



Prediction of hospitalizations by schizophrenia patients' assessment of treatment: an expanded study

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Abstract

This study examines whether schizophrenia patients' global assessment of treatment predicts outcome in community care. Eighty-five patients rated the extent to which their treatment was right for them. The outcome measure was assessed by means of a hospitalization index reflecting the duration of full and partial hospitalization within a follow-up period of 24 months. Patients who dropped out ($n = 21$) assessed their treatment more negatively than those who remained in the care system during follow-up. Patients with no hospitalization ($n = 25$) expressed a more negative assessment than patients who were hospitalized in the follow-up period at least once ($n = 39$). In this latter subgroup, however, patients with a more negative assessment had a longer duration of hospitalization during follow-up, and patients' assessment of treatment was the best single predictor of outcome ($r = -0.50$, $P < 0.01$). In a multiple regression analysis, patients' assessment of treatment, the number of previous hospitalizations and the hospitalization index in the two years prior to the interview, together, explained approximately half of the variance of outcome (adjusted $R^2 = 0.46$). The findings underline the relevance of asking patients whether treatment is right for them, although the relationship between patients' assessment of treatment and long-term outcome seems more complex than previous studies suggested.

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1. Introduction

In various studies, schizophrenia patients' assessment of treatment has been found to be a significant predictor for outcome. Patients who do not believe that their current psychiatric treatment is right for them, show a poorer compliance with that treatment and are more likely to terminate treatment early. Even if treatment is applied continuously and properly, patients with a more negative assessment of treatment tend to have a less favorable outcome. In short-term neuroleptic treatment (Singh, 1976; Van Putten and May, 1978; Van Putten et al., 1981, 1984; Hogan et al., 1985; Bartko et al. 1987; Hogan and Awad, 1992; Awad, 1993), in complex hospital treatment (Bröker et al., 1995), and in day hospital treatment (Priebe, 1992; Priebe and Gruyters, 1994) patients who initially assessed treatment more negatively, showed significantly less improvement of psychopathology after three or four weeks of medication or at discharge from hospital or day hospital respectively. In all these studies,

patients' initial assessment of treatment was obtained using simple questions such as to what extent they believed that their medication or treatment in the given setting was right for them.

While most studies examined the relationship between patients' assessment of treatment and short-term outcome, we investigated in a previous study whether such assessments also have some predictive value for the outcome of long-term treatment. Using a visual analog scale, 34 schizophrenia patients receiving long-term treatment in community care rated the extent to which their treatment was right for them. These assessments predicted the duration of full and partial hospitalization during an initial follow-up period of 12 months and a longer follow-up period of 30 months. Patients who assessed their treatment more negatively had significantly longer hospitalizations in the two follow-up periods. The predictive value of patients' assessments of treatment was not explained by the influence of other variables (Priebe and Gruyters, 1995). This was a preliminary finding in a small and somewhat selective sample. If it is, however, replicated in further studies, it may have obvious implications for clinical practice as well as for research. Two aspects appear particularly relevant: (a) This predictor can be obtained by an extremely simple method which can be applied under most circumstances and is inex-

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pensive; (b) Patients' assessment of treatment seems to be a predictor in its own right and may explain variance in outcome in addition to other predictors. This assumption is in line with results from research on consumer satisfaction; although patients with a higher degree of psychopathology tend to be less satisfied with treatment in most studies examining this relationship, and although correlations of consumer satisfaction with other sociodemographic or clinical variables have been reported inconsistently, the associations are weak so that patients' satisfaction with treatment or assessment of it can not simply be taken as an epiphenomenon of other factors (Denner and Halprin, 1974; Edwards et al., 1978; Larsen et al., 1979; LeVois et al., 1981; Berger, 1983; Hansson and Berglund, 1985; Hansson et al., 1987; Conte et al., 1989; McIntyre et al., 1989; Gruyters and Priebe, 1992).

Since the original study, we have examined a bigger and more comprehensive sample of schizophrenia patients receiving long-term treatment in community care. We investigated whether their global assessment of treatment predicted the outcome within a follow-up period of 24 months. Three questions were addressed:

- (1) Do patients who drop out of treatment in community care during the following two years, express a more negative assessment of treatment?
- (2) Does patients' global assessment of treatment predict the duration of their full and/or partial hospitalization within the follow-up period in the remaining group?
- (3) Is the predictive power of these assessments explained by the influence of other variables or does it add to the predictive value of other factors?

2. Methods

This study was carried out in the same setting as the original study. It is a community care system in an inner district of Berlin, Germany (Charlottenburg with about 200,000 inhabitants) (Steinhart and Priebe, 1992). The system is oriented toward providing long-term treatment for patients with severe and chronic mental disorders. It includes three partial-hospitalization programs, several community based services (a day-care center, a drop-in center, single and group protected-living apartments), and various outpatient facilities. In-patient care is provided in co-operation with psychiatric hospitals. Continuity of care is guaranteed by clinical case managers (Priebe and Gruyters, 1995).

Criteria for inclusion were a diagnosis of schizophrenia or schizoaffective disorder according to DSM-III-R (American Psychiatric Association, 1987) and continuous treatment in the community care system for at least three months. All 120 patients who fulfilled these criteria within a period of one year, were included. Patients were asked

to assess their treatment ("Is the treatment you are currently receiving right for you?"). The answers were self-rated on a 10 cm long visual analog scale (extreme points: 0 = not right at all, 10 = completely right). Each 1 cm interval is marked so that the scale combines qualities of a visual analog scale with features of a 11-point rating scale (Luria, 1975; Guyatt et al., 1987; Priebe and Gruyters, 1993, 1995). The same scale has also been demonstrated to predict outcome of day hospital treatment and of in-patient treatment in schizophrenia patients (Priebe and Gruyters, 1994; Bröker et al., 1995). Sociodemographic variables and data from patients' psychiatric history were recorded using a standardized documentation (Bosch and Lübke-Westermann, 1981). Psychopathological symptoms were rated on the Brief Psychiatric Rating Scale (BPRS; Overall and Gorham, 1962). All patients were examined by the same interviewer not otherwise involved in treatment who also made the diagnosis on the basis of a Present State Examination (Wing et al., 1974).

The total number of days of both full and partial hospitalization was recorded for the follow-up period. A hospitalization index (HI) was calculated reflecting the degree (full or partial) and duration of all periods of hospitalization: $(n \text{ days in full hospitalization} \times 3) + (n \text{ days in partial hospitalization} \times 2) / (\text{days in the observation period})$. The HI—a modification of indices used by Lavik (1983) and Tansella et al. (1986)—provides an approximate reflection of costs for in-patient and day hospital care during the observation period and has been used for assessing long-term outcome in other studies (Steinhart and Priebe, 1992; Priebe and Gruyters, 1993, 1995). The HI was also calculated for the two years prior to the interview.

The methods for examining patients' assessment of treatment, psychopathology and outcome were the same as in the original study. Because there was no substantial difference between the results concerning the two follow-up periods of 12 and of 30 months in the original study, we used only one follow-up period in this study. Thus, there was only one outcome criterion and one hypothesized predictor so that Bonferroni-adjustments of predictive relationships were not needed.

2.1. Statistical analysis

Differences between subgroups, i.e. drop-outs vs remaining patients and hospitalized vs non-hospitalized patients, were analysed by means of χ^2 contingency tables and *t*-tests depending on whether the variables involved were continuous or categorical. When differences were significant, group differences were controlled for the influence of other variables by a simple factorial ANOVA including other variables as co-variates. Thus, differences were reanalysed with the influence of other potentially influential variables partialled out. For examining associ-

ations of patients' assessment of treatment with sociodemographic and clinical variables point-biserial correlations—with dichotomous variables, and Pearson's product moment correlations—with continuous variables were used. For assessing the contribution of variables to the prediction of group differences we applied a stepwise forward logistic regression analysis with group status as dependent variable.

The way in which patients' assessment of treatment and other variables predicted the HI in the follow-up period was examined by single correlations. Additionally, a stepwise forward multiple regression analysis with the HI as dependent variable was calculated including all variables showing significant single correlations with the HI as predictors. According to the central limit theory we considered the requirements of the multiple regression analysis regarding the distribution of values as fulfilled in a sample size of > 30 (Kendall and Stuart, 1973).

3. Results

3.1. Sample

Thirty-five patients did not participate in the study; 25 of them refused to be examined, and 10 were not interviewed because of the severity of psychopathology. These 35 patients achieved a lower level of school education ($\chi^2 = 10.63$, $df = 3$, $P < 0.05$) and of occupational qualification ($\chi^2 = 9.41$, $df = 4$, $P = 0.05$) than the remaining 85 patients. The two groups did not differ significantly regarding any other sociodemographic or clinical variable.

The ages of the 85 patients who were interviewed (38 women and 47 men) ranged from 21–68 years (mean = 38.8, standard deviation (SD) = 9.7). At the time of the study, 48 of them were living alone, 21 with a partner, and 10 patients were living with their parents or with other family members. Eleven patients had not completed their primary school education, 52 had completed secondary school, and 22 had completed higher education. Twenty-nine patients had no occupational qualifications, 52 had completed an apprenticeship, and four held university degrees. Twenty patients had a job; 65 were unemployed or prematurely retired. At the time of the interview the mean BPRS score was 32.6 (range = 18–55; SD = 8.5). The duration of illness varied between 0 and 39 years (mean = 10.9, SD = 7.6), and the number of previous hospitalizations ranged from 0–17 (mean = 5.2, SD = 4.0). Patients had been treated within the community care system for between three months and approximately 20 years (mean = 5.8 years, SD = 4.7). The HI for the two years prior to the study was 0.70 (SD = 0.81). At the time of the interview, seven patients were not taking neuroleptic medication; 57 patients were receiving conventional neuroleptics, and 21 patients were on atypicals; 31 patients received depot

medication. The mean neuroleptic dosage was equivalent to 340 mg (SD = 270) chlorpromazine (CPZ) (Jahn and Mussgay, 1989). 57 patients regularly participated in one of the following group activities: occupational therapy, music therapy, dancing, various forms of talk therapies. Ten patients were in sheltered accommodation, and 24 in intensive day care programmes.

3.2. Assessment of treatment

On average, patients' view of long-term treatment was positive (mean = 7.4, SD = 2.4). The extent to which patients rated their treatment as being right was significantly correlated with age (Pearson's $r = 0.23$, $P < 0.05$), to the BPRS score ($r = -0.23$, $P < 0.05$), and to the HI during the two years prior to the interview ($r = -0.28$, $P < 0.01$). Younger patients, patients with a higher degree of symptoms and those with longer duration of hospitalization in the last two years tended to assess their treatment more negatively. Other sociodemographic variables (gender, living situation and occupational status) or clinical variables (number of previous hospitalizations, duration of illness, and current dosage of neuroleptic medication) were not significantly correlated with patients' global assessment of treatment.

3.3. Differences between subgroups

By the end of the follow-up, 21 patients had dropped out of treatment. Characteristics of these 21 patients and of the remaining 64 patients are shown in Table 1.

The 21 patients who later dropped out, assessed their treatment significantly more negatively than the 64 patients who did not. They also had a higher HI in the last two years and were more often unemployed, yet these differences failed to reach statistical significance. There was no significant difference in any other sociodemographic or clinical variable including the recorded treatment characteristics. In a stepwise forward logistic regression analysis, we tested which variables would significantly contribute to the prediction of whether patients dropped out or not. In this multivariate analysis, patients' assessment of treatment turned out to be the only predictor. Thus, patients who drop out of treatment during the two-year-follow-up expressed a more negative assessment of treatment, and this predictive relationship was not explained by the influence of any other variable that was recorded in the study.

The remaining two subgroups who did not drop out within the two year follow-up, differed in some variables as summarized in Table 2.

As compared to the 39 patients who were hospitalized at least once, the 25 non-hospitalized patients tended to have a longer duration of illness, had been treated in the community care system for a longer time already, had a lower HI in the two years prior to the study; and tended to assess their treatment more negatively; when the influ-

Table 1
Sociodemographic and clinical characteristics: differences between dropouts and patients remaining in the care system during follow-up

| Variables | Drop out patients (<i>n</i> = 21) Mean (SD)/ <i>n</i> (%) | Remaining patients (<i>n</i> = 64) Mean (SD)/ <i>n</i> (%) | <i>t</i> / χ^2 | df | <i>P</i> |
|---------------------------------------|---|--|---------------------|----|--------------------|
| Gender | | | | | |
| Female | 10 (47.6) | 28 (43.8) | | | |
| Male | 11 (52.4) | 36 (56.2) | 0.1 | 1 | ns |
| Age (years) | 37.5 (9.6) | 39.2 (9.7) | 0.7 | 83 | ns |
| Living situation | | | | | |
| Alone | 13 (61.9) | 31 (48.4) | | | |
| Not alone | 8 (38.1) | 33 (51.6) | 1.1 | 1 | ns |
| School education | | | | | |
| Sec. school not completed | 4 (19.0) | 7 (10.9) | | | |
| Sec. school completed | 11 (52.4) | 41 (64.1) | | | |
| Higher education | 6 (28.6) | 16 (25.0) | 1.2 | 2 | ns |
| Professional qualification | | | | | |
| No occupational qualification | 8 (38.1) | 21 (32.8) | | | |
| Apprenticeship completed | 11 (52.4) | 41 (64.1) | | | |
| University degree | 2 (9.5) | 2 (3.1) | 1.9 | 2 | ns |
| Job situation | | | | | |
| Employed | 2 (9.5) | 18 (28.1) | | | |
| Unemployed | 19 (90.5) | 46 (71.9) | 3.0 | 1 | <0.10 |
| Duration of illness (years) | 9.4 (7.0) | 11.3 (7.7) | 1.0 | 83 | ns |
| Number of previous hospitalizations | 4.6 (2.7) | 5.4 (4.3) | 0.8 | 83 | ns |
| Treatment in the care system (months) | 52.3 (51.8) | 74.5 (56.4) | 1.6 | 83 | ns |
| HI for the last two years | 1.0 (1.0) | 0.6 (0.7) | 1.8 | 83 | <0.10 |
| Neuroleptics (CPZ equivalents, in mg) | 354.4 (337.4) | 334.5 (247.0) | 0.3 | 83 | ns |
| Assessment of treatment (on VAS) | 6.1 (2.7) | 7.9 (2.1) | 3.1 | 83 | <0.01 ^a |
| BPRS-Sumscore | 33.7 (9.8) | 32.3 (8.0) | 0.7 | 83 | ns |

ns = not significant.

^a The difference remained significant after controlling for effects of the HI during last two years, and of the job situation.

ence of HI during the last two years, duration of illness and duration of treatment in the care system were controlled (as covariates in ANOVA), the difference in patients' assessment of treatment reached statistical significance. Including these four variables as predictors in a stepwise logistic regression analysis the HI in the past two years and patients' assessment of treatment predicted significantly whether patients were hospitalized during the follow-up or not ($\chi^2 = 18.2$, $P < 0.001$).

3.4. Prediction of hospitalization

The 39 patients who were hospitalized at least once during the two years following the interview, spent between 0 and 533 days in partial hospitalization programs (mean = 116.3, SD = 150.3). Days of full time hospitalization varied between 0 and 468 (mean = 45.8; SD = 85.0). The mean HI for this period was 0.53 (SD = 0.54).

In this subgroup, patients' global assessments of treatment was significantly correlated with the HI for the follow-up period ($r = -0.50$, $P < 0.01$). When the 39 patients were allocated to two further subgroups using the median as cut-off point, the HI of the 17 patients with

a more negative assessment of treatment was more than three times higher than the HI in the other 22 patients who had assessed treatment more positively (0.87 vs 0.27, $t = 3.7$, $P < 0.001$).

Besides patients' assessment of treatment, four of all the variables recorded in the study were significantly related to the HI in the subsequent two years in these 39 patients. Patients with a longer duration of illness ($r = 0.33$, $P < 0.05$), with more previous hospitalizations ($r = 0.41$, $P < 0.01$), and with an higher HI in the last two years ($r = 0.43$, $P < 0.01$), and those patients who were unemployed or prematurely retired (point-biserial $r = 0.37$, $P < 0.05$) spent significantly more days in full and/or partial hospitalization during the follow-up period. However, no variable recorded in this study was found to be significantly correlated with both the patients' assessment of treatment and the HI. A stepwise forward multiple regression analysis with the HI as dependent variable was calculated including these four variables and patients' global assessments of treatment as predictors (i.e. all variables showing significant single correlations with the HI were tested as predictors). The result is summarized in Table 3.

Patients' assessment of treatment was the best single

Table 2
Sociodemographic and clinical characteristics: differences between non-hospitalized and hospitalized patients

| Variables | Non-hospitalized patients (<i>n</i> = 25) Mean (SD)/ <i>n</i> (%) | Hospitalized patients (<i>n</i> = 39) Mean (SD)/ <i>n</i> (%) | <i>t</i> / χ^2 | df | <i>P</i> |
|---------------------------------------|---|---|---------------------|----|--------------------|
| Gender | | | | | |
| Female | 11 (44.0) | 17 (43.6) | | | |
| Male | 14 (56.0) | 22 (56.4) | 0.0 | 1 | ns |
| Age (years) | 41.4 (11.4) | 37.8 (8.3) | 1.4 | 62 | ns |
| Living situation | | | | | |
| Alone | 12 (48.0) | 19 (48.7) | | | |
| Not alone | 13 (52.0) | 20 (51.3) | 0.0 | 1 | ns |
| School education | | | | | |
| Sec. school not completed | 4 (16.0) | 3 (7.7) | | | |
| Sec. school completed | 14 (56.0) | 27 (69.2) | | | |
| Higher education | 7 (28.0) | 9 (23.1) | 1.5 | 2 | ns |
| Professional qualification | | | | | |
| No occupational qualification | 7 (28.0) | 14 (35.9) | | | |
| Apprenticeship completed | 16 (64.0) | 25 (64.1) | | | |
| University degree | 2 (8.0) | — | 3.4 | 2 | ns |
| Job situation | | | | | |
| Employed | 9 (36.0) | 9 (23.1) | | | |
| Unemployed | 16 (64.0) | 30 (76.9) | 1.3 | 1 | ns |
| Duration of illness (years) | 13.5 (8.1) | 9.9 (7.2) | 1.9 | 62 | <0.10 |
| Number of previous hospitalizations | 5.8 (4.6) | 5.1 (4.1) | 0.6 | 62 | ns |
| Treatment in the care system (months) | 91.8 (52.4) | 63.5 (56.6) | 2.0 | 62 | <0.05 |
| HI for the last two years | 0.3 (0.4) | 0.8 (0.8) | 3.6 | 62 | <0.01 |
| Neuroleptics (CPZ equivalents, in mg) | 338.2 (273.3) | 332.2 (232.3) | 0.1 | 62 | ns |
| Assessment of treatment (on VAS) | 7.3 (2.4) | 8.2 (1.9) | 1.8 | 62 | <0.10 ^a |
| BPRS-Sumscore | 31.1 (7.5) | 33.0 (8.4) | 1.0 | 62 | ns |

ns = not significant.

^a The difference reached a high level of significance ($P < 0.01$) after controlling for effects of HI during last two years, duration of illness, and duration of treatment in the care system.

predictor of outcome. The frequency of previous hospitalizations and the HI for the two years prior to the study were also included in the equation of regression and contributed significantly to the explanation of the variance. Together, the three variables explained 51% of the variance of the HI in the follow-up period.

4. Discussion

Schizophrenia patients' global assessment of treatment in community care was, on average, very positive. Yet, it varied, and its variation was correlated with patients' age and psychopathology. These findings are consistent with

Table 3
Prediction of the hospitalization index (HI) for 24 months (*n* = 39): significant correlations with predictors and stepwise forward multiple regression analysis (Multiple $R = 0.71$, $R^2 = 0.51$, adjusted $R^2 = 0.46$)

| Predictor | Single correlations with HI for 24 months follow-up | Multiple regression analysis | |
|---------------------------|---|------------------------------|----------------|
| | <i>r</i> | β | R^2 change |
| Assessment of treatment | −0.50** | −0.37** | Step 1: + 0.25 |
| Previous hospitalisations | 0.41** | 0.43** | Step 2: + 0.15 |
| HI during last two years | 0.43** | 0.35* | Step 3: + 0.11 |
| Duration of illness | 0.33* | ns | — |
| Occupational status | −0.37* | ns | — |

* $P < 0.05$; ** $P < 0.01$; ns not significant/not in the final equation.

numerous previous results reported in the literature (Corrigan, 1990; Gruyters and Priebe, 1994).

Patients who dropped out of treatment during the two year follow-up, had expressed a significantly more negative assessment of treatment in the interview. It is not surprising that patients who have more serious doubts as to whether their treatment is right for them, are more likely to terminate this treatment early than those patients who are convinced that their current treatment is completely right for them. This result may be seen as a predictive validity for the simple method used to examine patients' assessment of treatment in this study. Despite the trivial nature of this result it may nevertheless be relevant. Patients' assessment of treatment was the best predictor for whether patients later dropped out or not, and in a multivariate analysis its predictive power was not improved upon by the additional consideration of all other variables recorded in this study.

Within the subgroup of patients who did not drop out and who were hospitalized at least once in the follow-up period, patients' global assessment of treatment was the best predictor for the duration of full and/or partial hospitalization during the following two years. Alone, it predicted 25% of the variance of the HI. This predictive value was not explained by the influence of any other variable recorded in this study. Together with three variables of patients' psychiatric history patients' assessment of treatment added to an explanation of approximately half of the variance of the outcome criterion. This amount of predicted variance may not be satisfactory and certainly not good enough to make a reasonable prediction for a single given patient, but it seems sufficient to regard patients' assessment of treatment as a relevant predictor.

These results are in line with the original study and with findings on the relationship between patients' assessment and outcome of short-term treatment. This study, however, is not only a replication, but an expanded investigation. More variables of potential influence were considered than in the original study, and the sample was less selective and bigger so that results for subgroups could be analysed separately. The analysis of subgroups revealed that the relationship between patients' assessment of long-term treatment and outcome may be more complex than previously suggested. Patients without any hospitalization during follow-up had expressed a less positive assessment of treatment than those patients who were hospitalized at least once—and not a more positive one as one might have expected. The difference reached statistical significance when the influence of other influential factors was controlled.

The subgroup of patients with hospitalization during follow-up had assessed their treatment with a mean score of 8.2 on a scale the positive extreme of which is 10. A more positive assessment on a group level is hardly possible. Thus, there is an obvious limitation to predicting a more favorable outcome by a more positive

assessment of treatment across groups. In groups with different psychiatric histories and prognoses, patients' assessment of treatment may adjust to different levels. Moreover, it might reflect different psychological processes and expectations in the patients. It can be speculated that patients who were not hospitalized in the two year follow-up, had higher expectations as to what their treatment should achieve and that they were less prepared to accept disadvantages and side effects associated with treatment. The course of their illness had been more positive in the last two years, and they might see less need for psychiatric treatment, want to become more independent from it and subsequently feel more critical toward their ongoing treatment. In this subgroup, the variation in patients' assessment of treatment could not be tested for its predictive value for outcome, because the outcome criterion used in this study did not vary (all patients having a HI of zero).

It remains unclear whether the findings can be replicated in different settings and in patients who are not in continuous treatment for, on average, more than five years already. Further studies should focus on the mediating factors accounting for the predictive association between schizophrenia patients' assessment and outcome of long-term treatment (Priebe and Gruyters, 1993). It may be noted that concerning outcome of short-term treatment those factors are also poorly understood, although more research has been done in that field (Singh, 1976; Van Putten and May, 1978; Van Putten et al., 1981, 1984; Hogan et al., 1985; Bartko et al., 1987; Hogan and Awad, 1992; Awad, 1993). In long-term treatment this predictive relationship is even more complicated because the association is—as this study shows—not straightforward across different groups, because the assessment of treatment has been shown to vary substantially over longer periods of time in some patients (Gruyters and Priebe, 1992), and because aims of treatment might vary over time and across individual patients more than in short-term treatment. In this study, hospitalization was used as an operationalized outcome criterion. While preventing and shortening of hospitalization is a central goal in community care, it is not the only one; moreover, reasons for hospitalisation as well as its social and clinical impact vary depending on the given treatment situation. Further research might use more specific and individualized outcome criteria and should examine whether specific therapeutic interventions can affect patients' assessment of treatment and, subsequently, improve outcome.

In line with previous studies, the results suggest that schizophrenia patients' global assessment is of predictive value for the outcome not only of short-term treatment, but also of long-term treatment in community care. This applies even if these assessments are obtained by a simple method. A more negative assessment is associated with a higher likelihood to drop out of treatment, and with a

tendency for longer periods of full and/or partial hospitalizations in those patients who do not drop out and are hospitalized at least once. The finding that patients without any hospitalization in the follow-up period, had assessed their treatment more negatively than the hospitalized patients, demonstrates that differences in patients' assessment between subgroups with different psychiatric histories and probably with different levels of expectations are not fully understood yet. Thus, patients' assessment of long-term treatment alone, i.e. without further data specifying the patients' prognosis and expectations, has only a limited predictive value.

Nevertheless, schizophrenia patients' assessment of psychiatric long-term treatment appears to be worth obtaining, and one simple question is sufficient to elicit predictive information. In clinical practice, patients' answers should be taken seriously. Negative assessments may be a reason to explore patients' view of treatment in a more detailed way and to consider modifying treatment components or the treatment setting. In research, patients' ratings may be used for explaining variance in outcome, preferably in addition to other predictors.

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