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Abstract: *Outpatient consultation-liaison (C-L) psychiatry clinics are valuable settings for research and teaching endeavors. However, little is known about psychiatric symptoms and health status of persons treated in such settings. In this study, 80 persons seen in an outpatient C-L psychiatry clinic were compared with 100 persons seen in a mood disorder clinic on a variety of self-report instruments. Outpatient C-L clinic patients were found to have significantly poorer health status than mood clinic patients on the following domains as measured by the RAND instrument: general health perception, pain, physical functioning, and role functioning due to physical problems. Both groups had poor role functioning due to emotional problems and poor social functioning. The groups did not differ in depressive symptoms but C-L patients were significantly less anxious. Thus, it appears that patients in an outpatient C-L setting not only have significant medical comorbidity, as expected, but have levels of psychiatric distress comparable to that seen in a traditional psychiatry outpatient setting. These findings indicate that such a clinic is a fertile area for research and training in the diagnosis and treatment of persons with comorbid physical and mental disorders.*

Introduction

Consultation-liaison (C-L) psychiatry has traditionally been based in the general hospital setting. Recently, however, there has been increasing interest in expanding the concept to include the outpatient setting. The Academy of Psychosomatic Medicine, the professional organization for consultation-liaison psychiatry, is currently developing guidelines for residency training in C-L psychiatry that

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will likely include a recommendation that programs include an outpatient component whenever possible (Gitlin, personal communication). The research potential of such a setting was highlighted recently by Barsky [1] in one of a series of papers on the "unfulfilled promise" of outpatient C-L psychiatry.

Published reports of outpatient C-L clinics have largely been descriptive [2–6], reporting such factors as demographics, reasons for referral, clinical diagnosis, and referral source. Dickson et al. [7], using the SCL-90 and the Millon Behavioral Health Inventory, developed psychological profiles of patients seen in their integrative clinic. However, this clinic served only somatizing patients. The present study is the first to utilize well-validated measures of functioning and well-being to describe patients who attend an outpatient C-L psychiatry clinic. Given the high prevalence of comorbid medical conditions in users of ambulatory mental health services [8], these data may also be generalizable to other outpatient psychiatry settings.

Methods

Subjects were 80 new patients seen in an outpatient C-L program who agreed to complete a self-report battery. The comparison group was comprised of 100 new patients seen in a mood disorder program. The Medical Illness Program of the Department of Psychiatry of the Georgetown University Medical Center is an outpatient C-L clinic based solely in that department. Patients are referred from various sources in the medical center and metropolitan area. Reasons for referral include coping with medi-

cal illness, psychopharmacology evaluations for the pain program, and the assessment of persons with comorbid physical and mental disorders. Patients are evaluated by senior residents and seen on each visit by an attending C-L psychiatrist. The program offers evaluation and short-term treatment including time-limited psychotherapy and pharmacotherapy [9]. The Mood Disorder Program is a similarly organized program for evaluation and treatment of a variety of mood disorders, predominantly major depression.

Patients in both clinics completed an extensive self-report battery at the time of initial evaluation. The self-report battery consisted of demographic information including age, gender, marital status, level of education, employment status, and race. Self-report surveys included the following: 1) *Rand 36-Item Health Survey* [10], a 36-item self-report survey measuring eight health concepts: physical functioning, bodily pain, role limitations due to physical health problems, role limitations due to personal or emotional problems, emotional well-being, social functioning, energy/fatigue, and general health perceptions (not all scales were administered in this study). 2) *The Spielberger State Anxiety Scale* [11], a 20-item measure of state anxiety. 3) *The Zung Depression Scale* ([12], a 20-item measure of state depressive symptoms. 4) *The Global Assessment of Functioning Scale (GAF)* [14], a clinician-rated scale measuring psychological, social, and occupational functioning on a continuum from 1 (lowest) to 100 (highest).

Chi-square and two-tailed *t*-tests were the primary statistics used to compare the demographic characteristics and assessment instrument scores for the two groups. Because of the higher mean age

of the Medical Illness Program patients (see Table 1), correlations between age and assessment scores were also computed. For those scores that showed a significant correlation with age (5/10), an analysis of covariance, with age as the covariate, was used instead of the *t*-test statistic. Given that 10 tests of statistical significance were performed, significance levels were evaluated using a Bonferroni adjusted alpha of (0.05/10) = 0.005 for each test to maintain an experimentwise $p < 0.05$.

Results

Sociodemographic characteristics for the two clinic samples are cited in Table 1. The range of number of respondents for each item varied from 81 to 84 for the Medical Illness Program and 99 to 102 for the Mood Program, since not every patient responded to every item. Medical Illness patients were older, more likely to be married or living together, and less likely to be employed full time. The two groups had similar gender and educational composition. Approximately 60% of each sample was female, and both groups had approximately 60% college graduates.

Table 1. Sociodemographic information

	Medical Illness (N = 80)	Mood (N = 100)	p value*
Percent male	36.9	40.2	ns
Percent married or living together	49.4	32.7	<0.05
Percent college graduate	60.2	58.4	ns
Percent employed fulltime	37.0	57.4	<0.01
Age (mean)	42.7	37.6	<0.01

*Based on Chi-square analysis except for age (*t*-test).

Table 2. Functional health status and clinical ratings

Scale	Medical Illness (N = 80), mean (range)	Mood, (N = 100), mean (range)
RAND subscales[a]		
General health[b]	41.8 (0–100)	57.0 (0–100)*
Change in health[b]	42.7 (0–100)	47.2 (0–100)
Physical functioning[b]	61.0 (5–100)	81.5 (0–100)*
Free of pain[b]	45.8 (0–100)	65.8 (0–100)*
Social	42.8 (0–100)	39.0 (0–100)
Role physical[b]	26.7 (0–100)	64.6 (0–100)*
Role emotional	35.0 (0–100)	25.0 (0–100)
Other scales		
Zung depression	55.0 (41–80)	56.3 (39–74)
Spielberger anxiety	46.7 (20–77)	53.7 (28–79)*
Global assessment of functioning	62.2 (40–90)	59.9 (25–90)

[a]For unadjusted means, *p* values are based on a two-tailed *t*-test. *p* values comparing assessment scores that are adjusted for age are based on analysis of covariance.

[b]Means adjusted for age.

*Bonferroni adjusted $p < 0.05$.

Functional Health Status (RAND), Zung Depression, Spielberger Anxiety, and GAF scores are reported in Table 2.

Measures of functional health status indicate that both groups had significant problems in multiple domains. The mood clinic population had comparable levels of perceived change in health, social functioning, and difficulties with role functioning due to emotional problems. Medical Illness patients had significantly poorer general health perception, more pain, poorer physical functioning, and poorer role functioning due to physical problems. The two groups reported comparable levels of depression but the Medical Illness patients had lower levels of anxiety. Clinicians reported similar global assessments of functioning. The range of 51–60 on the GAF is defined as "moderate symptoms (e.g., flat affect and circumstantial speech, occasional panic attacks) or moderate difficulty in social, occupational, or school functioning (e.g., few friends, conflicts with co-workers) [13].

Discussion

This study extends previous reports of outpatient C-L psychiatry clinics to describe patients' clinical and functional status. Stewart et al. [14], using data from the Medical Outcomes Study (MOS), compared levels of well-being and functioning of depressed patients treated by mental health specialists with those of depressed patients treated by medical clinicians. Using subscales identical to or derived from the Rand 36-Item Health Survey, those authors found that patients treated by mental health providers had more social problems, whereas patients treated by medical clinicians had worse physical functioning, more pain, and worse health perceptions. The two groups did not differ significantly on measures of role limitations due to physical problems and role limitations due to emotional problems. Medical Illness patients in our study had functional health status scores that were markedly lower (i.e., worse health) than patients in the Stewart study in all domains. Medical Illness patients scored markedly worse than patients with chronic medical conditions (e.g., cardiac, arthritis, back) studied in the MOS. The only comparable score was physical functioning as compared with that of persons with current advanced coronary artery disease [15] (see Table 3). Thus, it appears that patients seen in our outpatient C-L clinic have significant decrements in functional health status and well-being.

Table 3. Comparison of the Medical Illness Program to two MOS samples

RAND scales	Medical Illness	Advanced coronary artery disease (MOS)[a]	Depressed patients seen in general medical sector (MOS)[a]
General health	41.1	65.8	52.6
Free of pain	44.9	70.8	54.8
Physical functioning	60.4	65.8	72.6
Social	42.8	83.9	64.4
Role physical	26.2	60.4	48.3

[a]For the two MOS samples, mean values are adjusted for sociodemographics, presence of medical conditions, and depressive symptoms.

These functional health status measures indicate that this patient population not only has a significant degree of physical morbidity, but that functional deficits are pronounced as well. Wells et al. [15] found that the effects of depressive symptoms and medical conditions on functioning were additive. For example, they found that the combination of depressive symptoms and advanced coronary artery disease was associated with approximately two times the decrement in social functioning than with either condition alone. Though we did not analyze the data for the effect of depressive symptoms on functioning, our findings are consistent with those of Wells et al. Specifically, our patient population suffers from a high degree of medical morbidity as well as a significant degree of mood and anxiety symptoms. If depression alone were responsible for functional decrements, there would be no difference between the two clinic populations which had comparable Zung depression scores. Thus, it appears that the additive effect of these conditions is responsible for the severe decrements in functional health status seen in this group. Type of medical comorbidity was not analyzed in this study. However, in a prior report on this clinic, patients had a wide variety of chronic medical conditions and only 11% had somatoform disorders [9].

Recently, increased attention has been paid to the economic costs of mental and physical disorders [16]. For example, the MOS found that bed days associated with depression were comparable to those seen with chronic medical conditions. Our

study did not assess bed days or economic outcomes, but it is notable that only 37% of Medical Illness patients were currently employed full time as compared with 57% of the Mood Program patients. Given that their mean age was 42.7 years, the Medical Illness patients would be expected to have a greater percentage of full-time employed if there were no debilitating medical or psychiatric conditions. Medical Illness patients had significantly greater role (including work) impairment due to physical causes, whereas there was a trend toward Mood Program patients to have greater role impairment due to emotional causes. Thus, for the Medical Illness patients, it appears that 1) role impairment due to physical causes may be associated with unemployment and 2) there is a high degree of impairment in productivity. Alternatively, Medical Illness patients may tend to attribute role impairment to physical causes more than do Mood Program patients, perhaps because of greater medical morbidity.

The Medical Illness group had a level of depression comparable to that seen in the Mood group. Adjusted Zung scores place both samples in the range of mild depression. In this study we did not utilize a structured interview to generate a DSM-III-R diagnosis. In a prior report on 94 patients from this clinic, however, 46% had an Axis I diagnosis of a Mood Disorder [9]. State anxiety scores were significantly lower than for patients in the Mood clinic. This finding may be explained by the observation that Mood Clinic patients tend to present with acute mood symptoms that often co-occur with anxiety symptoms, whereas most Medical Illness patients do not present with an acute disorder.

Study limitations include referral bias due to lack of strict referral criteria for each clinic. Structured interviews were not conducted to generate diagnoses, so comparative and descriptive data were based on self-report alone. This study is a report of only one outpatient C-L clinic, so findings may not necessarily be generalizable to all such clinics. Finally, the fact that the Zung Depression Scale does not differentiate well between depressed patients in various settings might partly explain why our two clinic populations did not have different levels of depressive symptoms.

In summary, the findings of this study indicate that patients in an outpatient C-L psychiatry clinic have a high degree of functional impairment as well as psychiatric distress. These results imply that

such a clinic is a fertile area for research and training in the diagnosis and treatment of persons with comorbid physical and mental disorders. The level of functional impairment seen in our clinic patients indicates that such patients meet medical necessity for psychiatric care. Thus, an outpatient C-L clinic does not appear to be a setting in which medically ill persons are having "normal" levels of adjustment to illness nor is it a setting that treats persons with mental health problems and only mild medical comorbidity. If replicated, findings such as ours may be used to document the continuing need for available services for people with comorbid psychiatric and physical conditions.

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