DSM-IV][12]) are limited, other than case reports of costly care[13] and a study reporting rehospitalization among patients with anorexia nervosa who were discharged at a low body weight.[14] It may be inferred that eating disorders are associated with high costs because of the clinical experience of insurers excluding or unrealistically limiting coverage for such patients.[15-16] In addition, an increased risk of disease and greater medical and psychiatric comorbidity may complicate the cost analysis of patients with eating disorder.[7]

Only a few studies have examined mental health variables and their impact on healthcare utilization in the primary care setting,[17] and the use of healthcare services in the primary care setting by patients with eating disorders has not been evaluated to date. In this study we have explored, in a primary care setting, the healthcare utilization of women with a history of disordered eating behavior.

··· METHODS ···

Subjects

The subjects participating in this study were the same as those described in a previous study[17] and consisted of 150 women who presented consecutively to a female family physician for routine gynecologic care. All participants were seen by the same physician at the same facility within a health maintenance organization (HMO) system. At the time of medical service, each patient candidate was invited to participate in "a study that explores patient behaviors and the relationship of these behaviors to medical care." The role of eating disordered behaviors was not explicitly stated to participants at the time of the study because the focus of the initial project was borderline personality symptomatology. Patients who were cognitively or medically impaired (ie, too ill to participate) were not asked to

participate; this decision was made by one of the investigators (L.A.S.) at the time of service.

Participants ranged in age from 17 to 49 years (mean ± SD, 33.7 ± 9 years). The ethnic makeup was 85% white, 6.7% native American, 2.7% African-American, 1.3% Asian-American, 1.3% Hispanic, and 2.7% other. Most participants were married (64.7%); the remainder were single (26.7%), divorced (7.3%), or widowed (1.3%). All participants had completed high school, 20.7% had a bachelor's degree, and 6.7% had a master's degree. The response rate of invited subjects was 97.4%.

All subjects provided informed consent. The project was approved by the Institutional Review Board of the University of Oklahoma College of Medicine, Tulsa.

Procedure

Each participant completed a questionnaire booklet that explored demographic data (eg, age, race, marital status, educational achievement) and self-destructive behaviors. The latter were explored through yes/no questions that began as "Have you ever intentionally or on purpose..." Three of the items in this assessment pertained to eating disordered behaviors and the questions were phrased as follows after the beginning words: "...induced vomiting to hurt yourself," "...starved yourself to hurt yourself," and "...abused laxatives to hurt yourself." These particular behaviors, together with their intentional nature, are associated with eating disorder syndromes (such as anorexia and bulimia nervosa). Each completed questionnaire booklet was placed in a sealed packet without review by investigators and was stored until the data were analyzed. All subjects were treated within the HMO system during the 12 months following completion of the questionnaire booklets (ie, no patients were excluded from the subsequent data analysis).

Participants' medical records were reviewed 12 months after participation in the study for the following measures of healthcare utilization: (1) telephone calls to the medical facility; (2) visits to the physician; (3) use of ongoing prescriptions (medications that were prescribed throughout the 12-month study period); (4) acute prescriptions (medications that were initially prescribed during the study period for brief courses of treatment); and (5) referrals to physician specialists (nonprimary care physicians). Physician investigators who reviewed participants' medical records were blinded to the information contained in the questionnaire booklets.

Statistical Analysis

Because the medical utilization data were not normally distributed, median tests were used to examine differences between the two groups.

··· RESULTS ···

Table 1 shows the relationship between self-reported eating disordered behavior and healthcare utilization. A comparison of participants with a history of eating disordered behavior with those without such a history revealed significant differences between the groups for two measures of healthcare utilization—the number of telephone contacts with the healthcare facility ($P < 0.02$) and the number of specialist referrals ($P < 0.001$).

Table 1. Healthcare Utilization as a Function of Self-Reported Disordered Eating Behavior

Healthcare Utilization Measure*	No Disordered Eating Behavior (n = 133)	Disordered Eating Behavior (n = 17)	Z Value	P Value
Telephone contacts	2.48 (2.94)	5.59 (5.94)	2.32	0.02
Physician visits	3.53 (2.57)	5.24 (4.25)	1.43	0.16
Ongoing prescriptions	0.84 (1.07)	1.18 (0.88)	1.80	0.08
Temporary prescriptions	2.93 (2.50)	4.88 (5.29)	0.79	0.44
Specialist referrals	0.35 (1.09)	2.18 (3.86)	3.82	0.001

A patient was considered to have disordered eating behavior if she reported vomiting, starving, or abusing laxatives.
*Results are expressed as mean (SD) values, whereas Z and P values refer to median tests.

··· DISCUSSION ···

Our data suggest that the utilization of medical resources in primary care settings is higher among women who have a history of eating disordered behavior (vomiting, starving, or laxative abuse). In this study, participants who reported this behavior evidenced both a higher number of telephone calls to the treatment facility as well as

a greater number of referrals to physician specialists. These results may explain to some degree why individuals with eating disorders may be expensive to treat and why insurance coverage for these conditions is limited.

From the current data we do not know the content of the telephone calls to the facility or the type of physician specialist to whom the patient was referred. It would be interesting to determine whether the telephone contacts or the physician referrals were in any way related to eating disordered behavior, either directly (eg, questions about or requests for eating disorder treatment) or indirectly (eg, health concerns related to infertility or amennorhea that may have necessitated an obstetrics/gynecology referral; or weight loss or vomiting that may have been referred to a gastroenterologist).

We wish to emphasize that the eating disorder variables used in this study were behaviors and not specific diagnoses. We do not know whether participants in this study met, either at the time of the study or in the past, the diagnostic criteria for an eating disorder (anorexia or bulimia nervosa) according to the DSM-IV[12] or whether they had subsyndromal eating disorder symptoms. It would be of interest to examine utilization of healthcare in a primary care setting by individuals with a diagnosed eating disorder. The results from such a study may show a greater extent of healthcare utilization than that reported with our participants because symptoms are more severe in individuals with an established diagnosis. Such a study would entail more intensive diagnostic assessment, probably after a screening measure, because the frequency of eating disorders among a general primary care population is low.

The study has a number of limitations. First, we do not know the diagnostic significance of the eating disordered behaviors that were investigated in this study (ie, eating disorders as diagnosed by DSM-IV criteria, subsyndromal symptoms, or symptoms with no diagnosis of eating disorders). Second, a relatively small sample of individuals from a primary care practice was studied. Third, the demographic profile of this particular sample is unusual and reflects a well-educated, largely married population, probably because the HMO facility is located in a relatively affluent area of the city. Lastly, this study was conducted in an HMO setting, and referral to specialist physicians may vary from practice to practice. Because of these factors, we do not know whether our data can be extended to other primary care populations.

To our knowledge, this is the first study that examines the healthcare utilization of individuals with eating disordered behavior in a primary care setting. Our results suggest that individuals in primary care settings with eating disordered behavior utilize healthcare resources to a greater extent than do their peers, which should raise concern among those studying patterns of healthcare utilization.

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