

Patient Satisfaction with In-hospital Psychiatric Care

A Study of a 1-Year Population of Patients Hospitalized in a Sectorized Care Organization

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Summary. Patient satisfaction with in-hospital psychiatric care in a community-oriented care organization was studied by means of a questionnaire mailed to a 1-year population of hospitalized patients. The response rate was 43.5%. The results showed that the level of patient satisfaction was high in some areas and low in others. It was higher with regard to staff-patient relationships, treatment programs and the physical environment of the wards, and lower in the areas of patient information, influence on management and design of treatment. Patients' ratings of the quality of different aspects of the treatment process were related to satisfaction. Patient satisfaction was also related to the level of global improvement. Male patients and older patients were more satisfied with the care received. No differences in patient satisfaction were found regarding diagnosis or length of treatment. Compulsorily admitted patients showed significantly lower levels of satisfaction in all areas measured, except for treatment design. It was concluded that there are some indicators of a decrease in patient satisfaction with in-hospital psychiatric care, which might be associated with the changes towards a community-oriented psychiatric care organization.

Key words: Patient satisfaction – In-Hospital care – Sectorized psychiatry – Catchment area

Introduction

A major international trend in psychiatric care during the last decades has been the deinstitutionalization of the care delivery system. There has been a shift towards treatment in more open settings guided by prin-

ciples such as integration in the society and a greater accessibility, availability and continuity in the delivery of care. This process towards a community-oriented care organization has often been paralleled by a division of the care organization into defined catchment areas, where a comprehensive care organization has taken responsibility for treatment at all care levels. This transformation of the care organization has also been associated with expectations of a rise in the quality of psychiatric care.

The quality of psychiatric care, like other kinds of medical care, is multidimensional. Assessments of the quality of care or quality assurance policies may focus on the structure, process and outcome of care (Donabedian 1980). Within these three perspectives multiple indicators may be used in the assessment of the quality of care. Patient satisfaction with care has been proposed as a valid and reliable indicator in each of these perspectives (OTA 1988). There are at least two rationales for patients' assessments in this respect. Firstly, it will ensure that the evaluation will represent the values of the individual consumers of care. Secondly, patients are a unique source of information concerning certain aspects of medical care and may also supplement information from other indicators of the quality of care.

Patient satisfaction may be viewed both as a qualitative measure of outcome per se and as a factor in the process of care which has an influence on both the course and ultimate outcome of treatment. Patient satisfaction with care has thus been shown to be related to the use of services, compliance with treatment and dropout from treatment (Ware et al. 1977; Ware and Davies 1983).

Efforts to measure patient satisfaction have varied widely in method, which has made comparisons be-

tween studies difficult, and systematic knowledge within the area has been scattered. In general, studies of patient satisfaction in psychiatric care has been neglected. In three review papers, Weinstein (1977, 1979, 1981) has analysed results from a number of studies. He found a high level of satisfaction with the care organization in 73% of the studies, a high level of satisfaction with nursing staff in 60% of the studies and a high level of satisfaction with the care received in 76% of the studies.

The variance in patient satisfaction may generally be related to patient characteristics, to features of the care organization and to the patients' experiences during the course of their treatment. In most studies, patient background variables, such as sex, age, work situation, level of education or marital status, have not been shown to be related to patient satisfaction. However, such variables as diagnosis, length of treatment, type of ward or setting and mode of treatment (e.g. voluntary vs compulsory treatment) have been related to the level of satisfaction (Weinstein 1979).

Outcome of treatment has generally not been included in studies of patient satisfaction. A significant association between the level of patient satisfaction and treatment outcome was, however, found in an earlier study by the author (Hansson 1987), and has also been reported in a few other studies (Edwards et al. 1978; Kelstrup et al. 1988).

Aim of the Study

The aim of the present study was to investigate patient satisfaction with in-hospital care at a Department of Psychiatry in southern Sweden, reorganized into a community-oriented care delivery organization. Patient satisfaction with care in the following areas was investigated: (1) availability/accessibility; (2) physical environment; (3) staff-patient relationship; (4) information/influence on treatment; (5) modes of treatment; (6) treatment design; (7) restrictions/compulsory treatment; (8) met/unmet needs of care.

The relationship between patient satisfaction and treatment outcome, and patient satisfaction in subgroups of patients with different backgrounds and treatment characteristics was also investigated.

Materials and Methods

In 1984, the former Department of Psychiatry at the University Hospital, Lund, Sweden, was reorganized into a care organization with two new departments, each consisting of three geographically defined catchment areas. In the department under study a com-

prehensive care organization serving each catchment area, including different outpatient facilities, was successively created. There was an explicit objective in the new organization of substituting care in more open settings for in-hospital care. In 1987 the in-hospital facilities of the department under study consisted of three general wards (one for each catchment area), a ward for suicidal patients and two wards primarily for schizophrenic patients.

Method

The study was performed as a survey with questionnaires mailed to all patients included in the study. All participants were guaranteed confidentiality. A follow-up letter was sent to all patients included, with a second request for a response to the questionnaire. Background and treatment characteristics were obtained from the patients' case records.

Sample

All patients admitted for in-hospital care and discharged during 1987, with a length of stay of 5 days or more, were formally included in the study. Of the 476 patients admitted 421 met the inclusion criterion. For 18 patients an adequate address was not obtained and 5 patients died during the period up to the time of investigation. Thus the final sample consisted of 398 patients who received the questionnaire in March 1988. Responses were obtained from 173 patients, 43.5% of the total sample.

Measures

Patient Attitudes. A patient self-rating questionnaire was developed on the basis of a questionnaire (Kelstrup et al. 1988) and an attitude measurement instrument used by the author in a previous study (Hansson et al. 1985). The questionnaire consists of 44 items covering the above-mentioned dimensions. In each item there were standardized response alternatives ranging from 1 (most negative attitude) to 7 (most positive attitude) and a mid-point of 4, depicting a neutral attitude. In some items there was a possibility of scoring 0, indicating that the respective item was not relevant to the patient. A parallel version of the questionnaire has been used for the assessment of patient satisfaction with outpatient care at the department (Hansson 1989).

For the analysis of patient satisfaction in the whole sample, six subscales were constructed, measuring different areas of satisfaction: Physical Environment (4 items), Staff-Patient Relationship (5 items), Information/Influence (4 items), Treatment Design (3 items), Treatment Program (4 items) and General Satisfaction (subscales 1-5 = 21 items).

Background and Treatment Characteristics. Age, sex, length of stay, number of admissions, voluntary/compulsory admission and diagnosis according to ICD-9 were taken from the patients' case records. In the analysis, diagnoses were divided into psychoses (ICD-9 = 290–299) and non-psychoses (ICD \geq 300).

Treatment Outcome. Patients rated their global improvement since the time of admission on a self-rating scale with 7 defined steps ranging from 1 (much worse) to 7 (much better).

Statistics

In the statistical analysis the chi-square test (Siegel 1956) was used to test differences between proportions and Student's *t*-Test (McNemar 1959) to test differences between means.

Results

Representativeness

Responses to the questionnaire were obtained from 173 of the 398 patients, a response rate of 43.5%. Missing data were in total 4% and varied through the different items in the questionnaire. Table 1 shows the background and treatment characteristics for patients

Table 1. Background and treatment characteristics for patients included in the study: patients divided into responders and non-responders

	Responders (<i>n</i> = 173)	Non- responders (<i>n</i> = 225)	All (<i>n</i> = 398)
Sex			
Men	77	99	176
Women	96	126	222
Age	47 \pm 18	47 \pm 18	
Diagnosis (ICD-9)			
Psychosis	105	120	225
Non-psychosis	68	105	173
Length of stay (days, mean, SD)	43 \pm 29	45 \pm 32	
Number of admissions			
1	140	175	315
> 1	33	50	83
Mode of admission			
Voluntary	142	170	312
Compulsory	31	55	86

Chi-square test, Student's *t*-test (age, length of stay)

* *P* < 0.05, ** *P* < 0.01, *** *P* < 0.001

included in the study, divided into responders and non-responders. There were no significant differences between the two groups in any of the variables, although there was a tendency to be fewer compulsorily admitted patients in the group of responders (NS). Thus the participants, in these respects, might be regarded as representative of the sample included in the study. The treatment characteristics found to affect the level of satisfaction more consistently, and which might therefore be crucial with regard to representativeness, are diagnosis, length of treatment and mode of treatment.

Level of Satisfaction

Table 2 shows the distribution in percentages of patients with positive, neutral and negative attitudes, and means and standard deviations in the 44 items. In 24 of the items, attitude ratings were obtained from the whole sample and in 20 items from subgroups of different sizes.

The highest level of satisfaction for the whole sample was found in 2 items concerning the physical environments of the ward ("facilities of the ward", 67.6% of the patients showing a high level of satisfaction, and "possibility of having visitors", 72.3% with a high level of satisfaction), in 2 items concerning staff-patient relationship ("reception at time of admission", 75.1% with a high level of satisfaction, and "staff caring for patients", 68.8% with a high level of satisfaction) and 1 item concerning the general evaluation of the treatment program ("treatment as a whole", with 65.3% of the patients showing a high level of satisfaction. A great majority of the patients, 76.4%, were highly satisfied with the geographical accessibility to hospital treatment.

Patient satisfaction was lowest in 3 items concerning information and influence on treatment: ("information concerning mental health problems", 43.4% with a low level of satisfaction; "information concerning treatment alternatives", 43.9% with a low level of satisfaction; "consideration of patient's own view of treatment", 56.1% with a low level of satisfaction), in 1 item concerning the staff-patient relationship ("time available with staff", 38.7% with a low level of satisfaction), and in 1 item concerning the general evaluation of the treatment program ("changes in coping abilities of mental health problems due to treatment", 40.5% of the patients showing a low level of satisfaction).

Level of Satisfaction in Subgroups of Patients

As shown in Table 2, 23.1% of the patients stated that they had no regular therapist during hospitalization,

Table 2. Patient satisfaction according to 44 items concerning in-hospital treatment, responses divided into percentages of positive (+), neutral (0) and negative (–) attitudes (means and standard deviations)

	Percentages			Not relevant	Mean ± SD
	—	0	—		
<i>Accessibility</i>					
1. Public transportation possibilities	76.4	6.9	19.7		
<i>Physical environment</i>					
2. Facilities of the ward	67.6	14.5	17.9		4.9 ± 1.5
3. Possibilities for peace and order	54.3	11.0	34.7		4.4 ± 1.9
4. Staying in a dormitory	22.5	14.1	63.4	17.9	3.0 ± 1.6
5. Possibilities of activation	42.2	23.1	34.7		4.0 ± 1.7
6. Possibilities of having visitors	72.3	10.4	17.3		5.2 ± 1.7
<i>Staff-patient relationship</i>					
7. Reception at admission	75.1	11.6	13.3		5.2 ± 1.7
8. Staff caring for patients	68.8	13.9	17.3		5.2 ± 1.8
9. Confidence in staff	55.5	16.2	28.3		4.6 ± 1.8
10. Time available with staff	42.2	19.1	38.7		4.1 ± 1.6
11. Keyworker system	85.0	6.9	8.1	16.8	5.7 ± 1.5
12. Community with other patients	59.5	14.5	26.0		4.6 ± 1.6
<i>Information/influence</i>					
13. Information, practical matters	63.6	14.4	22.0		4.7 ± 1.8
14. Information, mental health problems	39.3	17.3	43.4		4.7 ± 2.0
15. Information, treatment alternatives	37.6	18.5	43.9		3.6 ± 2.0
16. Consideration of patient's own view of treatment	28.6	13.3	56.1		3.4 ± 1.8
17. Influence on treatment planning	31.7	30.0	38.3	30.6	3.7 ± 1.8
18. Information, effects and adverse effects of medication	37.3	10.6	52.1	17.9	3.5 ± 2.0
19. Information, possibilities of reading case record	15.4	1.9	82.7	69.9	2.2 ± 1.7
<i>Treatment accomplishment</i>					
20. Time available for sessions with therapist	58.7	13.5	27.8	23.1	4.8 ± 1.8
21. Therapist's empathy	68.4	10.5	21.1	23.1	4.8 ± 1.7
22. Help function of sessions with therapist	48.9	18.8	32.3	23.1	4.2 ± 2.0
23. Help function of group sessions	29.0	10.5	60.5	78.0	3.2 ± 1.7
24. Participation of relatives in treatment	29.2	6.2	64.6	16.8	3.1 ± 2.2
<i>Treatment alternatives</i>					
25. Medical treatment ^a	50.0	42.1	7.9	19.1	3.3 ± 1.3
26. Adverse effects of medical treatment ^b	47.9	19.2	32.9	19.1	3.6 ± 2.0
27. Help function of occupational therapist	49.5	20.0	30.5	39.3	4.3 ± 2.0
28. Help function of physiotherapist	72.2	8.3	19.4	79.2	4.9 ± 1.8
29. Help function of social worker	49.4	14.0	36.6	46.2	4.2 ± 2.0
30. Help function of psychologist	43.3	20.0	36.7	65.3	4.0 ± 1.9
<i>Treatment design</i>					
31. Length of stay ^c	31.2	52.0	16.8		3.6 ± 1.5
32. Treatment planning	38.7	33.0	28.3		4.0 ± 1.7
33. Staff cooperation	51.4	26.6	22.0		4.4 ± 1.7
34. Demands on patient during treatment	13.8	76.8	9.4		3.9 ± 1.0
35. Planning for discharge	50.9	23.1	26.0		4.3 ± 1.9
<i>Restrictions/compulsory treatment</i>					
36. Locked ward	13.2	26.4	60.4	8.1	2.9 ± 1.7
37. Restrictions in rights to leave ward	20.4	22.2	57.4	37.6	3.2 ± 1.8
38. Compulsory admission ^d	41.5	17.0	41.5	69.4	3.9 ± 2.2
39. Compulsory treatment ^d	20.5	7.8	71.8	77.5	2.8 ± 2.0
<i>Treatment program</i>					
40. Treatment as a whole	65.3	13.9	20.8		4.8 ± 1.8
41. Content of treatment	41.0	27.2	31.8		4.0 ± 1.8
42. Scope of treatment	51.5	26.0	22.5		4.5 ± 1.8
43. Changes in abilities to cope with mental health problems as a result of treatment	39.3	20.2	40.5		3.7 ± 2.0
44. Being readmitted to the same ward	56.0	19.7	24.3		4.5 ± 2.0

^a + = Doses of psychopharmacological drugs too high, 0 = adequate dose, – = doses too low

^b + = Troublesome adverse effects, 0 = manifest adverse effects, – = no troublesome adverse effects

^c + = Too long, 0 = adequate, – = too short

^d + = Right, – = wrong

Table 3. Relationship of background and treatment characteristics to patient satisfaction with treatment in 6 areas

	Physical environment	Information/influence	Staff-patient relationship	Treatment design	Treatment program	General satisfaction
Range	4–28	4–28	5–35	3–21	5–35	21–147
All ($n = 173$)	18.5 ± 4.9	15.5 ± 6.3	23.8 ± 6.3	12.7 ± 4.7	21.6 ± 7.9	92.0 ± 26.1
Sex						
Men ($n = 77$)	18.9 ± 4.5	16.9 ± 6.0	24.6 ± 6.1	12.7 ± 4.8	22.0 ± 7.5	95.2 ± 25.1
Women ($n = 96$)	18.1 ± 5.2	$14.3 \pm 6.4^*$	23.2 ± 6.4	12.7 ± 4.6	21.3 ± 8.2	89.6 ± 26.8
Age (median = 45)						
≤ 45 years ($n = 87$)	17.7 ± 4.9	14.8 ± 6.1	22.7 ± 6.5	11.4 ± 4.6	20.3 ± 7.8	86.9 ± 25.2
> 45 years ($n = 86$)	$19.2 \pm 4.9^*$	16.2 ± 6.5	$25.0 \pm 5.9^*$	$14.0 \pm 4.3^{***}$	$22.9 \pm 7.8^*$	$97.2 \pm 26.1^{**}$
Diagnosis (ICD-9)						
Psychosis ($n = 105$)	19.0 ± 4.5	15.3 ± 6.5	23.9 ± 6.5	13.1 ± 4.7	22.0 ± 8.2	93.2 ± 26.8
Non-psychosis ($n = 68$)	17.7 ± 5.4	15.7 ± 6.1	23.8 ± 6.0	12.0 ± 4.6	21.0 ± 7.5	90.2 ± 25.0
Mode of admission						
Voluntary ($n = 142$)	18.9 ± 5.0	16.0 ± 6.4	24.5 ± 6.1	13.0 ± 4.7	22.3 ± 7.8	94.6 ± 26.0
Compulsory ($n = 31$)	$16.6 \pm 4.1^*$	$13.2 \pm 5.4^*$	$20.7 \pm 6.4^{**}$	11.4 ± 4.4	$18.3 \pm 7.8^{**}$	$80.3 \pm 23.6^{**}$
Length of stay (median = 30 days)						
≤ 30 days ($n = 88$)	18.6 ± 4.7	15.5 ± 6.3	23.4 ± 6.0	12.9 ± 4.7	21.5 ± 7.9	91.2 ± 25.7
> 30 days ($n = 85$)	18.3 ± 5.1	15.4 ± 6.4	24.3 ± 6.5	12.5 ± 4.6	21.7 ± 7.9	92.2 ± 26.6

t-test * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

an indicator of discontinuity in treatment. The patients who were assigned a regular therapist were in general satisfied; the majority of the patients showed a high level of satisfaction both concerning the time available with the therapist, the empathy of the therapist and the help function of the therapist.

In items concerning information and influence, 30.6% of the patients reported that they did not participate in the planning of their treatment. Of those participating, 38.1% reported a low level of satisfaction with their influence on the planning of the treatment. A majority (52.1%) of the patients who received pharmacological treatment perceived information concerning effects and adverse effects of their medication as not satisfactory. Furthermore, 50.0% of the patients felt that they were given too high doses of psychopharmacological drugs and 42.1% that they were given adequate doses.

Patient Background Characteristics and Satisfaction

Table 3 shows the relationship between, age, sex, diagnosis, length of stay, compulsory/voluntary admission and levels of satisfaction as expressed in the 6 satisfaction subscales.

Men showed a higher level of satisfaction in the Information/Influence scale ($P < 0.01$). Older patients (patients above/below median age = 45 years) were more satisfied in the Physical Environment scale ($P <$

0.05), Staff-Patient Relationship scale ($P < 0.05$), Treatment Design scale ($P < 0.001$), Treatment Program scale ($P < 0.05$) and General Satisfaction scale ($P < 0.01$).

Significant differences in patient satisfaction were also found between patients voluntarily admitted and patients compulsorily admitted. The latter showed a lower level of satisfaction in all areas except Treatment Design.

There were no significant differences in the level of satisfaction between patients with psychosis diagnoses and non-psychosis diagnoses, nor did the length of stay in hospital influence the level of satisfaction (patients above/below median length of stay = 30 days).

Treatment Process and Satisfaction

The relationships of patients' ratings of 8 treatment process variables to levels of satisfaction as expressed by the 6 subscales of patient satisfaction are shown in Table 4. There were no significant differences in satisfaction between patients who had a regular therapist and those who did not. Patients who had participated in their own treatment planning showed a significantly higher level of satisfaction in the areas of Information/Influence ($P < 0.01$), Treatment Design ($P < 0.01$) and General Satisfaction ($P < 0.01$). Patient ratings of an adequate length of stay, adequate demands put on the patient during treatment, a better content of the

Table 4. Relationship between patient ratings of 8 treatment process variables and patient satisfaction according to the satisfaction subscales

	Physical environment	Information/influence	Staff-patient relationship	Treatment design	Treatment program	General satisfaction
Treatment planning						
Participation (<i>n</i> = 120)	18.9 ± 4.9	16.5 ± 6.2	24.4 ± 6.3	13.3 ± 4.6	22.4 ± 8.1	95.5 ± 26.3
No participation (<i>n</i> = 53)	17.4 ± 4.9	13.2 ± 6.0**	22.7 ± 6.0	11.3 ± 4.5**	19.6 ± 7.1*	84.2 ± 24.0**
Therapist						
Regular therapist (<i>n</i> = 133)	18.6 ± 4.6	15.7 ± 6.4	24.2 ± 6.0	13.0 ± 4.6	21.9 ± 7.8	93.6 ± 25.1
No regular therapist (<i>n</i> = 40)	17.5 ± 5.7	14.7 ± 6.1	22.6 ± 7.0	11.8 ± 4.8	20.4 ± 8.2	87.5 ± 28.8
Length of stay						
Adequate (<i>n</i> = 90)	20.2 ± 5.1	17.6 ± 6.0	25.7 ± 5.6	14.4 ± 4.3	24.7 ± 7.0	102.6 ± 22.8
Not adequate (<i>n</i> = 83)	16.6 ± 5.1***	13.1 ± 5.9***	21.8 ± 6.4***	10.8 ± 4.2***	18.2 ± 7.4***	80.6 ± 24.6***
Demands on patient						
Adequate (<i>n</i> = 133)	19.6 ± 4.3	16.7 ± 6.0	25.0 ± 5.7	13.7 ± 4.4	23.1 ± 7.3	98.1 ± 23.9
Not adequate (<i>n</i> = 40)	14.8 ± 5.0***	11.2 ± 5.3***	19.9 ± 6.4***	9.5 ± 4.1***	16.4 ± 7.7***	71.8 ± 22.9***
Content of treatment (median cut)						
Better (<i>n</i> = 71)	20.3 ± 3.8	18.9 ± 5.6	27.0 ± 5.3	15.4 ± 3.5	27.9 ± 4.3	109.6 ± 18.3
Inferior (<i>n</i> = 102)	17.2 ± 5.2***	13.1 ± 5.7***	21.6 ± 6.0***	10.8 ± 4.4***	17.2 ± 6.7***	79.9 ± 23.7***
Information mental health problems (median cut)						
Better (<i>n</i> = 98)	20.2 ± 3.8	19.6 ± 4.0	26.4 ± 5.1	14.9 ± 3.5	25.1 ± 6.0	106.3 ± 18.7
Inferior (<i>n</i> = 75)	16.1 ± 5.3***	10.0 ± 4.3***	20.5 ± 6.1***	9.8 ± 4.4***	17.0 ± 7.1***	73.4 ± 22.4***
Consideration of patient's view of treatment (median cut)						
High (<i>n</i> = 76)	20.6 ± 4.1	20.2 ± 4.1	27.2 ± 4.4	15.4 ± 3.1	26.4 ± 5.3	109.9 ± 17.4
Low (<i>n</i> = 97)	16.8 ± 4.9***	11.7 ± 5.1***	21.2 ± 6.3***	10.6 ± 4.6***	17.8 ± 7.5***	78.1 ± 23.2***
Confidence in staff (median cut)						
High (<i>n</i> = 96)	20.5 ± 3.8	18.4 ± 5.4	27.8 ± 3.6	14.9 ± 3.4	25.5 ± 5.9	107.0 ± 17.6
Low (<i>n</i> = 77)	16.0 ± 5.0***	11.8 ± 5.4***	18.9 ± 5.4	10.0 ± 4.6	16.7 ± 7.4	73.4 ± 22.7***

t-test * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

treatment, better information concerning the mental health problems, a greater consideration of the patient's own view of treatment and greater confidence in the staff, were in all areas related to a significantly higher level of patient satisfaction ($P < 0.001$).

Improvement and Level of Satisfaction

Figure 1 shows the levels of satisfaction in 5 of the satisfaction subscales; patients were divided above/below median improvement in the global improvement scale. A greater improvement was associated with a higher level satisfaction in 4 of the areas: Staff-Patient Relationship ($P < 0.01$), Information/Influence ($P < 0.01$), Treatment Design ($P < 0.001$) and Treatment Program. There was also a significant relationship between improvement and General Satisfaction ($P < 0.001$), not shown in the figure.

Discussion

For several reasons there has been a growing clinical and scientific interest in the quality of care and quality assurance issues in medical care (OTA 1988; Vuori 1982). However, in the area of patient satisfaction with care there are still important methodological problems concerning measurement, sampling methods and designs. An initial problem concerns the response rates. In comparison with other studies published on patient satisfaction, an acceptably high response rate was achieved and the responders were found to be representative of the sample in terms of background and treatment characteristics. Many of these have, however, been shown to have a rather low predictive value, which indicates that there may still be factors influencing the level of satisfaction that are not controlled for by a representativeness in these respects,

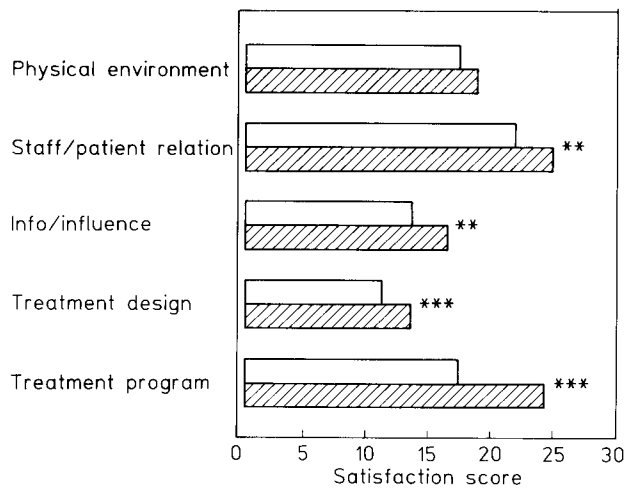


Fig. 1. The relationship of patient satisfaction to global improvement as measured by patient self-rating (median cut). In all areas measured, except for physical environment, a higher level of improvement was associated with a significantly higher level of satisfaction. (*t*-Test, * = $P < 0.05$, ** = $P < 0.01$, *** = $P < 0.001$). ▨ > median improvement; □ < median improvement

and which may cause a bias in the material under study. As an example, it has been suggested that non-responders are more dissatisfied with the care received (Kalman 1983; Frank et al. 1977), although this is a matter which has not been thoroughly investigated. In general the systematic knowledge of prediction variables concerning patient satisfaction is rather scattered. In our present state of knowledge, studies in this area should try to use designs which may ensure high response rates, and we should be cautious in generalizing and interpreting the results.

A second methodological problem concerns which standards or criteria to apply in defining a high/low level of patient satisfaction. Weinstein (1979) used the following criteria in dividing results into high/low levels of satisfaction:

1. If a global measure was used, a high level of patient satisfaction was indicated if the majority of the patients showed a positive attitude or if the mean of the global measure was above the mid-point of the scale.
2. If multiple measures were used (several variables, subscales or attitude factors), a high level of patient satisfaction was indicated if the majority of patients in the majority of items or subscales showed positive attitudes, or if the majority of means were above the mid-point of the items or subscales.

If these criteria are applied in the present study it is found that, out of 40 items with applicable distributions, the majority of patients showed positive attitudes in 18 items, and in 22 items the mean was above the mid-point of the scale. If one turns to the subscales

and general satisfaction scale, the mean was well above the mid-point of the scale in four of the scales. In the Information/Influence scale the mean was below the mid-point and in the Treatment Design scale it was just above the mid-point of the scale. This leads to the conclusion that the level of patient satisfaction was not unambiguously high or low in this study. In a slight majority of the items there were greater numbers of patients who were assessing their satisfaction with the care received as low. Concerning the subscales used in the study, involving items with ratings of all patients participating in the study, dissatisfaction with treatment was primarily focused on issues of Information/Influence of the patient in treatment. Further, the assessment of Treatment Design was on the threshold of dissatisfaction.

Patients who were compulsorily admitted showed a significantly lower level of satisfaction with care than voluntarily admitted patients in all of the subscales except for Treatment Design. There have been very few patient satisfaction studies of compulsorily admitted patients. Studies by Jones and Kahn (1964) and Linn (1969) reported a lower level of satisfaction in compulsorily admitted patients, while a study by Gove and Fain (1977) showed no differences between compulsorily and voluntarily admitted patients.

Patients' perceptions of the adequacy of the length of stay and of the demands made on them during treatment were strongly related to satisfaction in the different areas measured. The perceived quality of information and influence on treatment, the level of confidence in staff and cooperation in the treatment planning procedures also highly influenced the level of satisfaction. Together with the finding of a significant relationship between global improvement and level of satisfaction in almost all areas measured, this points to the importance of these variables both for the course of treatment, patient satisfaction and treatment outcome.

The development of community-oriented psychiatric care organizations has generally led to an increase in total utilization of psychiatric care (Häfner and Klug 1982), and to a decrease in utilization of in-hospital care. There have been reports of negative effects of these changes in the care delivery system, indicating that the new organizations are not adequate in caring for all groups of patients. The rise of the "revolving door patient" (ten Horn 1980; Woogh 1986), deficits in the quality of life for deinstitutionalized patients (Lehman et al. 1982), and the accelerated burden put on the social network of psychiatric patients (Kuipers and Bebbington 1985) have been associated with this development.

As regards the quality of care of in-hospital treatment in community-oriented psychiatric care organizations, there have been reports of a lack of resources

in caring for the most severely ill patients. The diminishing resources invested in in-hospital care have also resulted in a heterogeneity in patient groups treated in specific wards, which has made the development of therapeutically effective treatment milieus cumbersome. These factors may have implications for patient satisfaction with care.

In this study, patient satisfaction was found to be low in some respects. The design of this study does not permit any firm conclusions concerning changes in patient satisfaction over time, associated with changes in the care delivery organization. There are, however, some indicators of a decrease in patient satisfaction with in-hospital care. Firstly, a study of patient satisfaction with in-hospital care in the former care organization of the department under study showed generally higher levels of patient satisfaction (Hansson et al. 1985). Secondly, a study of patient satisfaction with outpatient care in one of the catchment areas in the new care organization of the department, covering almost the same period of time, revealed significantly higher levels of satisfaction than in the present study of in-hospital care (Hansson 1989).

In summary, patient satisfaction studies may be a useful instrument in the monitoring of quality of care and in the evaluation of changes in the care organization. This area of research is, however, still underdeveloped and has methodological problems. Still, patient satisfaction studies may provide important help in evaluations of the quality of care organizations.

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