Mental Health Service Utilization by Borderline Personality Disorder Patients and Axis II Comparison Subjects Followed Prospectively for 6 Years

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Objective: The purpose of this study was to describe the psychiatric treatment received by a well-defined sample of patients with borderline personality disorder and Axis II comparison subjects over 6 years of prospective follow-up.

Method: 362 inpatients were interviewed about their treatment histories during their index admission (1992–1995). 290 patients met both Revised Diagnostic Interview for Borderlines and DSM-III-R criteria for borderline personality disorder and 72 met DSM-III-R criteria for at least 1 nonborderline Axis II disorder (and neither criteria set for borderline personality disorder). Over 94% of surviving patients were reinterviewed about their psychiatric treatment histories 2, 4, and 6 years later.

Results: Only 33% of borderline patients were hospitalized during the final 2 years of the 6-year follow-up, a substantial decline from the 79% who had prior hospitalizations at baseline. Much the same pattern emerged for day and/or residential treatment (from 55% to 22%). In contrast, about three quarters of borderline patients were still in psychotherapy and taking psychotropic medications after 6 years of follow-up. Additionally, over 70% of borderline patients participating in these outpatient modalities did so for at least 75% of each follow-up period. While rates of intensive psychotherapy declined significantly over time (from 36% to 16%), rates of intensive polypharmacy remained relatively stable over time, with about 40% of borderline patients taking 3 or more concurrent standing medications during each follow-up period, about 20% taking 4 or more, and about 10% taking 5 or more.

Conclusions: The results of this study suggest that the majority of borderline patients continue to use outpatient treatment in a sustained manner through 6 years of follow-up, but only a declining minority use more restrictive and costly forms of treatment.

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Clinical experience suggests that patients with borderline personality disorder receive a great deal of psychiatric care. However, only 5 controlled studies explicitly detailing psychiatric treatment histories of borderline patients have been published.[1–5] Four of these studies assessed patient samples[1,2,4,5] and found that borderline outpatients and inpatients had received significantly more outpatient and inpatient care than patients with mood disorders or patients with other forms of Axis II pathology. The fifth study[3] found that individuals in the community meeting criteria for borderline personality disorder were significantly more likely than the community sample as a whole to have a history of both inpatient (20% vs. 1%) and outpatient (48% vs. 7%) psychiatric treatment.

Clinical experience also suggests that borderline patients continue to use high levels of psychiatric services over extended periods of time. To date, 17 small-scale, short-term follow-up studies of borderline patients, with mean follow-up periods of 1 to 7 years, have been conducted.[2,6–24] Eight of these studies assessed some aspect of the psychiatric treatment their borderline samples received during the period they were followed.[6–9,14–16,18,21,22] These studies found that 7% to 67% of their traced borderline patients had been hospitalized for psychiatric reasons, with a median of 45% receiving inpatient treatment.[6–9,14–16,18,22] Study results also found that 33% to 73% of traced borderline patients (median = 64%) received some form of psychosocial outpatient treatment, typically individual psychotherapy.[6,7,14–16,18,22] In addition, 29% to 67% of these borderline patients received some type of psychotropic medication during the follow-up period, with a median of 33% treated with 1 or more forms of pharmacotherapy.[7,15,18,21,22]

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Four long-term, large-scale, follow-back studies of samples of criteria-defined borderline patients have also been conducted, with a mean follow-up period of 14 to 16 years.[25–29] Three of these studies assessed some aspect of the psychiatric treatment their borderline samples received subsequent to the patients' index admission.[26,27,29] In these 3 studies, 23% to 28% of traced borderline patients had been rehospitalized, spending about 8% of the follow-up period as an inpatient.[26,27,29] One study also assessed outpatient care,[26] finding that borderline patients were on medication about 22% of the time and in psychotherapy about 35% of the time.

The current study is the first study of a well-defined sample of borderline patients and Axis II comparison subjects to systematically assess a full range of treatment modalities at 4 contiguous 2-year time periods. Its design is distinguished by the size of the patient groups being studied and the rigor with which they were diagnosed. Its design is also distinguished by the inclusive list of treatment modalities that were assessed as well as the use of a semistructured interview of demonstrated reliability to assess treatment experiences at each of these time periods.

METHOD

The current study is part of a multifaceted longitudinal study of the course of borderline personality disorder: the McLean Study of Adult Development (MSAD). All subjects were initially inpatients at McLean Hospital in Belmont, Mass., who were admitted during a 3-year period (1992–1995). Each patient was screened to determine that he or she (1) was between the ages of 18 and 35 years; (2) had a known or estimated IQ of 71 or higher; (3) had no history or current symptomatology of an organic condition that could cause psychiatric symptoms, schizophrenia, schizoaffective disorder, or bipolar I disorder; and (4) was fluent in English.

Study protocol was approved by the McLean Hospital Institutional Review Board. After the study procedures were explained, written informed consent was obtained. Each patient then met with a masters-level psychologist blinded to the patient's clinical diagnoses. Baseline treatment history was assessed using the Background Information Schedule (BIS), a semistructured interview specifically designed to assess the psychosocial functioning and treatment histories of borderline and other Axis II patients. The interrater and test-retest reliability and the concurrent validity of the BIS have been found to be excellent.[5] Three semistructured diagnostic interviews were then administered: (1) the Structured Clinical Interview for DSM-III-R Axis I Disorders (SCID-I),[30] (2) the Revised Diagnostic Interview for Borderlines (DIB-R),[31] and (3) the Diagnostic Interview for DSM-III-R Personality Disorders (DIPD-R).[32] Excellent levels of interrater and test-retest reliability were achieved at baseline for the DIB-R and DSM-III-R diagnoses of borderline personality disorder, and excellent interrater reliability was maintained throughout the course of the study for both borderline personality disorder diagnoses.[31,32]

At each follow-up wave, treatment history was reassessed by staff members blinded to baseline diagnoses and prior treatment history. After informed consent was obtained, the Revised Borderline Follow-up Interview (BFI-R) (which is the follow-up analog to the BIS) was administered. Both conjoint patient interviews and videotapes from previous periods were used to maintain high levels of interrater reliability and prevent rater drift throughout the years of follow-up. In terms of the conjoint interviews (N = 48), kappa values ranged from 0.53 to 1.0 (median = 0.94), while intraclass correlations ranged from 0.71 to 0.99 (median = 0.98). For videotaped interviews from earlier follow-up periods (N = 36), kappa values ranged from 0.47 to 1.0 (median = 0.93), while intraclass correlations ranged from 0.58 to 1.0 (median = 0.91).

Relationships between baseline demographic variables and diagnosis were assessed using logistic regression modeling methods. Data pertaining to treatment were assembled in panel format (i.e., multiple records per patient, with 1 record for each assessment period for which data were available). Random effects regression modeling methods assessing the role of diagnosis and time and controlling for clinically important baseline covariates (gender, race, age, socioeconomic status, and Global Assessment of Functioning [GAF][33] scores) were used in all analyses of treatment data.[34] In this modeling work, probit analyses of binary dependent variables (e.g., treatment modality present/absent) were used. Interactions between diagnosis and time were checked in this modeling. Because of the multiple comparisons involved in the analyses of treatment data, Bonferroni-type corrections were applied to the p values for the main effects of diagnosis and time. As there were 38 such comparisons (encompassing the data presented in Tables 2–5), this resulted in an adjusted p value of .05/34 = .0013.

Baseline diagnostic interviews were administered to 378 consecutive inpatients at McLean Hospital, 362 of whom met inclusion/exclusion criteria. Two hundred ninety patients met both DIB-R and DSM-III-R criteria for borderline personality disorder and 72 met DSM-III-R criteria for at least 1 nonborderline Axis II disorder (and neither criteria set for borderline personality disorder). Sixteen others were excluded from further study because they either met criteria for schizophrenia (N = 2) or bipolar I disorder (N = 2) or failed to meet DSM-III-R criteria for any Axis II disorder (N = 12).

Of the 72 comparison subjects, 4.2% (N = 3) met DSM-III-R criteria for a cluster A (odd cluster) personality disorder, 33.3% (N = 24) met DSM-III-R criteria for a cluster C (anxious cluster) personality disorder, 18.1%

Table 1. Baseline Demographic Characteristics of Borderline Patients and Axis II Comparison Subjects

Baseline Variable	Borderline Patients (N = 290)	Axis II Comparison Subjects (N = 72)	OR	Z Score	p Value	95% CI
Female, N (%)	233 (80.3)	46 (63.9)	3.71	4.068	< .001	1.97 to 7.00
Nonwhite, N (%)	37 (12.8)	10 (13.9)	1.36	0.759	.448	0.61 to 3.02
Age, mean (SD), y	26.9 (5.8)	27.0 (8.0)	0.98	–0.958	.338	0.94 to 1.02
Socioeconomic status, mean (SD)[a]	3.4 (1.5)	2.8 (1.3)	1.27	2.386	.017	1.04 to 1.55
GAF score, mean (SD)	38.9 (7.5)	43.5 (7.5)	0.92	–4.465	< .001	0.88 to 0.95

[a]1 = highest, 5 = lowest.
Abbreviations: CI = confidence interval, GAF = Global Assessment of Functioning, OR = odds ratio.

(N = 13) met DSM-III-R criteria for a nonborderline cluster B (dramatic cluster) personality disorder, and 52.8% (N = 38) met DSM-III-R criteria for personality disorder not otherwise specified (which was operationally defined in the DIPD-R as meeting all but 1 of the required number of criteria for at least 2 of the 13 Axis II disorders described in DSM-III-R).

Baseline demographic data are presented in Table 1. Borderline patients were significantly discriminated from Axis II comparison subjects by their larger percentage of females, lower socioeconomic status, and lower mean GAF score. Study subjects, both borderline and Axis II comparison, came from a broad socioeconomic spectrum. The socioeconomic distribution of the combined sample based on the 5-point Hollingshead-Redlich Scale[35] (1 = highest, 5 = lowest) was 1: 17.7% (N = 64), 2: 16.0% (N = 58), 3: 19.1% (N = 69), 4: 18.0% (N = 65), and 5: 29.3% (N = 106).

In the follow-up waves, 275 borderline patients and 67 Axis II comparison subjects were reinterviewed at 2 years, 269 and 64 were reinterviewed at 4 years, and 264 and 63 were reinterviewed at 6 years. By year 6, 26 borderline patients were no longer in the study: 11 had committed suicide, 3 died of natural causes, 9 discontinued their participation, and 3 were lost to follow-up. Among comparison subjects, 1 committed suicide, 5 discontinued their participation, and 3 were lost to follow-up. Over 94% of surviving borderline patients and Axis II comparison subjects were reinterviewed at all 3 follow-up waves.

RESULTS

Table 2 details the prevalence rates of the various forms of treatment studied during each of the 4 time periods. At the Bonferroni-corrected alpha level of .0013, a significantly higher percentage of borderline patients than Axis II comparison subjects reported participating in 12 of the 17 treatment modalities studied. The 5 exceptions were individual therapy, group therapy, couples/family therapy, day treatment, and electroconvulsive therapy (ECT). At this same stringent alpha level, the overall percentages of patients participating in 13 of the 17 treatment modalities studied declined significantly over time. The 4 exceptions were intensive polypharmacy involving at least 3, 4, or 5 concurrent standing medications and ECT.

Table 3 details the percentages of borderline patients and Axis II comparison subjects in individual therapy or taking standing medications who participated in these treatment modalities for at least 50% to 75% of each time period. About 80% of borderline patients who participated in these 2 outpatient treatment modalities did so for at least 50% of each time period, and about 70% did so for at least 75% of each study period. Borderline patients were significantly more likely than Axis II comparison subjects to have sustained patterns (50% of period) of both psychotherapy and pharmacotherapy. In addition, sustained use of psychotropic medications (50% and 75% of period) increased significantly over time when all patients in the study were considered together.

Table 4 details the psychotropic medications prescribed to and taken for at least a month by borderline patients and Axis II comparison subjects. At the Bonferroni-corrected p level of .0013, a significantly higher percentage of borderline patients than Axis II comparison subjects reported having taken 7 of the 13 types of medication studied. They were significantly more likely to report having taken an antidepressant, particularly an SSRI, for at least 1 month. They were also significantly more likely to have taken an anxiolytic, particularly a benzodiazepine. In addition, they were significantly more likely to have taken a conventional neuroleptic and a mood stabilizer, particularly an anticonvulsant mood stabilizer, for a month or more. For all subjects taken together, the use of most types of medication declined significantly with time. Only the use of atypical antidepressants, nonbenzodiazepine anxiolytics, and anticonvulsants remained relatively stable over time.

Interactions of diagnosis and time were checked for the data presented in Tables 2, 3, and 4 and none were found to be significant; that is, time-related changes in treatment occurred in parallel for borderline and Axis II comparison subjects.

Finally, we wanted to examine the relationship between symptom severity and the main types of treatment received by borderline patients. Table 5 details the percentage of remitted borderline patients (N = 202) and nonremitted borderline patients (N = 88) participating in 4

Table 2. Psychiatric Treatment Received by Patients With Borderline Personality Disorder and Axis II Comparison Subjects Followed Prospectively for 6 Years

	Follow-Up Period											
	Borderline Patients				Axis II Comparison Subjects					Dx Time		
Treatment	Baseline (N = 290)	2 Years (N = 275)	4 Years (N = 269)	6 Years (N = 264)	Baseline (N = 72)	2 Years (N = 67)	4 Years (N = 64)	6 Years (N = 63)	Model χ^2 p Value	Z Score	p Value	Significant Covariates
Individual therapy												
%	96.2	93.5	78.4	74.6	86.1	88.1	65.6	63.5	114.0	1.830	NS	Older, female, white,
(N)	(279)	(257)	(211)	(197)	(62)	(59)	(42)	(40)	< .0001	–9.626	< .001	lower GAF score
Intensive psychotherapy[a]												
%	36.2	37.1	23.4	15.9	19.4	19.4	9.4	11.1	85.2	3.283	0.001	Older, female
(N)	(105)	(102)	(63)	(42)	(14)	(13)	(6)	(7)	< .0001	–7.700	< .001	
Standing medication(s)												
%	84.1	86.2	75.8	70.8	61.1	77.6	53.1	54.0	115.8	3.701	< .001	Older, female, white,
(N)	(244)	(237)	(204)	(187)	(44)	(52)	(34)	(34)	< .0001	–5.297	< .001	lower GAF score
≥ 2 Concurrent standing medications												
%	65.5	64.0	56.5	50.8	25.0	41.8	26.6	22.2	124.6	5.311	< .001	Older, female, white,
(N)	(190)	(176)	(152)	(134)	(18)	(28)	(17)	(14)	< .0001	–4.404	< .001	lower GAF score
≥ 3 Concurrent standing medications												
%	45.5	42.2	43.5	36.7	12.5	22.4	14.1	7.9	88.6	4.507	< .001	Older, female, lower
(N)	(132)	(116)	(117)	(97)	(9)	(15)	(9)	(5)	< .0001	–1.515	NS	GAF score
≥ 4 Concurrent standing medications												
%	28.6	22.6	21.6	19.7	1.4	9.0	7.8	3.2	62.4	4.253	< .001	Older, lower
(N)	(83)	(62)	(58)	(52)	(1)	(6)	(5)	(2)	< .0001	–1.213	NS	GAF score
≥ 5 Concurrent standing medications												
%	17.9	11.6	10.0	11.7	1.4	1.5	3.1	0.0	51.9	3.704	< .001	Older, female, lower
(N)	(52)	(32)	(27)	(30)	(1)	(1)	(2)	(0)	< .0001	–1.588	NS	GAF score
Other outpatient modalities												
Group therapy												
%	36.2	22.9	17.1	12.1	18.1	19.4	6.3	6.4	81.9	3.079	.002	Older, white
(N)	(105)	(63)	(46)	(32)	(13)	(13)	(4)	(4)	< .0001	–8.142	< .001	
Couples/family therapy												
%	38.6	19.3	11.2	8.3	29.2	13.4	9.4	6.4	108.1	1.626	NS	White
(N)	(112)	(53)	(30)	(22)	(21)	(9)	(6)	(4)	< .0001	–10.131	< .001	
Self-help group(s)												
%	51.0	29.1	25.3	20.5	31.9	16.4	9.4	12.7	130.2	3.504	< .001	Older, male,
(N)	(148)	(80)	(68)	(54)	(23)	(11)	(6)	(8)	< .0001	–9.599	< .001	lower SES
Day and/or residential treatment												
%	54.8	49.5	25.7	22.4	23.6	31.3	7.8	6.4	164.7	3.589	< .001	Older, white, lower
(N)	(159)	(136)	(69)	(59)	(17)	(21)	(5)	(4)	< .0001	–10.935	< .001	SES and GAF score
Day treatment												
%	42.4	41.1	23.1	17.8	19.4	29.9	7.8	6.4	119.6	2.751	.006	Older, white, lower
(N)	(123)	(113)	(62)	(47)	(14)	(20)	(5)	(4)	< .0001	–8.746	< .001	SES and GAF score
Residential treatment												
%	36.9	28.4	11.9	9.9	9.7	9.0	1.6	1.6	120.7	3.959	< .001	Lower SES and
(N)	(107)	(78)	(32)	(26)	(7)	(6)	(1)	(1)	< .0001	–9.570	< .001	GAF score
Psychiatric hospitalization												
%	78.6	59.6	36.1	32.6	50.0	22.4	14.1	14.3	219.8	4.983	.001	Older, lower SES
(N)	(228)	(164)	(97)	(86)	(36)	(15)	(9)	(9)	< .0001	–13.676	< .001	and GAF score
Multiple hospitalizations												
%	60.3	42.6	26.0	23.1	20.8	10.5	7.8	3.2	176.0	5.662	< .001	Older, lower SES
(N)	(175)	(117)	(70)	(61)	(15)	(7)	(5)	(2)	< .0001	–11.370	< .001	and GAF score
≥ 30 Days psychiatric hospitalization												
%	60.0	34.6	20.5	18.6	29.2	13.4	3.1	3.2	186.4	4.048	< .001	Older, lower SES
(N)	(174)	(95)	(55)	(49)	(21)	(9)	(2)	(2)	< .0001	–12.422	< .001	and GAF score
ECT treatments												
%	6.9	6.9	4.1	3.8	5.6	6.0	0.0	1.6	22.3	1.575	NS	Older
(N)	(20)	(19)	(11)	(10)	(4)	(4)	(0)	(1)	< .0001	–2.615	.009	

[a] ≥ 2 sessions per wk.
Abbreviations: Dx = diagnosis, ECT = electroconvulsive therapy, GAF = Global Assessment of Functioning, SES = socioeconomic status.

Table 3. Sustained Participation by Patients With Borderline Personality Disorder and Axis II Comparison Subjects Participating in Psychotherapy and Pharmacotherapy During 4 Time Periods

	Follow-Up Period Borderline Patients				Axis II Comparison Subjects				Model χ^2	Dx Time		
Participation	Baseline	2 Years	4 Years	6 Years	Baseline	2 Years	4 Years	6 Years	p Value	Z Score	p Value	Significant Covariates
Individual therapy												
N	279	257	211	197	62	59	42	40				
≥ 50% of period												
%	83.2	81.7	81.5	81.7	59.7	67.8	69.1	70.0	61.6	3.197	.001	Older, female, white,
(N)	(232)	(210)	(172)	(161)	(37)	(40)	(29)	(28)	< .0001	–1.390	NS	lower GAF score
≥ 75% of period												
%	76.3	72.8	72.0	73.6	50.0	54.2	64.3	65.0	54.7	2.976	.003	Older, female,
(N)	(213)	(187)	(152)	(145)	(31)	(32)	(27)	(26)	< .0001	–0.966	NS	lower GAF score
Standing medications												
N	244	237	204	187	44	52	34	34				
≥ 50% of period												
%	73.0	82.3	84.8	83.3	43.2	67.3	67.7	76.5	54.2	4.629	< .001	Older
(N)	(178)	(195)	(173)	(160)	(19)	(35)	(23)	(26)	< .0001	3.451	.001	
≥ 75% of period												
%	64.3	71.7	75.5	78.1	36.4	53.9	67.7	67.7	62.4	3.865	< .001	Older, lower SES
(N)	(157)	(170)	(154)	(150)	(16)	(28)	(23)	(23)	< .0001	3.961	< .001	

Abbreviations: Dx = diagnosis, GAF = Global Assessment of Functioning, SES = socioeconomic status.

types of treatment in each study period: any outpatient treatment, multiple forms of outpatient treatment, any form of more intensive treatment, and multiple forms of more intensive treatment. (A remission was defined as not meeting either DIB-R or DSM-III-R criteria for borderline personality disorder for a period of at least 2 years.) At the Bonferroni-corrected alpha level of .0013, nonremitted borderline patients were significantly more likely than remitted borderline patients to participate in the more intensive forms of treatment studied. In addition, the overall percentage of borderline patients participating in each of these 4 forms of treatment declined significantly over time.

DISCUSSION

Five main findings have emerged from this study. The first of these findings is that only a declining minority of borderline patients used more intensive forms of treatment during each of the 2-year follow-up periods (i.e., psychiatric hospitalization, residential care, and/or day treatment). At baseline, 79% of borderline patients had a history of prior hospitalization, 60% had been hospitalized multiple times, and an equal percentage had been hospitalized for 30 days or more. After the first 2 years of follow-up, these figures had declined to 60%, 43%, and 35%, respectively. By the time of the 4-year follow-up, only 36% of borderline patients had been hospitalized for psychiatric reasons, only 26% had been hospitalized 2 or more times, and only 21% had spent a month or more in inpatient care. During the fifth and sixth years after their index admission, these figures had further declined to 33%, 23%, and 19%, respectively.

A similar pattern of declining participation was found for both day treatment and residential care. For day treatment, the percentage of borderline patients receiving this intensive form of outpatient care decreased from 42% at the time of index admission to 41%, to 23%, and to 18% over the course of 6 years of prospective follow-up. In terms of residential programs or halfway houses, the percentage of borderline patients needing such costly, intensive treatment declined from 37%, to 29%, to 12%, and to 10% over the course of the study. All told, the percentage of borderline patients in day and/or residential treatment decreased over time from 55%, to 50%, to 26%, to 22%.

The fact that only a declining minority of borderline patients used more restrictive and costly forms of treatment over time has not been previously reported. None of the earlier studies of the course of borderline personality disorder systematically assessed both the prebaseline treatment histories of their borderline cohort and the treatments received during multiple follow-up periods. Thus, this is the first study to demonstrate that there is a cascading pattern of decreasing treatment in these most costly and intensive modalities for borderline patients (and Axis II comparison subjects). Whether this declining pattern of restrictive care is primarily due to decreased psychopathology or whether it reflects the efforts of third party payers to limit access to the most costly forms of treatment is a question that cannot be definitively addressed by this (or any other) naturalistic study. Clinical experience suggests that this pattern is probably due to a complex admixture of both of these factors.

The second major finding of this study is that at least three quarters of borderline patients were in psychotherapy during all 3 follow-up periods—over 80% with a nonpsychiatrist whose treatment orientation incorporated elements of both psychodynamic and cognitive-behavioral therapy. While this rate of participation repre-

Table 4. Psychotropic Medications Taken for 1 Month or More by Patients With Borderline Personality Disorder and Axis II Comparison Subjects Followed Prospectively for 6 Years

	Follow-Up Period											
	Borderline Patients				Axis II Comparison Subjects					Dx Time		
Medication	Baseline (N = 290)	2 Years (N = 275)	4 Years (N = 269)	6 Years (N = 264)	Baseline (N = 72)	2 Years (N = 67)	4 Years (N = 64)	6 Years (N = 63)	Model χ^2 p Value	Z Score	p Value	Significant Covariates
Any antidepressant												
%	79.7	82.6	62.8	66.7	56.9	73.1	39.1	46.0	112.5	3.390	.001	Older, female, white,
(N)	(231)	(227)	(169)	(176)	(41)	(49)	(25)	(29)	< .0001	–6.393	< .001	lower GAF score
SSRI												
%	67.9	64.7	43.5	50.4	37.5	58.2	28.1	34.9	81.9	3.733	< .001	Older, female, white
(N)	(197)	(178)	(117)	(133)	(27)	(39)	(18)	(22)	< .0001	–6.438	< .001	
Tricyclic antidepressant												
%	51.4	19.6	11.2	10.6	31.9	11.9	4.7	6.4	159.3	2.513	.012	Older, white,
(N)	(149)	(54)	(30)	(28)	(23)	(8)	(3)	(4)	< .0001	–12.098	< .001	lower GAF score
Atypical antidepressant												
%	31.7	39.3	31.2	34.1	11.1	26.9	14.1	14.3	74.0	2.999	.003	Older, female, higher
(N)	(92)	(108)	(84)	(90)	(8)	(18)	(9)	(9)	< .0001	–2.699	.007	SES, lower GAF score
Any anxiolytic												
%	46.6	37.1	29.0	28.4	15.3	19.4	9.4	11.1	104.3	4.600	< .001	Older, female,
(N)	(135)	(102)	(78)	(75)	(11)	(13)	(6)	(7)	< .0001	–5.885	< .001	lower GAF score
Benzodiazepine												
%	43.1	31.3	24.9	22.0	13.9	16.4	6.3	7.9	104.2	4.324	< .001	Older, female,
(N)	(125)	(86)	(67)	(58)	(10)	(11)	(4)	(5)	< .0001	–7.009	< .001	lower GAF score
Nonbenzodiazepine												
%	16.9	11.6	11.5	10.2	1.4	6.0	3.1	3.2	34.1	3.011	.003	Older, lower GAF score
(N)	(49)	(32)	(31)	(27)	(1)	(4)	(2)	(2)	< .0001	–2.222	.026	
Any neuroleptic												
%	38.6	28.7	23.1	27.3	12.5	11.9	9.4	7.9	84.3	3.078	.002	Older, female, lower
(N)	(112)	(79)	(62)	(72)	(9)	(8)	(6)	(5)	< .0001	–4.787	< .001	SES and GAF score
Conventional neuroleptic												
%	37.6	21.1	13.0	12.9	11.1	9.0	4.7	3.2	102.1	3.332	.001	Older, female, lower
(N)	(109)	(58)	(35)	(34)	(8)	(6)	(3)	(2)	< .0001	–8.480	< .001	SES and GAF score
Atypical neuroleptic												
%	6.2	11.3	12.6	16.3	2.8	4.5	4.7	4.8	43.8	1.851	NS	Older, female,
(N)	(18)	(31)	(34)	(43)	(2)	(3)	(3)	(3)	< .0001	4.251	< .001	lower GAF score
Any mood stabilizer												
%	35.9	30.2	23.4	22.0	11.1	16.4	7.8	6.4	88.5	3.560	< .001	Older, white,
(N)	(104)	(83)	(63)	(58)	(8)	(11)	(5)	(4)	< .0001	–5.049	< .001	lower GAF score
Anticonvulsant												
%	22.1	22.2	21.6	18.2	2.8	9.0	7.8	4.8	56.9	3.569	< .001	Older, white,
(N)	(64)	(61)	(58)	(48)	(2)	(6)	(5)	(3)	< .0001	–1.243	NS	lower GAF score
Lithium												
%	25.9	12.0	5.6	4.9	8.3	7.5	0.0	1.6	79.5	2.644	.008	White, lower GAF score
(N)	(75)	(33)	(15)	(13)	(6)	(5)	(0)	(1)	< .0001	–7.935	< .001	

Abbreviations: Dx = diagnosis, GAF = Global Assessment of Functioning, SES = socioeconomic status, SSRI = selective serotonin reuptake inhibitor.

sents a substantial decline from the 96% baseline figure, it also indicates a preference for or a need for ongoing psychotherapy. As a corollary, most of the borderline patients who participated in individual therapy did so in a sustained manner (i.e., were in individual therapy for a substantial proportion of each follow-up period with only 1 therapist per study period). Indeed, over 80% of those borderline patients in individual therapy participated for at least 50% of each 2-year follow-up period. Nearly as many (over 70%) participated for at least 75% of these 3 periods. While the rates of sustained psychotherapy remained relatively stable throughout the study's course, the percentage of borderline patients receiving intensive psychotherapy (defined as 2 or more therapy appointments per week) declined significantly over time (from 36% at baseline to 16% at 6-year follow-up).

Previous studies of the short-term course of borderline personality disorder[6,7,14–16,18,22] have found highly variable rates of individual therapy during follow-up, ranging from 33% to 73%, with a median figure of 64%. Our results concerning the percentage of borderline patients participating in individual therapy are consistent with the higher end of this range. However, the high rate of both individual therapy over 4 time periods and sustained individual therapies found in the current study are new findings.

The latter finding contradicts the common clinical belief that borderline patients typically engage in brief,

Table 5. Forms of Psychiatric Treatment Received by Remitted and Nonremitted Patients With Borderline Personality Disorder Followed Prospectively for 6 Years

	Remitted Borderline Patients				Nonremitted Borderline Patients							
	Baseline	2 Years	4 Years	6 Years	Baseline	2 Years	4 Years	6 Years	Model χ^2	Dx Time		
Treatment Modality	(N = 202)	(N = 202)	(N = 201)	(N = 200)	(N = 88)	(N = 73)	(N = 68)	(N = 64)	p Value	Z Score	p Value	Significant Covariates
Any outpatient treatment[a]												
%	97.0	98.5	82.6	84.0	100.0	98.6	100.0	100.0	53.3	–3.085	.002	Older, female, white
(N)	(196)	(199)	(166)	(168)	(88)	(72)	(68)	(64)	< .0001	–5.999	< .001	
Multiple forms of outpatient treatment												
%	91.1	85.6	67.7	62.0	93.2	91.8	92.7	90.6	98.4	–2.839	.005	Older, white,
(N)	(184)	(173)	(136)	(124)	(82)	(67)	(63)	(58)	< .0001	–8.340	< .001	lower GAF score
Any more intensive treatment[b]												
%	78.2	64.9	28.4	23.5	89.8	82.2	70.6	76.6	190.8	–6.152	< .001	Older, lower
(N)	(158)	(131)	(57)	(47)	(79)	(60)	(48)	(49)	< .0001	–12.620	< .001	GAF score
Multiple forms of more intensive treatment												
%	49.0	37.1	14.9	11.5	61.4	60.3	47.1	46.9	138.0	–4.535	< .001	Older, white,
(N)	(99)	(75)	(30)	(23)	(54)	(44)	(32)	(30)	< .0001	–10.121	< .001	lower GAF score

[a]Individual therapy, standing medication, group therapy, couples/family therapy, self-help group.
[b]Day treatment, residential care, inpatient hospitalization. All ECT treatments were administered during inpatient stays.
Abbreviations: Dx = diagnosis, GAF = Global Assessment of Functioning.

crisis-related therapies as well as the results of earlier studies that have found that borderline patients are prone to prematurely terminating treatment.[1,36] Several factors may account for this difference.

The first factor is that many therapists now see borderline personality disorder as the final common pathway for a variety of etiological influences, including adverse childhood experiences.[37] This belief in the importance of early events of a difficult or traumatic nature has led many therapists, in our opinion, to adopt a more empathic, less confrontational therapeutic style. It may be that this more supportive, validating therapeutic style is better matched to the hyperbolic, aggrieved personality style common among borderline patients.[38]

The second factor is that many clinicians are now wary of the regressive spirals that can emerge as a result of overly intense explorations of past events and their attendant thoughts and feelings.[39] As a result, even many highly experienced therapists tend to focus their efforts, especially during the early phases of treatment, on helping their borderline patients handle issues of immediate importance, such as learning to take care of day-to-day needs and gaining control of self-destructive behaviors. Taken together, this combination of factors may have made psychotherapy both more emotionally tolerable and more relevant for seriously disturbed borderline patients. This, in turn, may have permitted borderline patients to remain in psychotherapy for more sustained periods of time.

The third main finding of the current study is that over 70% of borderline patients were taking standing medications during all 3 follow-up periods. While this represents a significant decline from the 84% baseline figure, the results of this study also indicate a growing willingness among borderline patients (and Axis II comparison subjects) to remain on standing medications for sustained periods of time. More specifically, the percentage of borderline patients taking standing medications who took them for at least 50% of each time period increased from 73% at baseline to 83% at 6-year follow-up. Similarly, the percentage of borderline patients taking standing medications for at least 75% of each time period increased from 64% at baseline to 78% at 6-year follow-up.

Previous studies of the short-term course of borderline personality disorder[7,15,18,21,22] have found relatively low rates of medication treatment for borderline patients, ranging from 29% to 67%, with a median figure of 33%. We found higher rates of psychotropic medication prescription than the rates reported in most of these earlier studies. This difference is not surprising. Since the time that many of the earlier short-term studies were conducted, medications with better side effect profiles have been introduced. A number of these medications, including several of the SSRIs, atypical antipsychotics, and mood stabilizers, have been found in open-label and controlled trials to be safe and effective in the treatment of borderline patients.[40] The greater perceived efficacy and lower side-effect profiles of newer medications may be partly responsible for both the high rates of pharmacotherapy we found at all follow-up periods and the tendency for both borderline and comparison subjects to remain on these medications for sustained periods of time. These findings may also reflect, in part, the influence of managed care, which is typically more willing to pay for psychotropic medications than psychotherapy.

The fourth main finding of the current study is that high rates of intensive polypharmacy were reported by the borderline subjects in the follow-up waves. Forty percent of these patients reported taking 3 or more concurrent

standing medications during each follow-up period, 20% reported taking 4 or more, and 10% reported taking 5 or more. Neither the existence of newer medications nor pressures exerted by managed care can completely explain this finding. Clinical experience suggests that many psychiatrists, as in the current study, now have practices limited to psychopharmacology, and it may be that this more focused type of practice has led to more aggressive attempts to medicate the comorbid Axis I disorders as well as the symptoms of borderline personality disorder itself. This trend, which is commonly found in the treatment of many psychiatric disorders, has developed despite no empirical evidence of the effectiveness of polypharmacy, particularly intensive polypharmacy, in the treatment of borderline personality disorder.

The fifth main finding is that a significantly higher percentage of borderline patients than Axis II comparison subjects tended to take all major classes of medication, other than neuroleptics. They were also significantly more likely to take specific types of medications within classes: SSRIs, benzodiazepines, conventional neuroleptics, and anticonvulsants. The finding that borderline patients are more likely to be prescribed antidepressants, anxiolytics, and mood stabilizers than are Axis II comparison subjects echoes and reflects the high levels of both subjective feelings of dysphoria[41] and DSM mood and anxiety disorders[42] found in recent reports concerning criteria-defined borderline patients. Additionally, both groups of patients tended over time to stop taking older types of medication (tricyclic antidepressants, conventional neuroleptics, and lithium), while rates of newer medications in the same overall class of psychotropics increased or at least remained stable. It is difficult to determine if this "migration" was due to the search for greater efficacy, better compliance, or a higher degree of safety. However, this apparent move from medications available in generic versions to medications still under patent has clear-cut cost implications.

An additional, but expected, finding was that less symptomatic or remitted borderline patients used less treatment than did nonremitted borderline patients. While clear in the outpatient realm, this finding was statistically significant in the area of more intensive forms of treatment. More specifically, nonremitted borderline patients were 3 times more likely than remitted borderline patients to have used more intensive forms of treatment during the fifth and sixth years of follow-up. They were also 4 times more likely to have used multiple forms of more intensive treatment during this period. This finding makes clinical sense as patients with full-blown borderline personality disorder would be more likely to need psychiatric hospitalization, day treatment, and residential care due to the severity of their symptoms.

Only further waves of follow-up will provide data to address the following important questions about the course of the psychiatric treatment of borderline patients: Do borderline patients who are still using restrictive forms of care after 6 years of follow-up eventually no longer need to be hospitalized and/or no longer use day treatment or residential care? Do borderline patients who have only used outpatient treatment modalities during follow-up "outgrow" such treatments? If so, at what point in time does this occur?

LIMITATIONS AND DIRECTIONS FOR FURTHER RESEARCH

The most important limitation of the current study is that the entire sample of borderline patients was composed of subjects recruited as highly disturbed inpatients. To what extent these results would generalize to never-hospitalized outpatients is unclear. One might expect that less disturbed outpatients would want and need less treatment over time than would recovering inpatients, but only longitudinal studies of this type of moderately disturbed borderline personality disorder patient will answer this question. The naturalistic nature of the current study also limits what can be inferred about the effect of treatment on the symptomatic and psychosocial course of borderline personality disorder. This is so because hundreds of nonrandomly assigned mental health professionals provided the care for this sample of patients.

More research is needed that addresses the efficacy for borderline patients of various forms of psychotherapy and various psychotropic compounds. It is also important that studies that assess the long-term costs of treating both moderately and severely ill borderline patients be undertaken. Such studies could be used to compare the costs of treating borderline personality disorder to those of treating other serious psychiatric disorders.

Taken together, the results of this study suggest that the majority of borderline patients continue to use outpatient treatment modalities over time and that they use both psychotherapy and pharmacotherapy in a sustained manner. The results of this study also suggest that only a declining minority of borderline patients use more restrictive and costly forms of treatment as time progresses.

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