"Does Insight Affect Long-Term Inpatient Treatment Outcome in Chronic Schizophrenia?"

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Abstract

The purpose of this study was to investigate whether the degree of insight into illness is associated with long-term inpatient treatment outcome in chronic schizophrenia. Inpatients diagnosed with schizophrenia were evaluated using the Global Assessment of Functioning (GAF) scale and the Functional Skills Rating Form (FSRF) at baseline and at follow-up evaluation 1 year after treatment. The Scale to Assess Unawareness of Mental Disorder (SUMD) was used to evaluate insight into illness at follow-up evaluation. Pearson correlation coefficients were used to evaluate the relationship between insight and outcome variables, and multivariate analyses and variance (MANOVAs) were used to assess differences in treatment outcome between patients with good versus poor insight. The results suggest that a patient’s insight is significantly related to global and specific measures of functional outcome. Moreover, patients with good insight showed better improvement after long-term inpatient treatment. These findings both support and expand on previous research indicating that increased insight into illness is associated with better treatment compliance and outcome. We propose that further research is necessary to specify the etiology of insight and to develop new interventions focused on increasing insight into illness.

Introduction
Schizophrenia is a common and chronic mental disorder usually involving marked and pervasive cognitive, affective, and behavioral dysfunction (World Health Organization, 1995). A variety of treatment regimens are available for patients afflicted with this illness, including pharmacotherapy and psychosocial rehabilitation (Penn & Mueser, 1996). Specific treatment approaches may include psychoeducation (Hogarty, Anderson, Reiss, and Kornblith, 1991), social skills training (Hayes, Halford, and Varghes, 1995), supportive group therapy (Eckman, Wirshing, Marder, Liberman, Johnston-Cronk, and Zimmerman et al, 1992), and behavioral family management (Randolph et al., 1994). However, despite long-term, intensive interventions by mental health practitioners, debilitating symptoms of illness often plague patients with schizophrenia over the course of a lifetime.

Recent research indicates that several measurable factors may be predictive of better overall treatment outcome among patients with schizophrenia. Insight into illness is one variable which has been consistently found to correlate positively with good versus poor outcome in schizophrenia. That is, good insight (or more awareness of having and mental disorder and its associated consequences) has been correlated with better overall improvement after pharmacological or psychological treatments (Schwartz, 1998). Conversely, lack of awareness of one’s mental condition and its ramifications is often associated with poor treatment compliance and outcome. As DSM-IV states, "Lack of insight [in schizophrenia] is common and may be one of the best predictors of poor outcome, perhaps because it predisposes the individual to noncompliance with treatment" (p. 279).

The purpose of the present study was to investigate further whether insight affects specific measures of treatment outcome in schizophrenia. Specifically, inpatients requiring long-term residential treatment were evaluated. Our goal was to test prior research observations that insight affects treatment gains in schizophrenia, and to expand the scope of clinical knowledge by examining a specific patient population while including various functional skill areas not researched previously. Therefore, several dimensions of insight were assessed and correlated with various specific and global measures of treatment outcome.

Methodology

Participants included 23 chronically psychotic patients (9 women and 14 men) between the ages of 20 and 52 years (M=40.1, SD=8.1). Participants were from various races (14 were Anglo-American, 6 were African-American, and 3 were Hispanic-American) and all subjects were diagnosed according to DSM-IV criteria. Diagnoses were based on structured psychiatric interviews and medical chart reviews, and all diagnoses were confirmed by a board-certified psychiatrist. Patients were randomly selected from an inpatient residential treatment program in Florida based on a simple random sampling procedure. Admission to the residential program and to this study was nondiscriminatory and was not based on severity of illness, mental disability, sex, age, level of functioning, or financial status. The criterion for admission into this longitudinal study was based only on a DSM-IV diagnosis of schizophrenia. All participants were provided with written and verbal information concerning the procedures, benefits, risks, and contact persons related to this study, and all patients gave written informed consent for their own participation.
After being formally admitted as inpatients, subjects were rated at baseline using the Global Assessment of Functioning (GAF) scale (APA, 1994). Multiple raters evaluated each patient during assessments to obtain interrater reliability. The intraclass correlation for rater agreement was .91. After initial GAF ratings, each patient received daily cognitive-behavioral counseling focused on medication compliance, social skills acquisition, and behavioral management. Common therapeutic factors between patients and counselors included environmental structure, a therapeutic alliance, advice and suggestions, cognitive learning and reality testing, behavioral regulation, and modeling.

From admittance until follow-up one year later, each patient was rated on a daily basis using the Functional Skills Rating Form (FSRF). The FSRF is a clinician-rated instrument developed by the primary author in order to evaluate psychosocial skills on an ongoing basis. Each skill area is scored using a 10-point scale (10=clear demonstration of skill without assistance or prompts, 1=refusal or inability to perform skill regardless of interventions utilized). Functional skill areas assessed in this study included punctuality, housekeeping, money management, communication skills, stress management, interpersonal skills, and participation in treatment.

One year after treatment, participants were again rated using the GAF scale. The intraclass correlation for rater agreement at posttest was .96. In addition, all participants were also rated using the Scale to Assess Unawareness of Mental Disorder (SUMD) at posttest. The SUMD is a reliable and comprehensive measure of insight which rates awareness of having a mental disorder, the need for treatment, the consequences of one’s mental disorder, awareness of hallucinations, delusions, thought disorder, poor judgment, poor attention, and lack of motivation. The SUMD assesses insight using a 6-point scale (0=symptom not present, 1=fully aware of symptom, 5=unaware of symptom) (Amador, Flaum, Andreasen, Struss, Yale, and Clark et al., 1994). Insight was evaluated only at posttest due to prior research findings which suggest that level of insight remains relatively stable over time (Amador et al., 1994; McEvoy, Freter, Everett, Geller, Appelbaum, and Apperson et al., 1989). The structured clinical interviews used to obtain SUMD ratings were conducted by two clinicians simultaneously in order to obtain interrater reliability. The intraclass correlation for rater agreement on the SUMD was .98.

Results and Discussion

Pearson correlations were used to evaluate the relationship between insight ratings and pretest GAF scores, posttest GAF scores, pretest FSRF scores, posttest FSRF scores, age, and total years of treatment. Participants were then separated into good insight versus poor insight groups to test differences in pretest and posttest scores on the GAF and FSRF. Good insight was defined as a SUMD score of less than 27 (an average rating of ‘somewhat aware of symptoms’). Poor insight was defined as a SUMD score of 27 or greater (an average rating of moderately to severely unaware of symptoms). A 2x2 MANOVA (good insight/poor insight and GAF pretest/GAF posttest) was used to evaluate the affect of insight on changes in global functioning after long-term treatment. A 2x2 MANOVA (good insight/poor insight and FSRF pretest/FSRF posttest) was used to evaluate differences in specific functional skill development after long-term treatment. An alpha level of p<.01 was used for all statistical tests.

Results of Pearson correlations indicate that level of insight is positively correlated with FSRF pretest scores (r=.53, p<.01), FSRF posttest scores (r=.70, p<.001), and GAF posttest scores (r=.65, p<.001). These results suggest that insight into illness may account for 28%, 49%, and 42% of the
Results of MANOVA for insight and GAF scores was significant (F=24.2, df=1.21, p<.001), indicating that pretest/posttest GAF scores were significantly related to ratings of insight. Follow-up tests (univariate ANOVAs) showed that GAF ratings at baseline did not differ between good versus poor insight groups. However, at posttest GAF ratings differed significantly as a function of insight (F=8, df=1, 21, p<.01). Results of MANOVA for insight and FSRF scores was also statistically significant (F=7.7, df=1, 21, p<.01), implying that degree of insight was significantly related to pretest/posttest FSRF ratings. Follow-up ANOVAs showed that FSRF pretest ratings were not significant between good versus poor insight groups. However, at posttest these groups significantly differed on level of functional skill development based on degree of insight (as rated using the SUMD). Therefore, good versus poor insight did not determine initial functional skill level, but did predict improvement in functional skills after long-term treatment.

The results suggest that poor insight is correlated with worse specific and overall functioning before and after treatment. In addition, those patients with good insight into their illness and its associated consequences may show significantly better improvement after long-term treatment. It is possible that greater insight will predispose a patient to increased motivation, greater understanding of the treatment processes, and a better therapeutic relationship with the practitioner. In effect, these processes may culminate in a simultaneous improvement in signs and symptoms, resulting in a better therapeutic outcome. Whether schizophrenic patients with poor insight function less effectively due to neuropsychological deficits, noncompliance with treatment, or more severe psychopathology is not fully known. But it is possible that increasing a patient’s insight could more effectively and efficiently promote recovery from psychosis (Greenfeld et al., 1989). We therefore assert that further research regarding the etiology and development of insight in schizophrenia is a highly valuable and necessary undertaking for clinicians and researchers focused on this area of investigation.