THE IMPACT OF THE INTERVIEWER-INTERVIEWEE RELATIONSHIP ON SUBJECTIVE QUALITY OF LIFE RATINGS IN SCHIZOPHRENIA PATIENTS

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SUMMARY

Subjective quality of life (SQOL) ratings are usually based on interviews. This study examined in which way patients' ratings differ depending on whom they are interviewed by. SQOL was assessed in 78 schizophrenia patients in an out patient clinic and in sheltered living arrangements. Using patients randomly allocated to two interview situations: one group was interviewed by external researchers, the other group by their case managers. On average, more favourable ratings were elicited by case managers. Some of the differences were statistically significant and substantial in size. Yet, opposing differences were also found regarding some life domains in one group. It may be concluded that a significant impact of the interviewer-interviewee relationship on SQOL ratings may exist, but that it is not consistent, unidirectional and uniform regarding life domains and across different settings and samples.

INTRODUCTION

In mental health care, the concept of subjective quality of life (SQOL) health was initially used for investigating the effects of deinstitutionalisation (Lehman, 1983; Lehman *et al.* 1986). These days it has become a more and more indispensable evaluation criterion for the whole spectrum of psychiatric care and treatment – whether it is confined to psycho-pharmacological treatment (Awad *et al.* 1999) or more complex care programmes in the community (Holloway & Carson, 1988; Taylor *et al.* 1998). Methodological prerequisites to assess SQOL have been reported in reviews of SQOL-interview-instruments (Lehman, 1996; Oliver *et al.* 1997) and been the subject of specific methodological papers (Corrigan & Buican, 1995; Kaiser & Priebe, 1998; Kaiser, 1999; Priebe *et al.* 1999; Russo *et al.* 1997; Voruganti *et al.* 1998). Although most SQOL measures reported in the psychiatric literature are interview based, the issue of the interviewer effect has rarely been mentioned or investigated in studies and methodological papers to date.

Numerous studies have demonstrated that professional staff and patients may have very different views on a patient's quality of life (Sainfort *et al.* 1996; Skantze *et al.* 1992; Thapa & Rowland, 1989). Yet, the next step to investigate the implications of professional staff asking patients about their SQOL and to assess the influence of the interviewer on the patients' ratings has not been taken. This may be due to the fact that SQOL data as published in research papers have rarely been gathered as part of routine data collection. In most

research studies, interviewers asking patients about their SQOL are independent researchers, who are not in any way involved in treatment or in the patient's care setting. When quality of life interviews are carried out in routine practice, however, professional staff obtain quality of life data the question of interviewer bias and interviewer effect becomes of crucial importance. This is independent of whether SQOL is assessed for the purpose of individual treatment planning or for evaluating a service (Priebe *et al.* 1999).

In a controlled study in Berlin, Kaiser *et al.* (1998) tested the influence of the interviewer-interviewee relationship on SQOL ratings: from all patients (N = 186) from a catchment area of 220.000 population (district Spandau) who were living in sheltered community housing arrangements, a random sample was drawn and randomly assigned to two different interview conditions for assessing SQOL: one group (A) was interviewed by staff working for providers in the same district (most of them were social workers), but not known to the patients they interviewed and not involved in the care of the interviewees. The other group (B) was interviewed by their case managers. Patients in group B expressed a higher degree of satisfaction with their subjective quality of life: the overall mean value of SQOL ($p < .05$) as rated on the Berliner Lebensqualitätsprofil, the German version of the Lancashire Quality of Life Profile, and also the average score in the domain 'living situation' ($p < .01$) were significantly higher in group B. The conclusion was that well known psychological mechanisms like 'acquiescence' (Messick, 1967) and 'social desirability' (Edwards, 1957) may have had an impact on interview results and led to higher satisfaction when case managers interviewed their own patients. Basic material interests may also have influenced the patients' answers and contributed to the more positive ratings in group B: at least those patients who lived in group homes or hostels and not in their own apartments (90% of the sample) might have been concerned that an expression of dissatisfaction with their life and their living arrangements would jeopardise the current arrangement. They might have believed that saying they were dissatisfied with how they lived would make their case manager look for even less attractive alternative housing so that they would lose their accommodation.

A methodological shortcoming of the study conducted by Kaiser *et al.* (1998) was the diagnostic mix of the sample (ICD-10: schizophrenia: 62%, alcoholism: 27%, other: 11%). Although there were no statistically significant group differences between the diagnostic subgroups, satisfaction scores for alcoholics were lower in nearly all domains.

Because of these limitations of the previous study, this study set out to examine the impact of the relationship between interviewer and interviewee on SQOL ratings in a diagnostically homogeneous sample. Moreover, it was to test whether, and to what extent, the results found in the study cited above can be generalised across different treatment settings. Is it a general rule that neutral interviewers elicit less favourable SQOL ratings than case managers who are in charge of care of the interviewees? If there is a consistent interviewer effect on patients' SQOL ratings, what is its size?

METHODS

Sample
Data of schizophrenia patients (N = 32) in the first study (Kaiser *et al.* 1998) were pooled together with data from a diagnostically homogeneous group of schizophrenia outpatients

(N = 52) which had also been interviewed using the Berliner Lebensqualitätsprofil. On the questionnaire, satisfaction with life as a whole and with life domains are rated on 7 point Likert type scales with 1 the negative, and 7 the positive extreme. All patients in the latter sample had been randomly selected from an outpatient clinic integrated in a comprehensive community care system run by the Department of Social Psychiatry at the Free University of Berlin (Priebe & Gruyters, 1995). The care system serves severely mentally ill people between 18 and 65 years of age in an inner city catchment area of 180,000 population (Charlottenburg).

As in the study reported by Kaiser *et al.* (1998), patients were randomly allocated in two interview conditions: one group was interviewed by their clinical case manager (2 social workers and 3 psychiatrists), the other group by research assistants (psychologists) not known to the patients and not involved in treatment.

In all patients, the diagnosis of schizophrenia was made by the clinician psychiatrist according to ICD-10.

Interviews in the sheltered living treatment situation were carried out in the patients homes, group homes or hostels. The outpatient clinic patients were interviewed in the clinic building.

Statistics

Differences between the two samples in sociodemographic and clinical characteristics were analysed using t-tests and chi-square statistics. Differences in SQOL variables for the pooled data set from the two treatment situations were analysed using two-factorial analyses of variance (ANOVA). Satisfaction with life as a whole and with different life domains as well as SQOL mean values were dependent variables. Since the two samples differed in age and years since first admission these variables were included as covariates in all ANOVAs. Additionally monthly income was added as a covariate for the domain of finances.

The first ANOVA factor was the different interviewer-interviewee relationship (interviewers: A = external researchers unknown to patients, B = case managers in charge of the patient's care). The second factor was the two different treatment situations (sample I = outpatient clinic and sample II = sheltered living). We were interested in the first ANOVA main effect concerning the interview conditions and hypothesised that scores in groups B would be more favourable than in groups A. The second main effect (differences between patients of the outpatient clinic and those in sheltered living) was not of special interest as both conditions for treatment and care overlapped in both groups, i.e. some patients in the out-patient clinic (group I) were also in sheltered living arrangements and some of the patients in sheltered living (group II) also attended an out-patient clinic in their district (in the latter group, however, there were different providers for sheltered living and out-patient clinic). Thus a differential effect of the treatment situation on SQOL ratings could not be isolated. However, the interaction effect between interview conditions and treatment situations was of interest. The interaction effect indicates whether main effects differ between settings or can be generalised across interview settings. Additionally we analysed SQOL differences separately for each treatment situation (using one-tailed t-tests) – if there was significant ANOVA main effect, a significant interaction, or both. Interactions diagrams according to Leigh & Kinnear (1980) are presented.

RESULTS

Sample characteristics

Patients from sheltered living were older than those from the outpatient clinic (see Table 1). They had a lower monthly and earned income (rarely from regular jobs, mostly from sheltered employment) and they had been ill for a longer time. Other data did not differ significantly between the two samples.

Subjective quality of life

For the pooled data set (see column 'total sample' in Table 2) all satisfaction ratings except the one regarding 'social relations' were higher in interview condition B. We found a) two significant main effects without significant interaction effects: *work* and *living situation*, b) two significant interaction effects without significant main effects: *family* and *mental health* and c) one significant main and interaction effect at the same time concerning the SQOL *mean scores*.

a) The case is simple for the domains of *work* and *living situation*: for both samples scores are higher in interview situation B although differences do not reach statistical significance in the outpatient clinic sample. Yet, the effects in the sheltered living sample are strong enough to lead to a significant additive effect for the pooled data set.

b) 'Disordinal' interactions can be observed for the domains of *family* and *mental health* (see

Table 1
Sample characteristics

	Total Sample		Subsample 1 Outpatient clinic		Subsample II Sheltered living	
	N = 78		N = 46		N = 32	
	Mean	SD	Mean	SD	Mean	SD
Age in years[1]	44,5	11,3	41,9	11,0	48,3	10,8
Monthly income (DM)[2]	1065	511	1190	479	890	510
Earned income (DM)[3]	712	738	1058	737	269	459
Years since 1st admission to a psychiatric hospital[4]	16,4	10,5	13,0	7,7	21,4	12,1
	N	Percent	N	Percent	N	Percent
Women	40	51%	21	46%	19	59%
Marital status						
Single	50	64%	30	65%	20	63%
Married/cohabiting	8	10%	6	13%	2	6%
Separated/divorced/widowed	20	26%	12	22%	10	21%
Has a job (incl. sheltered employment or industrial therapy)	34	44%	18	39%	16	32%
Psychiatric admission last year	18	23%	10	22%	8	25%

Differences between subsamples I and II: [1]$p < .05/t = -2,52$ [2]$p < .05/t = 2,57$ [3]$p < .001/t = 3,50$ (55% of subsample I have an earned income > 1000 DM vs. 14% in subsample II)   [4]$p < .001/t = -3,74$

Table 2
Subjective Quality of Life

Interview conditions	Total sample				Subsample I: outpatient clinic				Subsample II: sheltered living			
	N = 78				N = 46				N = 32			
	A		B		A		B		A		B	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
General well-being	4,84	1,27	4,89	1,21	4,72	1,14	4,65	1,37	5,00	1,46	5,23	0,87
Domains												
Work[1,6]	4,58	1,53	5,28	1,32	4,72	1,09	5,09	1,20	4,38	2,03	5,55	1,47
Leisure	4,78	1,36	4,94	1,28	4,54	1,13	4,54	1,11	5,13	1,61	5,50	1,33
Finances	3,90	1,70	4,62	2,06	4,17	1,75	4,39	2,04	3,50	1,59	4,94	2,11
Living situation[2,7]	4,51	1,89	5,13	1,56	4,52	1,83	4,78	1,73	4,50	2,03	5,63	1,15
Safety	4,90	1,31	5,10	1,21	4,85	1,20	4,98	1,13	4,97	1,50	5,28	1,34
Family[3]	4,91	1,44	4,99	1,61	5,15	0,99	4,60	1,72	4,55	1,89	5,55	1,27
Social relations	4,94	1,20	4,78	1,30	4,89	1,19	4,46	1,10	5,00	1,25	5,26	1,46
Mental health[4,8]	4,41	1,60	4,44	1,52	4,57	1,34	3,78	1,35	4,19	1,94	5,40	1,24
Mean score (whole profile)[5,9]	4,64	0,91	4,91	0,84	4,68	0,90	4,59	0,68	4,58	0,96	5,37	0,86

Total sample: ANOVA-results (main effects: one-tailed)
[1]Main effect: $F = 6,12/p = .008$ [2]main effect: $F = 2,92/p = .046$ [3]Interaction effect: $F = 4,30/p = .042$ [4]interaction effect: $F = 8,06/p = .006$ [5]Main effect: $F = 2,90/p = .046$; interaction effect: $F = 4,34/p = .041$
Differences within sample I and II: t-tests (one tailed)
[6]II: $t = -1,87/p = .036$ [7]II: $t = -1,93/p = .032$ [8]I: $t = 1,97/p = .027$; II: $t = -2,10/p = .022$ [9]II: $t = 2,46/p = .010$

Figure 1). For these two variables the effects of one group are strong enough to suppress the other groups' inverse differences effects, which are in opposite directions for the two groups – non-significant for the domain *family* and significant in both groups for *mental health* (see Table 2).

c) For SQOL *mean scores* the partially opposite tendencies in the two treatment situations lead to the following results: Figure 1(a) shows a significant interaction that again has to be classified as 'disordinal' according to Leigh and Kinnear (1980). That means that the significant main effect for the pooled data set can not be interpreted across treatment situations. Interview condition B is superior to A only for sample II – although strong enough to override the partially inverse relationships for sample I.

DISCUSSION

This study examined whether a domain specific (*living situation*) and overall interviewer effect (referring to the *mean scores*) on SQOL ratings, which had been found in a previous study in a diagnostically heterogeneous group (Kaiser *et al.* 1998), was replicated in a bigger and diagnostically homogeneous group of schizophrenia patients across different settings. The two settings studied (sheltered living and an outpatient clinic) are components
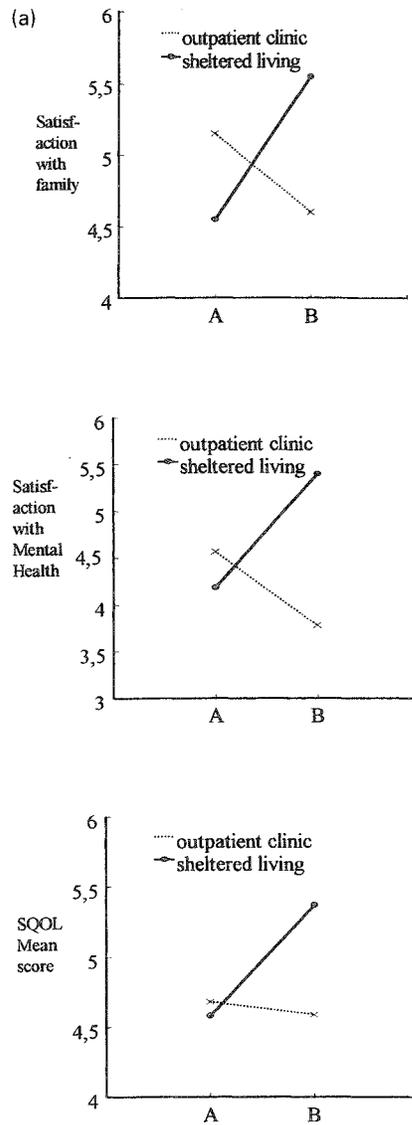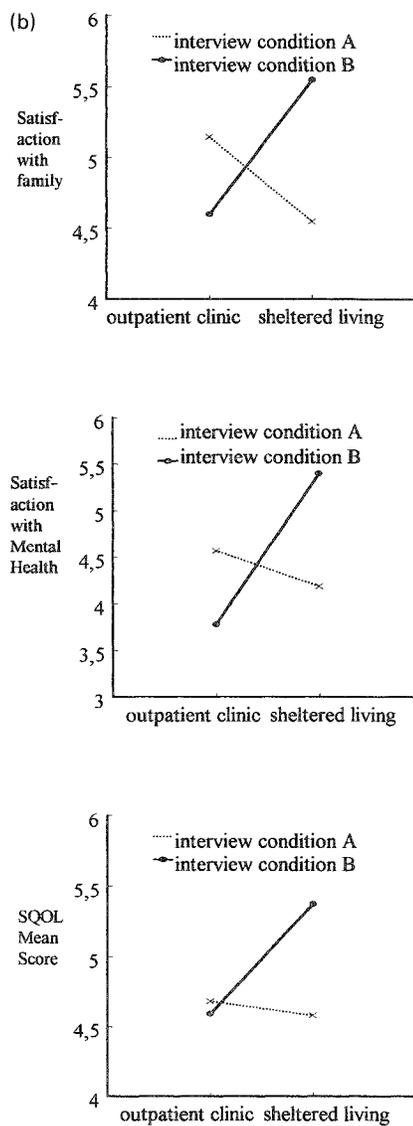
Figure 1. Interaction diagrams: interview conditions x treatment situations. 1a Interview condition: A = external researcher vs B = case manager. 1b Treatment situation: outpatient clinic vs sheltered living

of a similar community oriented approach and are situated in two neighbouring districts of the same city.

We found some differences between the two interview situations. Most of the differences failed to reach statistical significance because of the high variance of ratings and of the

Figure 1. Interaction diagrams: interview conditions x treatment situations. 1a Interview condition: A = external researcher vs B = case manager. 1b Treatment situation: outpatient clinic vs sheltered living

relatively small sample size in each sub group. Yet, some differences were statistically significant, and their size appears substantial. For example, in the sheltered living sample the SQOL mean score, which is based on 7 point rating scales, was 0.8 scale points higher when patients were interviewed by their case managers. This difference is clearly bigger than the

effect that has been achieved in most intervention studies aimed at improving patients' quality of life. The findings underscore the relevance of the interviewer-interviewee relationship on SQOL ratings in schizophrenia patients.

In the pooled data set there was a difference between the two interview situations in satisfaction ratings in two central domains – a *work* and *living situation*. In these domains, ratings in both samples were more positive when patients were interviewed by their case managers. The effects were stronger and reached statistical significance in the sheltered living sample. Satisfaction ratings with three domains yielded discordant interaction effects, i.e. differences in opposite directions in the two settings (significant: *family* and *mental health*, non-significant: *social relations*). For patients in sheltered living, these domains may be viewed as separate from their care and not influenced by their case managers. Thus, they might generalise their overall tendency for more positive ratings to all domains if case-managers are interviewers. In the out-patient clinic, however, patients might associate the domains of *mental health* – and to a lesser extent *family* and *social relations* – more closely with treatment and with the commitment and efforts of their clinical case managers. In these more treatment related domains – but in no other domain – patients in the out-patient clinic expressed less satisfaction when interviewed by their case managers. This may be regarded as an objective cognitive dissonance (Festinger & Carlsmith, 1959) reflecting the patients' wish to optimise psychiatric treatment. It might also be interpreted as a Hawthorne-effect (Roethlisberger & Dickson, 1964). Patients in a model institution of community care (sample I) may give more positive ratings to researchers regarding domains that can be seen as primary targets not of psychiatric treatment, but of this special institution's approach which is distinct from what they have experienced in other institutions before.

These interpretations are extremely speculative. Independently of these interpretations, however, the study has found answers to the question it was set out to address. There may be an effect of the interviewer-interviewee relationship on SQOL ratings in different settings. This effect seems to be setting and group specific. There is no consistent size and not even a consistent direction of the effect. On average, patients with schizophrenia in community care settings seem to express a more positive SQOL when interviewed by their case managers as opposed to external researchers. The size of the difference is, on average, limited. In special circumstances, the difference may be reversed and independent interviewers elicit more positive SQOL ratings than case managers involved in the patients' care.

It may be concluded that an interviewer effect has to be considered when research studies or routine evaluation using SQOL ratings are planned and when SQOL data are interpreted. The direction and particularly the size of the effect are likely to depend on various characteristics of the setting and of the interview situation. Both direction and size of the effect should be explored in each setting and situation. It appears important that they may vary in different life domains. A consistent, unidirectional and uniform effect of the relationship of interviewer and interviewee on SQOL ratings could not be identified in this study. For future evaluative research studies, an independent researcher as interviewer may still be the preferred option although the generalisability of findings to routine situations remains problematic. If SQOL data have been gathered by independent interviewers, there are good reasons to assume that results would have been different if patients had been interviewed by professional staff in charge of their care. What remains unclear is just

precisely in which way, to what extent and regarding which domains ratings would have been different.

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