Subjective Evaluation: Is There More Than One Criterion?

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Abstract

Previous cross-sectional investigations have shown that subjective evaluation criteria (criteria that are used in psychiatric research for evaluating care based on patients' statements) do overlap and that there exists a single general factor underlying all these criteria. In this study, we tested longitudinally and in two different samples of schizophrenia patients the distinctness and covariation at baseline and at followup of three common subjective evaluation criteria (subjective quality of life, self-rated needs, and self-reported symptoms). Scores were intercorrelated at both baseline and followup and showed some intercorrelations over time, suggesting temporal covariation. One stable subjective appraisal factor was identified at both baseline and followup, summarizing a negative subjective quality of life and more symptoms and needs. This factor explained 50 percent to 69 percent of the variance. It was found to be strongly associated with observer-rated mood and was mainly predicted by reporting dark thoughts and being dissatisfied with life as a whole. In subjective evaluation, there appears to be a need to distinguish between a general appraisal factor and specific aspects of different criteria. Therefore, future research needs to focus on how the general factor can be assessed more directly and to identify how the specific variance of different criteria independent of that factor can be maximized.

Keywords: Quality of life, self-reported symptoms, needs, schizophrenia, subjective evaluation.

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Over the past 3 decades, there has been a growing emphasis worldwide on assessing users' views on mental health services and increasing users' involvement in service planning and provision, with the aim to increase service responsiveness to mental health users, their families, and their caregivers (Steenfeldt-Foss et al. 1999). The focus on service users' involvement has led to an increase in the use of subjective criteria for measuring and evaluating outcome of care. Subjective evaluation criteria are based on patients' statements and reflect their views, feelings, and judgments. Three of the most commonly used subjective evaluation criteria are subjective quality of life (SQOL), self-rated symptoms, and self-rated needs.

Various instruments have been developed for measuring these criteria in schizophrenia patients. In research, a number of them have been established to assess SQOL (Quality of Life Interview, Lehman et al. 1982; the Oregon Quality of Life Instrument, Bigelow et al. 1991; the Lancashire Quality of Life Profile, Oliver 1991; and the Manchester Short Assessment of Quality of Life, Priebe et al. 1999*b*), self-reported symptoms (Von Zerssen Complaints checklist, Von Zerssen 1986; the Schizophrenia Symptom Distress Statement and the Schizophrenia Symptom Intensity Statement, Hamera et al. 1996), and self-rated needs (Camberwell Assessment of Need, Phelan et al. 1995; the U.K. Health of the Nation Outcome Scales, Wing et al. 1996).

Subjective evaluation criteria have been reported to have varying, but on the whole modest, correlations with their "objective" observer-rated counterparts. Numerous studies reported a weak to moderate correlation between patients' SQOL and objective indicators of quality of life (Oliver et al. 1996, 1997). With respect to specific life domains, stronger associations between objective and subjective indicators were found (Postrado and Lehman 1995; Priebe et al. 1998*b*). Weak to moderate correlations were also found between observer-rated and self-rated psychopathology (Deluty et al. 1986; Faravelli et al. 1986; Fava et al. 1986), and observer-rated needs for care and self-rated needs (Hoffmann and Priebe 1996; Slade et al. 1996). The lack of substantial correlations between

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subjective evaluation criteria and their objective counterparts led for the call to consider subjective evaluation criteria as evaluation criteria in their own right (Priebe et al. 1998*a*).

Recent research has indicated that different subjective evaluation criteria may not be distinct in what they assess. The premise has always been that different criteria have different theoretical foundations and therefore reflect different constructs. Priebe et al. (1998*a*) found that, in four different samples of patients diagnosed with schizophrenia or alcoholism, criteria such as self-rated symptoms, self-rated needs, SQOL, and patient assessment of treatment were all substantially intercorrelated. When subjected to factor analysis, the four criteria loaded on a single general subjective factor that accounted for almost half of the total variance of the criteria. The authors therefore suggested that the use of more than one subjective criterion should occur only with specific hypotheses, acknowledging that their analyses were based on cross-sectional data and would need to be repeated using longitudinal data.

In this study, we explored how the three most common subjective evaluation criteria covaried over time in two different samples of schizophrenia patients. More specifically, the analysis addressed the following questions:

1. Were SQOL, self-rated needs, and self-rated symptoms intercorrelated at both baseline and followup, and were the changes over time in these criteria also intercorrelated?
2. Did the criteria load on one general factor? If so, which items significantly predicted and substantially contributed to the variance in factor scores pertaining to that factor?
3. Did the factor scores correlate with observer-rated psychopathology, and did the changes in factor scores correlate to changes in psychopathology, particularly mood?
4. Were the individual items of the various instruments influenced by only the subjective appraisal factor? If not, and in case it was possible to identify them, which items in the instruments contributed to the variance of each criterion that was not explained by scores of the general subjective appraisal factor?

Methods

Subjects. The analysis was conducted on two samples of schizophrenia patients, a first admission sample and a group of long-stay patients, some of whom were resettled in the community. The characteristics are presented in table 1.

The first admission sample consisted of 51 followup patients out of an original group of 90 patients with a schizophrenia diagnosis (ICD–10, F20–F23) who were admitted for the first time to psychiatric hospitals (or departments at general hospitals) in Berlin or Potsdam, Germany. These patients were first interviewed between the second and the fourth week of hospital treatment (baseline interview) and were re-interviewed after 9 months (followup interview) (Priebe et al. 2000). At followup, 46 of them were being treated on an outpatient basis, and 5 were still or again receiving inpatient care or attending a day hospital. The 51 patients did not differ significantly from those who were not followed up (39 patients) on the main sociodemographic characteristics (age, gender, marital status, and monthly income).

The long-term hospitalized sample consisted of 58 of 113 followup schizophrenia patients (ICD–10, F20–F23) who were recruited in the Berlin Deinstitutionalisation Study from a catchment area of 550,000 residents in Berlin and were re-interviewed on average after 18 months (Priebe et al. 1996; Hoffmann et al. 2000). The decision to restrict the analysis to 58 patients (51% of the total sample) was based on the availability of complete data on all the subjective evaluation criteria that were investigated in this study. At followup, 29 of the 58 patients were being treated on an outpatient basis, and the others were still or again receiving inpatient hospital care. Comparing patients included in the sample (n = 58) to patients who were followed up but were not part of this sample (n = 55), there were no statistically significant differences between the two groups in either length of stay in the hospital or other sociodemographic characteristics (age, gender, marital status, or monthly income). Full details of the first admission group have been reported in Priebe et al. (2000) and of the long-stay sample in Hoffmann et al. (2000).

Subjective Evaluation Criteria. Three self-rated subjective evaluation criteria were investigated in this study. As in a previous cross-sectional analysis (Priebe et al. 1998*a*), the Berlin Needs Assessment Schedule (Berliner Bedürfnis-Inventar) was used for assessing needs (Hoffmann and Priebe 1996), the Von Zerssen Complaints checklist (Von Zerssen 1986) for the self-rating of symptoms, and the German version of the Lancashire Quality of Life Profile (Berliner Lebensqualitätsprofil) (Oliver 1991) for measuring SQOL.

The Berlin Needs Assessment Schedule gathers patients' views on their need for help or support in 16 areas with a dichotomous rating for each area. A rating of 0 reflects no need, while a rating of 1 means that a need existed (Priebe et al. 1995; Hoffmann and Priebe 1996). In the analysis, a sum score of 15 out of the 16 items was

Table 1. Characteristics of the first admission sample (n = 51) and the long-term hospitalized sample (n = 58)

	First admission	Long-term hospitalized
Gender (% male)	35.3	51.7
Age (yrs, mean ± SD)	30.0 ±10.2	46.6 ± 13.3
Monthly income (deutshe mark, mean ± SD)	1,364.5 ± 672.1	430.5 ± 454.0
Marital status (% with spouse or partner)	35.0	12.2
Total length of stay in hospital (months, mean ± SD)	—	64.2 ± 75.8
BPRS sum score (mean ± SD)	46.5 ± 10.4	47.0 ± 16.6
BPRS subscales (mean ± SD)		
Anxiety/depression	10.9 ± 3.2	12.5 ± 5.3
Anergia	10.3 ± 3.3	11.3 ± 4.0
Thought disorder	10.1 ± 3.7	9.0 ± 5.0
Activity	6.6 ± 2.7	7.9 ± 4.1
Hostility	8.6 ± 3.5	6.7 ± 3.6

Note.—BPRS = Brief Psychiatric Rating Scale; SD = standard deviation.

used. The item on need for support with housework was excluded because of its irrelevance to hospitalized patients.

The Von Zerssen Complaints checklist is a 29-item scale of unspecific psychological and physical symptoms that has been used with patients with different psychiatric diagnoses in both epidemiological and clinical studies (Von Zerssen 1986). Patients were asked to provide a rating for each of the 29 complaints ranging from 0 (not existent) to 3 (severe). For the purpose of the analysis, a sum score of all the complaints was calculated.

The Lancashire Quality of Life Profile (LQOLP) devised by Oliver (1991) was theoretically based on Lehman's research that considered patient satisfaction with life in general and in major life domains as SQOL (Lehman 1996). Patients rate their satisfaction with life as a whole and with different life domains on 7-point scales ranging from 1 (could not be worse) to 7 (could not be better). The means of satisfaction with life as a whole and satisfaction with six domains were taken as indicators of SQOL. There is evidence that this mean score has satisfactory psychometric properties (Kaiser et al. 1997; Kaiser and Priebe 1998). In our analysis, the family and work domains were excluded, because many patients had no contact with their family or were unemployed.

Psychopathology. The 18-item observer-rated Brief Psychiatric Rating Scale (BPRS; Overall and Gorham 1962) was used for assessing psychopathology. A sum score of the 18 items was calculated as were sum scores of the BPRS five subscales: anxiety/depression, anergia, thought disorder, activity, and hostility.

Statistical Analysis. Data were collected by a trained research psychiatrist or psychologist who was not involved in treatment and were analyzed using the Statistical Package for Social Sciences (SPSS 8.0; Norusis 1997). Differences in each instrument assessing changes in sum scores at baseline and at followup were analyzed using the t test for mean differences. Spearman's rho coefficients were calculated to assess nonlinear correlations among instruments' scores at baseline and followup. They were also used to assess whether the changes in scores of the three instruments (between baseline and followup) were intercorrelated. Partial correlations were calculated to control for the impact of the BPRS sum score and the BPRS subscale score for anxiety/depression.

Factor analysis using principal-components extraction with no rotation of factor solutions was conducted on scores of the instruments, in both samples separately at baseline and followup. The aim was to assess whether the three instruments load into one general subjective factor. Factor scores were also computed and their correlations with various other variables were investigated, including psychopathology. Stepwise multiple linear regression analyses were conducted on both samples, using factor scores at baseline and at followup as dependent variables, and items making up the various instruments as independent variables. This was done to determine which items in each instrument were the main contributors to the variance in factor scores. Partial correlations between individual items of each instrument and the sum score of that criterion were calculated with the influence of the general subjective appraisal factor extracted. This was done to

identify items on each scale contributing to that part of the variance of the given criterion that was not explained by the subjective appraisal factor.

Results

Table 2 shows scores of each criterion at baseline and at followup in the two groups. At baseline, scores of self-rated needs and self-reported symptoms were higher in the first admission sample, while the SQOL score was higher in the long-term hospitalized sample. BPRS scores were similar in both samples. As far as changes in scores over time are concerned, self-reported needs, self-reported symptoms, and BPRS scores—but not SQOL—significantly improved in the first admission schizophrenia sample, while only SQOL—but not self-rated symptoms or needs—significantly changed in the long-term hospitalized sample. Treatment in first onset schizophrenia seems to improve symptoms and needs but not necessarily SQOL, while long-term rehabilitation and resettlement in the community may impact on SQOL in long-term hospitalized patients without influencing the other evaluation criteria. The clinical reasons for the specific changes in the two groups have been discussed elsewhere (Hoffmann et al. 2000; Priebe et al. 2000) and appear less relevant for the further analysis of this methodological study. What is to be noted is that the two groups were different in many respects and showed distinct changes over time.

Table 3 shows that the three criteria were significantly correlated to the BPRS anxiety/depression subscale score at both baseline and followup, and in both samples. The correlations were positive with self-rated needs and self-reported symptoms scores and negative with the SQOL score. The direction of the correlations with the BPRS sum score was similar to that with the BPRS anxiety/depression subscale scores.

Table 4 shows intercorrelations between scores of the three instruments and also between changes in their scores over time. Many of the intercorrelations among the scores of the three criteria at baseline and at followup in both samples were statistically significant and of moderate strength: scores of self-rated needs and self-reported symptoms were positively correlated, and both were negatively correlated to SQOL. Correlations of change scores between baseline and followup were statistically significant only in criteria that were also significantly correlated at both baseline and followup. Partial correlations, in which the influence of BPRS sum score and that of BPRS anxiety/depression subscale score was controlled for, were lower in strength and only half of them remained statistically significant after controlling for the effect of observer-rated psychopathology.

Table 5 shows the results of the factor analyses. In both samples, at baseline and followup, scores of the three instruments loaded on one subjective appraisal factor. The cumulative variance explained by this factor ranged from 50 percent to 69 percent, with little variation in the amount of variance contributed by scores from each instrument whether within or between samples (with the exception of the followup self-rated needs score in the long-term hospitalized sample). There was a positive loading of self-reported symptoms and of self-rated needs, and a negative loading of SQOL. This means that the general subjective factor summarizes dissatisfaction with life as a whole, and a higher number of self-reported symptoms and self-reported needs for care in general.

Table 2. Subjective evaluation criteria and psychopathology at baseline, followup, and changes from baseline to followup in the first admission sample (n = 51) and the long-term hospitalized sample (n = 58)

	Baseline, mean ± SD	Followup, mean ± SD	Difference, mean ± SD	t test	95% CI of difference
First admission					
Self-rated needs	5.1 ± 2.0	3.1 ± 12.1	−2.0 ± 2.4	5.88***	1.28; 2.61
Self-reported symptoms	28.9 ± 14.8	21.6 ± 11.5	−7.3 ± 14.1	3.71***	3.35; 11.28
Subjective quality of life	4.5 ± 0.8	4.6 ± 0.8	0.1 ± 0.9	−0.75	−0.36; 1.63
BPRS sum score	46.5 ± 10.4	32.4 ± 7.7	−14.0 ± 11.5	8.74***	10.81; 17.27
Long-term hospitalized					
Self-rated needs	4.0 ± 3.0	3.7 ± 2.6	−0.3 ± 3.0	−0.80	−1.09; 0.47
Self-reported symptoms	22.7 ± 15.3	21.6 ± 14.6	−1.2 ± 12.1	−0.74	−4.36; 2.01
Subjective quality of life	4.7 ± 1.0	5.0 ± 1.0	0.3 ± 0.9	2.39*	0.04; 0.50
BPRS sum score	47.1 ± 16.8	43.7 ± 14.0	−3.4 ± 14.3	−1.77	−7.32; 0.46

Note.—BPRS = Brief Psychiatric Rating Scale; CI = confidence interval; SD = standard deviation.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 3. Correlations between subjective evaluation criteria and BPRS sum score and anxiety/depression subscale score in the first admission schizophrenia sample (n = 51) and long-term hospitalized schizophrenia sample (n = 58)

	First Admission		Long-term Hospitalized	
	BPRS	Anxiety/depression	BPRS	Anxiety/depression
Baseline				
Self-rated needs	0.52***	0.49***	0.10	0.39***
Self-reported symptoms	0.52***	0.58***	0.53***	0.77***
Subjective quality of life	–0.35***	–0.44***	–0.18	–0.41***
Followup				
Self-rated needs	0.29***	0.47***	0.20	0.29***
Self-reported symptoms	0.44***	0.65***	0.41***	0.65***
Subjective quality of life	–0.45***	–0.62***	–0.37***	–0.55***
Changes from baseline to followup				
Self-rated needs	0.30*	0.25	0.25	0.21**
Self-reported symptoms	0.18	0.36*	0.50***	0.48***
Subjective quality of life	–0.14	–0.33	–0.22	–0.21

Note.—BPRS = Brief Psychiatric Rating Scale.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 4. Correlations among the three instruments at baseline and followup and of the changes from baseline to followup in the first admission sample (n = 51) and the long-term hospitalized sample (n = 58)

	Self-rated Needs		Self-reported Symptoms		Subjective Quality of Life	
	First admission	Long-term hospitalized	First admission	Long-term hospitalized	First admission	Long-term hospitalized
Baseline						
Self-rated needs	—	—	0.49***	0.45***	–0.36**[a]	–0.38***
Self-reported symptoms	0.49***	0.45***	—	—	–0.31*[a]	–0.56***
Subjective quality of life	–0.36**[a]	–0.38***	–0.31*[a]	–0.56***	—	—
Followup						
Self-rated needs	—	—	0.35**[a]	0.15	–0.48***	–0.04
Self-reported symptoms	0.35**[a]	0.15	—	—	–0.64***	–0.46***[a]
Subjective quality of life	–0.48***	–0.04	–0.64***	–0.46***[a]	—	—
Changes from baseline to followup						
Self-rated needs	—	—	0.32*[a]	0.10	–0.29*[a]	0.05
Self-reported symptoms	0.32*[a]	0.10	—	—	–0.29*[a]	–0.29*
Subjective quality of life	–0.29*[a]	0.04	–0.29*[a]	–0.29*	—	—

Note.—BPRS = Brief Psychiatric Rating Scale.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

[a] Values remain no longer significant when BPRS sum score and BPRS anxiety/depression subscale score are controlled for.

Stepwise multiple linear regression analyses showed that two items were consistently selected as predictors of the factor scores of the subjective appraisal factor. These were having dark thoughts (a self-reported symptom in the Von Zerssen symptoms scale) and satisfaction with life as a whole (a question in the SQOL scale). The former positively while the latter negatively regressed against the factor scores. In the first admission sample, both items combined explained 50 percent and 62 percent of the variance in factor scores at baseline and at followup respectively. The corresponding variances were 71 percent and 46 percent in the long-term hospitalized sample.

The factor scores at baseline and at followup were not significantly correlated to gender in either sample. They were, however, negatively correlated with age in the long-term hospitalized sample at baseline (r = –0.35; $p < 0.001$) and at followup (r = –0.33; $p < 0.05$).

Table 5. Factor analysis of three criteria in the first admission sample (n = 51) and the long-term hospitalized sample (n = 58)

	Factor Loading		Individual Variance (%)		Cumulative Variance (%)	
	First admission	Long-term hospitalized	First admission	Long-term hospitalized	First admission	Long-term hospitalized
Baseline						
Factor number (eigenvalue)	1 (1.87)	1 (1.90)			62.27	63.43
Self-rated needs	0.83	0.76	37	30		
Self-reported symptoms	0.83	0.82	37	35		
Subjective quality of life	–0.70	–0.81	26	34		
Followup						
Factor number (eigenvalue)	1 (2.07)	1 (1.50)			69.05	50.04
Self-rated needs	0.86	0.45	36	14		
Self-reported symptoms	0.74	0.85	27	48		
Subjective quality of life	–0.88	–0.76	37	38		

Note.—Missing cases: listwise deletion; extraction method: principal component analysis; rotation: none.

In addition, length of stay in the hospital in the long-term hospitalized sample was significantly correlated to factor scores at baseline (r = –0.39; $p < 0.001$) and at followup (r = –0.29; $p < 0.05$). Older patients in the long-term hospitalized sample and those with a longer length of hospitalization tended to report a more positive SQOL and fewer symptoms and needs (i.e., had a more positive subjective appraisal). Monthly income was significantly negatively correlated to only factor scores at baseline in the long-term hospitalized sample (r = –0.37; $p < 0.001$).

Table 6 shows the correlations between factor scores and both the BPRS sum score and the BPRS anxiety/depression subscale score. The correlations with factor scores at baseline and at followup, and with the changes in factor scores from baseline to followup, were significantly positively correlated to the respective BPRS sum scores and the BPRS anxiety/depression subscale scores. Higher correlations were found with the anxiety/depression subscale scores than with the BPRS sum scores, suggesting that the general subjective appraisal factor is particularly associated with mood.

Finally, comparing the correlations between individual items of each instrument and the sum score of that instrument to partial correlations between the two controlling for factor scores of the subjective appraisal factor showed that most of the correlations remained significant after controlling for the factor scores, although their strength decreased. This was true for analyses conducted on both samples, at both baseline and followup. However, these analyses failed to identify any specific items that were unaffected by the factor score and could have contributed to the unexplained specific variance of any of the three subjective evaluation criteria.

Discussion

Subjective Appraisal Factor. The three subjective evaluation criteria—i.e., SQOL, self-rated symptoms, and self-rated needs—were significantly correlated in both samples at baseline and followup. Correlations of the change scores of these criteria between baseline and followup showed some significant covariation over time. Factor analyses revealed that SQOL, self-reported symptoms, and self-rated needs loaded on one subjective appraisal factor. This was the case at baseline and also at followup in both samples. The explained cumulative variance ranged between 50 percent and 69 percent, with little variation in the percentage variance contributed by each instrument, suggesting consistency in the structure of the one-factor solution. The cumulative variances were somewhat higher than what has been reported in other studies that used the same instruments employed in this study. For example, Priebe et al. (1995) found that 39 percent of the variance of SQOL, self-rated needs, and patients' assessment of treatment was explained by one general factor in a diagnostically heterogeneous sample of community care patients in Berlin. In another study, Priebe et al. (1998*a*) reported variances ranging from 48 percent to 55 percent for one-factor solutions in samples of patients diagnosed with schizophrenia or alcoholism. On the whole, our findings add weight to the existing limited evidence that a general subjective appraisal factor summarizes all subjective evaluation criteria. They also take the literature a step forward by showing that structurally similar one-factor solutions were found at both baseline and followup, hence suggesting consistency over time.

It may be concluded that the three criteria indeed overlap and are influenced by a single underlying tendency for a more positive or negative self-rating.

Table 6. Correlations between scores of general subjective appraisal factor and BPRS sum scores and anxiety/depression subscale scores in the first admission sample (n = 51) and the long-term hospitalized sample (n = 58)

	First Admission		Long-term Hospitalized	
	BPRS	Anxiety/depression	BPRS	Anxiety/depression
Factor score at baseline	0.57***	0.63***	0.51***	0.71***
Factor score at followup	0.48***	0.71***	0.46***	0.66***
Factor score change (baseline to followup)	0.36**	0.46***	0.38**	0.40**

Note.—BPRS = Brief Psychiatric Rating Scale.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Therefore, analyses as to how they may "influence" each other—for instance, whether the number of needs influences SQOL—seem questionable although they are still common in the evaluation literature. In research, more than one subjective evaluation criterion should be used with only specific separate hypotheses. Alternatively, significant results should stand the test of a Bonferroni adjustment. The theoretical basis for the three criteria might have to be re-explored on the basis of the empirical findings (Priebe et al. 1999*a*).

General Appraisal Factor and Mood. Correlations between factor scores and observer-rated psychopathology showed that the subjective appraisal factor was strongly influenced by patients' mood. Factor scores were significantly correlated with scores on the BPRS anxiety/depression subscale. Changes in factor scores between baseline and followup were also significantly correlated with changes in observer-rated mood/depression. Thus, the subjective appraisal factor seems strongly influenced by mood. Correlations with observer-rated mood did not explain all of the variance of the factor score. Approximately 50 percent of the variance of that factor was independent of the BPRS subscale anxiety/depression. This finding is in line with the results of the multiple regression analyses. Two single items, reporting dark thoughts and being dissatisfied with life as a whole, significantly contributed 50 percent to 71 percent of the explained variance in the subjective appraisal factor. Dark thoughts and satisfaction with life as a whole may be regarded to reflect both mood and cognitive processes. The influence of mood on subjective evaluation criteria has been well documented in the literature, while the role of other cognitive factors is still poorly understood. The findings underline the importance of diagnosing and treating depressive symptoms in patients with acute and more chronic forms of schizophrenia. This may apply even when the symptoms are mild and do not reach diagnostic thresholds. Depressive symptoms in the samples reported here were only low to moderate on average but nevertheless dominated the patients' general subjective appraisal. It remains to be tested what forms of pharmacological and psychological interventions can improve both subthresholds depressive symptoms and general subjective appraisal.

Specific Variance of Each Subjective Criterion Not Explained by the General Factor. The general subjective appraisal factor explained 50 percent to 69 percent of the overall variance of the three subjective evaluation criteria. While this is an impressive degree of explained variance, it still leaves 31 percent to 50 percent of the variance unexplained. This remaining variance makes it possible that the use of the three criteria does not yield identical findings. In the two samples investigated in this study, changes over time were very distinct: only SQOL changed in the long-stay sample, while only self-rated needs and self-rated symptoms—but not SQOL—improved in the first admission group. Whatever the reasons for these differences, they clearly indicate that the specificity of each criterion warrants further theoretical and empirical exploration.

Most of the correlations between individual items of each instrument and the sum score of that instrument remained statistically significant—although became weaker in strength—after controlling for the influence of the general appraisal factor. Thus, we have not been able to distinguish between items on each scale that would reflect the influence of the general factor and other items that contributed to the score of the given criterion without being affected by that underlying factor. The currently used scales appear to have been constructed in a fashion that all items capture both the general appraisal factor and some specific aspects.

Conclusion

The analysis was conducted on two distinct samples that differed in clinical features and in changes over time on

the three subjective evaluation criteria under investigation. However, the subjective appraisal factor was consistently identified in both samples, suggesting that the findings may hold true across different settings and groups of schizophrenia patients. Future research in this area may have to focus on two aims: (1) to assess the general factor more directly and to identify the most relevant aspects of mood and cognitive processes determining the general tendency for more positive or negative subjective appraisal, and (2) to find ways to maximize the specific variance of each criterion that are independent of the general factor and, possibly, to redefine the concept of each criterion.

References

Bigelow, D.A.; McFarland, B.H.; and Olson, M.M. Quality of life of community mental health programme clients: Validating a measure. *Community Mental Health Journal,* 27:43–55, 1991.

Deluty, B.M.; Deluty, R.H.; and Carver, C.S. Concordance between clinicians' and patients' rating of anxiety and depression as mediated by private self-consciousness. *Journal of Personality Assessment,* 50:93–106, 1986.

Faravelli, C.; Albanesi, G.; and Poli, E. Assessment of depression: A comparison of rating scales. *Journal of Affective Disorders,* 11:245–253, 1986.

Fava, G.A.; Kellner, R.; Sansky, J.; Park, S.; Perini, G.I.; and Zielezny, M. Rating depression in normals and depressives: Observer versus self-rating scales. *Journal of Affective Disorders,* 11:29–33, 1986.

Hamera, E.K.; Kraenzle Schneider, J.K.; Potocky, M.; and Casebeer, M.A. Validity of self-administered symptom scales in clients with schizophrenia and schizoaffective disorders. *Schizophrenia Research,* 19:213–219, 1996.

Hoffmann, K., and Priebe, S. Welche Bedürfnisse nach Hilfe haben schizophrene Langzeitpatienten? – Probleme der Selbst- und Fremdbeurteilung von "Needs." [Needs for help and support in the view of schizophrenic long-term patients and of their therapists]. *Fortschritte der Neurologie Psychiatrie,* 64:473–481, 1996.

Hoffmann, K.; Isermann, M.; Kaiser, W.; and Priebe, S. Lebensqualität im Verlauf der Enthospitalisierung Teil IV der berliner Enthospitalisierungsstudie. [Quality of life in the course of deinstitutionalisation: Part IV of the Berlin Deinstitutionalisation Study]. *Psychiatrische Praxis,* 27:183–188, 2000.

Kaiser, W., and Priebe, S. Zur Messung von lang- und kurzfristigen Veränderungen der subjektiven Lebensqualität bei chronisch schizophrenen Patienten. [On the measurement of long-term and short-term change of subjective quality of life in chronic schizophrenia patients]. *Nervenarzt,* 69(3):219–227, 1998.

Kaiser, W.; Priebe, S.; Barr, W.; Hoffmann, K.; Isermann, M.; Roder-Wanner, U.U.; and Huxley, P. Profile of subjective quality of life in schizophrenic in- and out-patient samples. *Psychiatric Research,* 66:153–166, 1997.

Lehman, A. Measures of quality of life among persons with severe and persistent mental disorders. *Social Psychiatry and Psychiatric Epidemiology,* 31:78–88, 1996.

Lehman, A.F.; Ward, N.C.; and Linn, L.L. Chronic mental patients: The quality of life issue. *American Journal of Psychiatry,* 139:1271–1276, 1982.

Norusis, M.J. *SPSS Statistics 8.0.* Chicago, IL: SPSS Inc., 1997.

Oliver, J.P.J. The social care directive: Development of a quality of life profile for use in community services for the mentally ill. *Social Work and Social Science Review,* 3:5–45, 1991.

Oliver, J.P.J.; Huxley, P.J.; Bridges, K.; and Mohamad, H. *Quality of Life and Mental Health Services.* London, U.K.: Routledge, 1996.

Oliver, J.P.J.; Huxley, P.J.; Priebe, S.; and Kaiser, W. Measuring the quality of life of severely mentally ill people using the Lancashire Quality of Life Profile. *Social Psychiatry and Psychiatric Epidemiology,* 31:76–83, 1997.

Overall, J.E., and Gorham, D.R. The Brief Psychiatric Rating Scale. *Psychological Reports,* 10:799–812, 1962.

Phelan, M.; Slade, M.; Thornicroft, G.; Dunn, G.; Holloway, F.; Wykes, T.; Strathdee, G.; Loftus, L.; McCrone, P.; and Hayward, P. The Camberwell Assessment of Need: The validity and reliability of an instrument to assess the need of people with severe mental illness. *British Journal of Psychiatry,* 1676:589–595, 1995.

Postrado, L., and Lehman, A. Quality of life and clinical predictors of rehospitalization of patients with severe mental illness. *Psychiatric Services,* 46(11):1161–1165, 1995.

Priebe, S.; Gruyters, T.; Heinze, M.; and Hoffmann, C. Subjektive Evaluationskriterien in der psychiatrischen Versorgung: Erhebungsmethoden für Forschung und Praxis. [Subjective criteria for evaluation of psychiatric care: Methods for assessment in research and routine care]. *Psychiatrische Praxis,* 22:140–144, 1995.

Priebe, S.; Hoffmann, K.; Isermann, M.; and Kaiser, W. Klinische Merkmale lagzeithospitalisierter Patienten: Teil I der Berliner Enthospitalisierungsstudie. [Clinical charac-

teristics of long-term hospitalised patients: Part I of the Berlin Deinstitutionalisation Study]. *Psychiatrische Praxis,* 23:15–20, 1996.

Priebe, S.; Huxley, P.; and Burns, T. Who needs needs? *European Psychiatry,* 14:186–188, 1999*a*.

Priebe, S.; Kaiser, W.; Huxley, P.; Roeder-Wanner, U.; and Rudolf, H. Do different subjective evaluation criteria reflect distinct constructs? *Journal of Nervous and Mental Disease,* 186:385–392, 1998*a*.

Priebe, S.; Roeder-Wanner, U.; Knight, S.; and Evans, S. Applications and results of the Manchester Short Assessment of Quality of Life (MANSA). *International Journal of Social Psychiatry,* 45:7–12, 1999*b*.

Priebe, S.; Roeder-Wanner, U.U.; and Kaiser, W. Quality of life in first-admitted schizophrenia patients: A follow-up study. *Psychological Medicine,* 30:225–230, 2000.

Priebe, S.; Warner, R.; Hubschmid, T.; and Eckle, I. Employment, attitudes toward work, and quality of life among people with schizophrenia in three countries. *Schizophrenia Bulletin,* 24(3):469–477, 1998*b*.

Slade, M.; Phelan, G.; Thornicroft, G.; and Parkman, S. The Camberwell Assessment of Need (CAN): Comparison of assessments by staff and patients of the needs of severely mentally ill. *Social Psychiatry and Psychiatric Epidemiology,* 31:109–113, 1996.

Steenfeldt-Foss, O.T.; Birnbacher, D.; and Okasha, A. Forum—The declaration of Madrid and current psychiatric practice: Users' and advocates' views. *Current Opinion in Psychiatry,* 12(1):12–16, 1999.

Von Zerssen, D. Clinical Self-Rating Scales (CSr-S) of the Munich Psychiatric Information System (Psych IS, Munich). In: Sartorius, N., and Bans, T.A., eds., *Assessment of Depression.* Berlin, Germany: Springer, 1986. pp. 270–303.

Wing, J.K.; Curtis, R.H.; and Beevor, A.S. *Health of the Nation Outcome Scales: Glossary for HoNOS Score Sheet.* London, U.K.: Royal College of Psychiatrists, 1996.

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