Use of the Brief Psychiatric Rating Scale to Measure Success in a Psychosocial Day Program

Roxanne Inch, M.A.
Margaret Crossley, Ph.D.
David Keegan, M.D.
Dorie Thorarinson, R.P.N.

This study contrasted six subscales of the Brief Psychiatric Rating Scale (BPRS) to determine their sensitivity to psychosocial treatment outcome. An expanded version of the BPRS was administered to 216 clients on admission to a day program. The subscale measuring hostility and suspiciousness discriminated at intake clients who were therapeutically discharged from clients who did not complete the program and predicted discharge status after the investigators controlled for the effects of demographic variables. Significant reductions in scores were obtained on five subscales for a subset of clients to whom the BPRS was readministered before discharge. The results support the use of the expanded BPRS as an evaluative tool in psychosocial rehabilitation programs. (*Psychiatric Services* 48:1195–1197, 1997)

The Brief Psychiatric Rating Scale (BPRS) (1) was originally devised as a symptom rating scale for psychopharmacology research. It has had a long history of use in clinical psychiatric and psychopharmacology research to evaluate change in patients' symptoms, classify patients according to their symptoms, and develop models for predicting treatment response (2). Lukoff and his colleagues (3–5), who developed an expanded 24-item version of the BPRS, indicated that the use of standardized measures such as the expanded BPRS by trained program staff is important for determining the course of rehabilitative treatment as well as enhancing research on rehabilitation interventions (3).

This paper describes a retrospective examination of BPRS data for individuals who were admitted over a four-year period to a community-based psychosocial day treatment program. This examination was undertaken to illustrate the potential utility of the expanded BPRS as an evaluative tool for quantifying symptom change and predicting successful program completion. We compared intake BPRS total and subscale scores for clients who completed the program successfully and for clients who were nontherapeutically discharged. We also compared intake with discharge BPRS ratings for a sample of clients who were rated using the BPRS before discharge.

Methods

Study participants were 216 adults—100 men and 116 women—who attended a psychosocial day treatment program in Saskatoon, Saskatchewan, between March 1989 and June 1994 and to whom the BPRS was administered as part of their intake assessment. The BPRS was readministered to a subset of 69 study participants before they were discharged from the program. These 69 clients attended the program an average of 134±67 treatment days.

The day treatment program is housed in a community setting and comprises structured therapy, psychoeducational groups, and community-based leisure and recreational activities. A detailed program description has been published elsewhere (6).

The mean±SD age of the participants was 37.6±11.5 years, and their average amount of education was 10.9±2.4 years. The majority were unmarried—112 were single, 60 were divorced, 36 were married, and eight were widowed. Seventy-seven participants lived with family members, 71 lived alone, and 68 lived in shared or supportive housing.

Primary *DSM-III-R* diagnoses were schizophrenia, for 52 participants; major depression, for 51; bipolar disorder, for 44; organic disorder, for 19; dysthymia or other depressive disorder, for 17; other nonpsychotic disorders, for 15; developmental disorders, for 11; and other psychotic disorders, for seven. In addition to the primary diagnostic grouping, 89 clients, or 41 percent of the sample, met criteria for a substance use disorder.

Intake BPRS data were grouped according to whether the clients went on to receive a therapeutic discharge (N=80) or nontherapeutic discharge (N=136) from the program. The two groups did not differ in education,

Ms. Inch is a research consultant and Ms. Thorarinson is a program coordinator at McKerracher Centre, Saskatoon District Health, Royal University Hospital, 103 Hospital Drive, Saskatoon, Saskatchewan, Canada S7N 0W8. Dr. Keegan is professor in the department of psychiatry and Dr. Crossley is assistant professor in the department of psychology at the University of Saskatchewan. Dr. Keegan is also head of the department of psychiatry for Saskatoon District Health.

Table 1

Mean total and subscale scores on the Brief Psychiatric Rating Scale-24 (BPRS-24) at program intake for clients with therapeutic and nontherapeutic discharges from a psychosocial day program

Scale	Therapeutic discharge (N=80)		Nontherapeutic discharge (N=136)		
	Mean	SD	Mean	SD	F[1]
Total BPRS-24	47.9	13.2	51.9	14.4	4.22
Anxious-depression[2]	3.1	1.0	3.3	1.2	1.19
Thinking disorder[3]	1.8	1.0	1.9	1.0	<1.0
Withdrawal-retardation[4]	2.3	1.0	2.5	1.0	2.92
Hostile-suspiciousness[5]	1.9	0.9	2.3	0.9	9.35*
Activation[6]	1.8	0.8	1.8	0.7	<1.0
Mania[7]	1.5	0.6	1.6	0.8	1.73

[1] df=1,214 for all comparisons
[2] Measures symptoms of anxiety, depression, guilt
[3] Measures unusual thought content, hallucinations, conceptual disorganization
[4] Measures emotional withdrawal, motor retardation, blunted affect
[5] Measures hostility, suspiciousness, uncooperativeness
[6] Measures tension, mannerisms, excitement
[7] Measures elated mood, motor hyperactivity, distractibility
*p<.005

marital status, living arrangements, or primary diagnosis.

The expanded BPRS-24 (3) was administered individually to the participants by one of several psychiatric nurses who were trained by the second author to use the administration and rating protocol. The scale was routinely administered during the first two weeks clients attended the program as part of the clinical intake assessment. The scale was readministered whenever possible within the last two weeks before discharge for clients who did not leave the program prematurely.

The type of discharge was determined by consensus rating among program staff using relatively strict criteria for the client's attaining individualized goals set at intake. According to these discharge criteria, clients received a therapeutic discharge if they met their program objectives, and a nontherapeutic discharge if they left the program prematurely for any reason.

The 24 BPRS scale items were rated on the 7-point scale described by Lukoff and associates (3). A score of 1 indicates that a symptom is not present; symptom ratings vary from 2, very mild, to 7, extremely severe. In addition to the BPRS-24 total score, scores for six subscales—anxious-depression, thinking disorder, withdrawal-retardation, hostile-suspiciousness, activation, and mania—were used in the analysis.

Results

Clients with therapeutic discharges were compared with those with nontherapeutic discharges using one-way analysis of variance for the BPRS-24 total score and scores on the six subscales (see Table 1). Levels of significance were set at p<.01 (Bonferroni adjustment, .05/7=.0071). The two groups did not differ significantly on the total score at program intake (p<.05). As Table 1 shows, F tests for scores on the six subscales indicated that the hostile-suspiciousness subscale score was significantly higher for clients who went on to receive nontherapeutic discharges than for clients who received therapeutic discharges.

To examine the potential effects of demographic variables, therapeutic versus nontherapeutic discharge was predicted using a logistic regression procedure in which demographic and diagnostic variables—age, sex, education, marital status, living arrangements, diagnostic group, and presence of a substance use disorder—were entered first, and then the six BPRS subscale scores as well as the BPRS-24 total score were entered using a forward stepwise procedure.

Age contributed significantly to type of discharge (Wald statistic=7.13, p<.01), with older clients more often attaining therapeutic discharge (F=13.02, df=1,214, p<.001). Consistent with the results of the analysis of variance, only the hostile-suspiciousness subscale entered the stepwise procedure (Wald statistic=7.17, p<.01). The addition of the hostile-suspiciousness subscale to the predictive model increased its accuracy of classifying clients by type of discharge from 67.1 percent to 72.2 percent.

The predischarge BPRS ratings for the 69 clients for whom the ratings were available were compared with the intake ratings for those clients. Paired t tests indicated significant decreases from intake to discharge on the BPRS-24 total score (50.6±12.8 versus 41±10.1; t=7.27, df=68, p<.001) and on five subscales: anxious-depression (3.3±1 versus 2.6±1; t=5.46, df=68, p<.001), thinking disorder (1.7±.9 versus 1.4±.5; t=3.63, df=68, p<.001), withdrawal-retardation (2.5±1.1 versus 1.9±.8; t=5.25, df=68, p<.001), hostile-suspiciousness (2.2±1 versus 1.8±.8; t=3.81, df=68, p<.001), and activation (1.9±.7 versus 1.6±.6; t=2.93, df=68, p<.005). The change in the mania subscale score, from 1.5±.6 to 1.3±.5, was not significant.

Discussion and conclusions

Previous investigations have demonstrated the clinical utility of the BPRS for monitoring the symptoms of patients with schizophrenia (3) and for predicting psychotic relapse (7). The retrospective examination reported on here was undertaken to provide a preliminary description of the usefulness of the expanded BPRS for assessing the impact of and predicting success in a psychosocial day treatment program. The ability to predict program success adds to the utility of a clinically informative tool.

Clients who were nontherapeutically discharged had higher scores on the BPRS hostile-suspiciousness subscale at program intake, compared with clients who completed the program successfully. Although age was also a significant predictor of discharge status, the hostile-suspiciousness subscale accounted for a small but significant increment in prediction of discharge status.

The BPRS is frequently used to assess change in symptoms over time (2), and we noted a significant de-

crease in BPRS total scores from program intake to discharge for a subset of clients who were retested. This drop in total BPRS scores was not limited to a specific symptom cluster but was consistent with a general decrease in reported symptoms.

We acknowledge that because this was not a controlled study, the results are not sufficient evidence for treatment success. Predischarge testing was limited to clients who remained in the program a significant period of time and whose discharge was planned with program staff.

Future investigations using the BPRS as a program outcome measure should include appropriate comparison groups, such as potential clients who refuse to enter the program and clients who drop out within days of admission. Data on interrater reliability and concurrent validity with other outcome variables will also be needed. ♦

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Mnemonics for DSM-IV Personality Disorders

Harold B. Pinkofsky, M.D., Ph.D.

The paper presents several mnemonics to assist clinicians in recalling *DSM-IV* diagnostic criteria for personality disorders. The mnemonics are acronyms, and each letter is associated with a specific criterion. Each acronym reflects a facet of the related disorder; for example, the acronym for the diagnostic criteria for paranoid personality disorder is SUSPECT, and for histrionic personality disorder it is PRAISE ME. The mnemonics have been used to teach students and residents the conceptual nature of *DSM-IV* disorders and to help them remember the criteria. (*Psychiatric Services* 48:1197–1198, 1997)

Dr. Pinkofsky is assistant professor in the department of psychiatry at Louisiana State University Medical Center, P.O. Box 33932, Shreveport, Louisiana 71130.

The criteria-based approach to diagnosis of mental disorders outlined in *DSM-IV* can present certain difficulties. The practitioner must memorize specific criteria for specific mental disorders. Improper recollection of the criteria may result in misdiagnosis.

Mnemonics have been used by various segments of the medical profession (1–3). Mnemonics for selected *DSM-III-R* and *DSM-IV* disorders have previously been described (1,2). This paper presents acronyms developed to help clinicians learn and recollect criteria for *DSM-IV* personality disorders. The acronyms reflect a facet of their respective disorders. These mnemonics have been helpful in teaching students and residents in our teaching program the conceptual nature of *DSM-IV* disorders and helping them remember the criteria. The mnemonics are intended to be used in conjunction with *DSM-IV* and not as a substitute for it.

In Table 1 the number in brackets refers to the number of the *DSM-IV* criterion for the disorder. The number of criteria needed to make the diagnosis is in parentheses after the acronym. ♦

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